

ANGLIAN ECOLOGY



PRELIMINARY ECOLOGICAL APPRAISAL OF LAND AT:

Brockford Sidings Dog Park, Brockford Green, Brockford, Stowmarket, Suffolk



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RELEVANT LPA	Mid Suffolk
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VERSION	1
DATE OF FIELD SURVEY	28/07/2023
DATE OF ISSUE	22/08/2023
CHECKED BY	FM

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Please note:

Records form a vital part of conservation work and potentially inform decisions within the wider area. In line with good practice, all recordings of protected species found during this site survey will be given to the relevant county recording service within one week of report issue, unless specific instructions to the contrary are received within this timeframe from the client.

Ecosystems and wildlife species are constantly changing and moving and can be dependent on surrounding impacts and climate conditions. Therefore, any field survey, no matter how thoroughly undertaken, can only represent a 'snapshot' of conditions at the time of visit.

If in doubt as to wildlife or protected species issues, seek advice from a suitably qualified ecologist, as the legislature will not accept ignorance as defence. All site owners and contractors should make themselves aware of their legal obligations concerning species and habitats.

A précis of the current legislation as it may apply to this site is contained within the appendix of this report, but whilst every effort has been made to include relevant legislation the information is not fully comprehensive. For full details of legislation regarding protected species and sites clients should visit: <https://www.gov.uk/topic/planning-development/protected-sites-species> <http://www.legislation.gov.uk/> Natural England is the government's advisor on the natural environment and provides a range of information including regional contact details on their website: <https://www.gov.uk/government/organisations/natural-england/services-information>

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The information that I have prepared and provided is true and has been prepared in accordance with the guidance of my professional institutes.

I therefore confirm that the opinions expressed are my true and professional opinions.



An approximate outline of the site survey area is indicated by the red line in the photograph below, the yellow horizontal line demarcates the dog park area (to the south) from the remaining field (to the north).



SUMMARY

D I Alston Will Trust Ltd commissioned Anglian Ecology to conduct a Preliminary Ecological Appraisal (PEA) of land at Brockford Sidings Dog Park, Brockford Green, in connection with a retrospective application for the creation of a dog park on part of this land (south section). Inclusion of the area to the North was at the request of the client, this includes the whole area of the land to the West of the Brockford Sidings Campsite, to include the existing field boundaries.

The purpose of the PEA is to determine any potential impacts on protected species and habitats of a proposed planning application, and to identify any constraints, opportunities, and requirements for further survey. Enclosed requirements and recommendations relate to information provided by the client, or the clients agent, at the time of survey, any subsequent changes to the proposals may alter recommendations and the proposed mitigation or enhancement measures.

This PEA includes a desktop survey, analysis of all species and sites records within a 2km radius, Phase I¹ field survey of the site, and a search for signs of protected species and habitats using appropriate guidelines². The field survey was conducted by qualified surveyor Sue Morgan on Friday 28th July 2023, in appropriate seasonal and weather conditions.

The surveyed site is predominantly rectangular with a tapered southern border. It is divided into two sections by a (3 m wide) grass trackway running east to west. The southern section of the site is completely fenced with wide gauge post and rail fencing and measures approximately 7762.519 m². The north section which is unfenced measures approximately 6921.408 m².

The whole site is bordered by hedgerows with trees to the north and south, west, and (partially) to the east, with many mature oaks (*Quercus robur*) providing a rich habitat for birds and bat species. To the southeast is a campsite area, to the south beyond the tree line is a singletrack road, beyond the remaining boundaries is arable farmland.

The vast majority of the southern (dog park) site area habitat is improved grassland dominated by perennial rye grass (*Lolium perenne*), now being kept mown. To the boundaries are narrow bands of tall ruderals and small pockets of scrub. The northern area of the site consists of former arable land now left overgrown and colonised by arable escapees, meadow foxtail (*Alopecurus pratensis*), yarrow (*Achillea millefolium*), with a high bank of tall ruderals to the east.

There are 423 records of protected species within a two-kilometre radius of the site, of which 303 are for birds covering 56 species, seven of which are Schedule 1³. None of the existing records pertain to the proposed site area. Within the search radius are also records for water vole (*Arvicola amphibius*), hedgehog (*Erinaceus europaeus*) bats, grass snake (*Natrix helvetica*), flowering plants, invertebrates, and at least ten species of bat.

Breeding birds were observed to the boundaries of the site during the field survey, in the hedgerow trees. Specifically, blackbird (*Turdus merula*) and crow (*Corvus corone*) great tit (*Parus major*), robin (*Erithacus rubecula*), and green woodpecker (*Picus viridis*). Many of the trees bordering the site also have high bat roosting potential.

DEFRA's MAGIC⁴ map records at least 13 ponds within a 500m radius, the nearest being approximately 80m to the East. Several ponds have ecological continuity to the site. Whilst there are no records of great crested newt (*Triturus cristatus*) (GCN) within the records data search results, this species may well be present in nearby ponds.

There are no sites with statutory protection within a 2km radius. The site lies just outside three SSSI Impact Zones⁵. Please see details within.

¹ The Phase One Survey followed the standard Phase I Survey methodology (JNCC, 1993, 2010).

² Guidelines published for individual species surveys by specialist organisations such as The Bat Conservation Trust, The Mammal Society, and Natural England.

³ All birds are protected under the 1981 Wildlife and Countryside Act (as amended) Some birds, known as 'schedule 1 birds', e.g. barn owls, (*Tyto alba*) have extra legal protection.

⁴ MAGIC: Multi Agency Geographic Map of the Countryside.

⁵ SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

To date, there are no details of further development works on any of the surveyed site area. Given that the south section of the surveyed site is now an established dog park which has been fenced and mown regularly for some time, the chances of any potential offence being committed with regard to a protected species or habitat is considered extremely low and no further surveys are required on this section.

The only exception to the above is if there were to be any works proposed likely to affect the boundary trees bordering the fenced area; new lighting would affect these trees as would pruning or removal. If any of these works are planned, then further surveys for bat and breeding bird species may be required.

Any development planned for the north section of the site must take the potential presence protected species into account before works to avoid the possibility of committing an offence, details of the requirements are summarised below and collated in Table 1.

Ecological requirements for north site area if future works are planned. (6).

1. An SQE⁶ must be appointed prior to works. The SQE shall deliver a Toolbox talk to all contractors prior to any site clearance works.

The overgrown areas of tall ruderals and grass sward to the north site area are likely to provide habitat for reptiles and small mammals and have ecological continuity with the site. Prior to any proposed works in this north area, a Toolbox Talk should be given to all contractors. This talk should detail best working practice on sites where protected species may be present, especially with regard to small mammals and reptiles.

2. The ponds within 250 m of the site should be surveyed for the presence/absence of great crested newt.

Further surveys and appropriate mitigation for this protected species may be required to ensure compliance with UK and European legislation. There are no records of GCN within 2 km. However, dependent on the nature of any future proposals, current guidelines⁷ may recommended further GCN surveys to determine absence/presence prior to works. These surveys could take the form of eDNA testing of water bodies within 250m to inform the need for any further surveys or mitigation.

3. Any trees likely to be subject to works (including pruning works), or removal must be subject to a potential bat roost assessment prior to works. Bats are likely to be present in the immediate locality. The proposals must not affect the immediate local habitat matrix by significantly increasing lux levels along hedgerow lines either before, during, or after works. Bats may be roosting in the trees and disturbance of a bat roost is an absolute offence. To inform the client further a potential bat roost assessment must be undertaken on any tree likely to be affected by works.

4. Breeding birds will be utilising the trees and hedgerows and any pruning or removal, irrespective of bat roosting potential, must take place outside the breeding bird season (March to September inclusive).

⁶ Suitably Qualified Ecologist.

⁷ <https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>

5. Trees close to plant movement or any ground works would require root protection during works and contractors must follow the guidelines in BS 5837:2012 'Trees in Relation to Design, Demolition, and Construction'.

6. The site boundaries which contain scrub and tall ruderals, and hedgerow trees are excellent habitat for invertebrates and must be retained wherever possible. Any loss of invertebrate habitat must be compensated for within the proposed developments landscaping scheme.

Other than the species and factors mentioned above, no protected species or signs of protected species were found during the field survey. For the north section of the surveyed area please also see the summary of requirements and enhancements in Table 1 below. For the south (dog park) section to the south please see the list of enhancements and requirements in Table 2 below.

Table 1 Summary of further actions/survey requirements

Applicable to the north section of the surveyed area.

Habitat/Species	Action	Enhancement Opportunity
Bats	<p>If any trees are to be removed or subject to works, these must be subject to a potential bat roost assessment before felling or pruning.</p> <p>Lighting must be kept to low lux levels on this rural site.</p>	<p>New landscaping with native pollinating plants around any proposed development would benefit invertebrate and bat species as would the in-fill planting of a native species rich hedgerow with standard broadleaved trees to the south section of the east boundary.</p>
Birds	<p>Any tree, hedgerow, or scrub removal between March to September inclusive will require an SQE to check for presence of breeding birds before removal.</p>	<p>Species-specific nest boxes should be included at the design stage of any proposals for the Suffolk BAP⁸ species e.g. song thrush (<i>Turdus philomelos</i>) and UK BAP species house sparrow (<i>Passer domesticus</i>). A 'sparrow hotel' could be affixed to any structure of boundary tree.</p>
Reptiles, small and larger mammals.	<p>Best practice should be observed on site during works. An SQE must deliver a Toolbox Talk to all contractors before any clearance work begins.</p>	<p>Areas of tall ruderals should be retained to the site boundaries. The addition of log-piles would be advantageous for reptiles and small mammals, as well as invertebrates.</p>
Invertebrates	<p>The local area is already floristically impoverished by arable farmland.</p> <p>Any retention of tall ruderals or, new planting of invertebrate friendly plants and tree species will be beneficial.</p>	<p>Dead wood piles and native pollen rich planting, as above would be advantageous to all invertebrates.</p> <p>Further advice on plant species which would be beneficial can be found at: https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs-perfect-for-pollinators-garden-plants.pdf</p>
Hedgerow	<p>Any removal of a treed hedgerow during breeding bird season will require an SQE check as above.</p>	<p>Any removal of hedgerow must be compensated for by planting of similar volume and native species mix.</p>
Trees	<p>Any trees within or close to or bordering the site area to the north field will need root protection during any ground works in accordance with BS5837:2012 Trees in relation to design, demolition, and construction which site contractors must follow.</p> <p>Any trees which will be subject to works or removal must first be subject to a potential bat roost assessment to ensure any mitigation or licence of derogation can be in place before works.</p>	<p>Any tree removal must be compensated for by the planting of native species trees on site. These trees should be of standard size with a clear stem of 1.8m and a head of branches.</p>
Great crested newts	<p>There are several ponds with ecological continuity to the site. If any groundworks are proposed, then all ponds within 250 m should be tested for the presence/absence of GCN eDNA. This will inform the client of any need for further surveys or mitigation works to ensure that works proceed without the risk of committing an offence.</p>	
Bats	<p>If any trees are to be removed or pruned these must be subject to a potential bat roost assessment before felling or pruning.</p> <p>Lighting must be kept to low lux levels on this rural site.</p>	<p>New landscaping with native pollinating plants around the proposed development would benefit invertebrate and bat species as would the planting of native species broadleaved trees to the new proposed wooded area.</p>

⁸ Biodiversity Action Plan species

Table 2 Summary of further actions/survey requirements

Applicable to the south section of the surveyed area.

Habitat/Species	Action	Enhancement Opportunity
Bats	<p>If any trees beyond the existing fenced boundaries of the dog park are to be removed or subject to works, these must be subject to a potential bat roost assessment before felling or pruning.</p> <p>Lighting must be kept to low lux levels on this rural site.</p>	<p>New landscaping with native pollinating plants to the border areas or potentially an inset central area would benefit invertebrate and bat species on this improved grass sward.</p>
Reptiles, and small mammals.		<p>Areas of tall ruderals should be retained to the site boundaries. The addition of log-piles would be a simple yet highly advantageous addition to the dog park area for reptiles and small mammals, as well as invertebrates.</p>
Invertebrates	<p>The local area is already floristically impoverished by arable farmland.</p> <p>Any retention of tall ruderals or, new planting of invertebrate friendly plants and tree species will be beneficial.</p>	<p>Dead wood piles and native pollen rich planting, as above would be advantageous to all invertebrates.</p> <p>Further advice on plant species which would be beneficial can be found at: https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs-perfect-for-pollinators-garden-plants.pdf</p>

1 INTRODUCTION

1.1 Purpose of PEA

Anglian Ecology was commissioned by D I Alston Will Trust Ltd to conduct a Preliminary Ecological Appraisal of an area of land at Brockford Sidings, Brockford Green, Suffolk, to support a retrospective planning application for a new dog park (occupying the south section of the surveyed area). Inclusion of an adjoining area to the north (north section of surveyed area) was at the request of the client. No details of any new proposals were given.

This appraisal is based on the following plan circulated by the client's agent, Hucklesby Architects:
Site Plan (Bing Image) sent via email on 05/07/2023.

The purpose of the PEA was to assess the potential impact of the development on protected species and habitats within the site area or with ecological continuity to it, and to identify constraints, opportunities, and requirements for further survey prior to planning submission.

Where appropriate to the remit of this report and where sufficient information is available, recommendations for minimising impacts using avoidance, mitigation, compensation and enhancement proposals are also given.

1.2 Personnel

Sue Morgan is a Chartered Ecologist and Chartered Environmentalist with 21 years' experience of surveying similar sites, structures and protected species habitats.

She works on projects for the Church of England, the National Trust, County and District Councils, the Suffolk Wildlife Trust, multi-national engineering consultancies, and private landowners. She is a Natural England licenced Volunteer Bat Roost Visitor and holds Natural England licenses to survey for protected species.

She is a qualified teacher and delivers training courses for adults on ecological surveying, woodland management, and protected species, please visit: www.anglianecology.co.uk for more information.

She is a Full Member of the Chartered Institute of Ecology & Environmental Management (MCIEEM) and a past Convener of its East of England Section, and a Chartered member of the Institute of Environmental Management (MIEMA).

NATURAL ENGLAND LICENCES:

Natural England Licence Holder for the Surveying of Barn Owls Number CL29/00106.

Natural England Licence holder Class Licence CL18 Registration number: 2015-11320-CLS-CLS for the surveying & handling of bats in all counties of England.

Natural England Survey Class Licence WML-CL08 Registration number 2015-19101-CLS-CLS. (great crested newts).

Natural England Survey Class Licence holder 2016-21569-CLS-CLS (dormice).

2 SITE DESCRIPTION

2.1 Grid Reference

The grid reference at site centre is: TM 12440 65924

2.2 Address and Location Map

Site Address: Brockford Green Sidings, Brockford Green, Brockford, Stowmarket, Suffolk IP14 5NN

Please see location indicated by arrow on the map below.



2.3 Proposals

The survey is to support a retrospective planning application for the now existing new dog park to the south section of the surveyed area. The inclusion of the area to the north was at the request of the client. No details of any proposals were given.

2.4 Site Context

The site lies to the north western boundary of the hamlet of Brockford Green in the parish of Wetheringsett-cum-Brockford, approximately 13 km to the north east of Stowmarket, and is within the administrative jurisdiction of Mid Suffolk District Council.

It is within Natural Character Area 83: South Norfolk and High Suffolk Claylands and the Landscape Character Type referred to as 'RCA' which consists of Intermediate rolling/undulating areas, below 1000 ft, including descriptive landform classes 'low hills - plateau' and 'rolling lowland' - associated mainly with Mesozoic (Cretaceous, Jurassic, Triassic & Permian) or Tertiary rocks of sedimentary origin and glacial till.

This clayland is often heavy, often poorly draining land, associated with base-rich, clayey and loamy soils developed on soft (Mesozoic & Tertiary) clay and chalky till. Seasonal waterlogging is the main constraint to agricultural production and, although utilized extensively for cereal growing in Eastern England, this ground type is mainly under permanent grassland in central and western areas where neutral grassland is the characteristic associated habitat.

It is part-wooded – sometimes with examples of ancient woods. It is a generally settled agricultural landscape (with dispersed or nucleated settlements) characterised by an assorted pattern of ancient woodlands which pre-date the surrounding enclosure pattern - in places associated with densely scattered hedgerow trees, typically oak (*Quercus robur*).

The site area is also classified as Suffolk County Council Landscape Typology No: 10 'Plateau Claylands' A large plateau of heavy clay soil very gently undulating or flat dissected by small streams sometimes with an ancient organic pattern of fields, some co-axial in the north-east. There are often substantial hedges of hawthorn, blackthorn, and elm (*Ulmus spp*) with oak and ash (*Fraxinus excelsior*) predominant hedgerow trees.

In this area, there have been extensive areas of hedgerow loss creating "arable prairies." A largely dispersed settlement of villages with multiple nuclei, and a landscape scattered with farmsteads and hamlets. There are some large greens (many now enclosed but with 'ghost' outlines) on the flatter parts, with houses around their margins, but medieval churches are only very rarely present. There are often small wood copses in villages and around farmsteads. Boundary trees, especially ash (*Fraxinus excelsior*) and oak (*Quercus robur*), often pollarded, are present in many of the hedges. Poplars (*Populus spp*) are ubiquitous in association with farmsteads and in the open landscape have a disproportionate impact given their numbers.

There are no SSSI's within a 2 km radius of the site. The nearest identified Priority Habitat is Deciduous Woodland approximately 116 m to the east, with many other examples (some newly planted), within a 2 km radius. The River Deben rises approximately 4 km to the south east. The River Gipping has its source at Mendlesham Green approximately 3.5 km to the south west, and the River Dove, a tributary of the River Waveney runs 2 km to the north west.

2.5 Site Description

The surveyed site area measures approximately 14683.927m². It can be accessed via a turning west off Station Road which connects this Wetheringsett- Mickfield Road with the A140 to the west. The surveyed area can be found at the west end of a single gravel track running south of the campsite area which is situated to the immediate north of this small connecting road.

At the west end of the access trackway (3 m wide) is a five-bar timber gate giving access to a 3 m wide mown grassy track which separates the two sections of the site in an east to west direction. To the immediate south of is a metal gate (3m wide) giving access into the fenced dog park area. This area contains short mown improved grassland perennial rye-grass dominated. There is a small (2 m x 1 m) timber hut with felt pitched roof to the immediate east of the entrance and one telegraph pole surrounded by a bank of tall ruderals to the north east section. Tall ruderals here include ragwort (*Jacobaea vulgaris*), common nettle (*Urtica dioica*), scentless mayweed (*Tripleurospermum inodorum*), bramble (*Rubus fruticosus agg*), and comfrey (*Symphytum officinale*).

There is a narrow band of tall ruderals (less than 1 m wide) to the boundary fencing. This fencing is continuous wide gauge wire and post approximately 2 m high to all boundaries. Beyond the west, north and south boundaries are very mature ecologically important mature oaks with high bat roosting and foraging potential. To the east is fencing beyond which is the dividing grass trackway. Please see photos of the south (dog park) section of the site below.

Figure 1 Top: Looking west across the site from the entrance gate (left) area of tall ruderals around the one telegraph pole (right). Bottom: Looking west (left) and looking north east from the southwest corner (right).



Beyond the east west dividing trackway to the north is a section of former arable field now gone to seed. Just to the immediate north east of the open entrance to this area is a timber pallet and protective fencing covering an excavation (1 m²).

To the east boundary of this section is a 5 m wide mown grass strip bordered east by a deep (10 m) wide bank of tall ruderals to the southern end giving way to ruderals and maturing trees to the north. This bank has extensive heaps of grass cuttings to the fore and contains rosebay willowherb (*Chamaenerion angustifolium*), spear thistle (*Cirsium vulgare*), common nettle, hemlock (*Conium maculatum*), lesser burdock (*Arctium minus*), fat hen (*Chenopodium album*), dock (*Rumex sp*) scentless mayweed, and ragwort. Trees to this east boundary include willow (*Salix caprea*) laurel (*Prunus lusitanica*), sycamore (*Acer campestre*). To the northeast corner of this area is a 5-bar timber gate giving access into the adjoining campsite area.

To the north boundary is a further mown grass trackway (approx. 3 m wide), and a continuous hawthorn (*Crataegus monogyna*) hedgerow (approx. 87 m long x 3 m high), with a young oak to the western end. To the north east corner there is open access into the wheatfield beyond.

The west boundary consists of a 15 m of tall ruderals to the north end, before mature trees line the remaining length. A further mown grass trackway 3 m wide runs to the fore. There are many mature oaks to this boundary often with an underplanting of hawthorn saplings, and a tall continuous fringe of ruderals (dominated by common nettle) often 8 m wide. A stand of cuckoopint (*Arum maculatum*) was observed here. These trees have high bat roosting and foraging potential. To the southern end of this east boundary is a large stand of hemlock and some conifers and laurel.

To the south east corner of this area, at the west end of the grass trackway that divides the surveyed site into two sections, conifers and bramble frame an open 3 m wide access into the arable field beyond.

The central site area is colonised by grasses and arable escapees, predominantly meadow foxtail, false oat grass (*Arrhenatherum elatius*), yarrow, perennial rye-grass, and cocksfoot (*Dactylis glomerata*), with stands of dock and thistle. Please see photos of the north section of the surveyed site below.

Figure 2 Top: Bank of tall ruderals to east boundary (left and right). Second row: looking south along the east boundary back toward the dog park section (left) and looking northwest across the north site (right). Third row: Looking west along the north hawthorn hedgerow (left) and looking west across underplanting of hawthorn amidst west boundary trees (right). Bottom: Looking north along west boundary (left) and looking east along grass trackway dividing the two site areas (right).



2.6 Geological and Hydrological Information

Soilscape

Reference: 18, Name: SLOWLY PERMEABLE SEASONALLY WET SLIGHTLY ACID BUT BASE-RICH LOAMY AND CLAYEY SOILS

Main Surface Texture Class: LOAMY, Natural Drainage Type: IMPEDED DRAINAGE, Natural Fertility: MODERATE

Characteristic Semi-natural Habitats: LOWLAND SEASONALLY WET PASTURES AND WOODLANDS

Main Land Cover: GRASSLAND AND ARABLE SOME WOODLAND

The Soil Association for the site is 711r Beccles 1 with ancillary subgroup 712 Ragdale: Slowly permeable seasonally waterlogged fine loamy over clayey soils, associated with similar clayey soils.

Hydrology

The total hardness in groundwater in the Chalk on this site is 400 and the Chloride ion concentration is 50-100mg/l

The hydrogeological characteristics are made up of Boulder Clay and Crag; boulder Clay consists of a stiff unstratified clay containing abundant angular fragment of flint and chalk and less commonly of Jurassic and older rocks. Crag consists of mainly unconsolidated or poorly consolidated ferruginous sands and gravels, often with abundant shells in the lower layers. Basal layers of flint, pebbles, or phosphatic nodules may occur.

The average rainfall is 600 millimetres.

3 LEGISLATION

This PEA has been undertaken with reference to relevant wildlife legislation and planning policy.

Relevant legislation considered within the scope of this document includes the following:

- The Wildlife and Countryside Act 1981 (as amended).
- The Conservation of Habitats and Species Regulations 2017 (as amended).
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- Natural Environment and Rural Communities (NERC) Act 2006.
- The Countryside and Rights of Way (CROW) Act 2000.
- Wild Mammals (Protection) Act 1996.
- The Hedgerow Regulations (1997).
- The Protection of Badgers Act (1992)
- The Environment Act (2021)

In addition to obligations under wildlife legislation, a new version of the National Planning Policy Framework was published on 20 July 2021, this sets out the government's planning policies for England and how these are expected to be applied.

Chapter 2 'Achieving sustainable development', members of the United Nations – including the United Kingdom – have agreed to pursue the 17 Global Goals for Sustainable Development in the period to 2030. These address social progress, economic well-being and environmental protection⁹

The environmental objective is to protect and enhance our natural, built and historic environment, including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy. Chapter 15: 'Conserving and enhancing the natural environment' sets out how requires planning decisions must contribute to conserving and enhancing the local environment.

The 'UK Post-2010 Biodiversity Framework', published in July 2012, succeeded the UK BAP. The framework particularly set out the priorities for UK-level work to support the Convention on Biological Diversity's (CBD's) Strategic Plan for

Biodiversity 2011-2020 and the EU Biodiversity Strategy (EUBS), launched in May 2011. Many of the outputs originally developed under the UK BAP remain valid and of use. Background information on UK Priority Habitats (HAPs) and species (BAPs) still inform biodiversity work at country level and are a point of reference for targeted conservation efforts.

⁹ Transforming our World: the 2030 Agenda for Sustainable Development

4 METHODS

This report is written with reference to:

The British Standard BS 42020:2013, Biodiversity a Code of Practice for Planning and Development (BSI¹⁰ 2013).

As a full member of the Chartered Institute of Ecology & Environmental Management (CIEEM) and of the Institute of Environmental Management the author of this report followed the institutes Codes of Professional Conduct and Technical Guidelines, including CIEEM's Sources of Survey Methods, whilst conducting the field survey and compiling the accompanying written report of findings.

Species and habitats were assessed following guidance found within CIEEM's Guidelines for Ecological Impact Assessment in the United Kingdom (2006), The Bat and Bird Scoping Survey was undertaken in line with The Bat Conservation Trust: Bat Surveys - Good Practice Guidelines (3rd edition 2016), and Natural England Bat Mitigation Guidelines and the Barn Owl Trust (2010) Survey techniques. Leaflet no. 8.

The current (Standing Advice for bats can be found at:

<https://www.gov.uk/guidance/bats-protection-surveysand-licences>.

The current Standing Advice for breeding birds can be found at:

<https://www.gov.uk/guidance/wild-birds-surveys-and-mitigation-for-development-project>

Plant species nomenclature follows that of Stace¹¹ (2019).

4.1 Desktop Survey

The desktop survey searched for and analysed records of protected species and sites within a 2-km radius using DEFRA's MAGIC MAP, and information supplied from a 2km search radius by Suffolk Biological Information Service (SBIS) An assessment of their relevance in relation to the impact of proposed development in the site area follows below.

4.2 Phase One Survey

The Phase I Survey of the proposed site area for signs of protected species or their potential habitat followed the standard Phase I survey methodology (JNCC¹², revised reprint 2010).

4.3 Risk Assessment

A risk assessment was undertaken prior to the field survey. There were no risks other than those usually encountered when surveying out of doors. Parking can be found at the end of the entrance trackway.

¹⁰ British Standards Institute

¹¹ Stace; C. New Flora of the British Isles, C & M Floristics, 4th Ed, 2019

¹² Joint Nature Conservation Council

5 SURVEY RESULTS

5.1 Desktop Survey

5.1.1 History

So far as the author is aware, no previous ecological surveys have been carried out on this site.

5.1.2 Protected Species and Sites, data search details

Suffolk Biological Information Service (SBIS) conducted a standard data search for all records of protected species and sites within a 2-km radius. Ownership of the data used in this report remains with the original recorder, and SBIS. Copyright of the original data report remains the property of SBIS.

The data search was instigated on 28/07/2023; all data use restrictions apply.

Protected sites, Priority Habitats, and areas of local or regional conservation importance within a 2 km radius have been assessed within the Geographic Frame of Reference¹³ which is comprised of seven levels: • International; • UK; • National (i.e. England/Northern Ireland/Scotland/Wales); • Regional/ County (or Metropolitan - e.g. in London); • District/ (or Unitary Authority, City, or Borough); • Local or Parish; • within zone of influence only (which might be the project site or a larger area).

No sites of International, national, regional, county, or district importance will be affected by the proposed development of the site area.

Brief details of sites and Priority Habitats are detailed below.

Maps showing the results of the SBIS and MAGIC Map searches for a radius of 2km are included in the appendix.

¹³ Geographic Frame of Reference, Guidelines for Ecological Impact Assessment in the UK, CIEEM, 2006

5.1.2.1. Protected or notable sites

1. SSSI Sites and SSSI Impact Zones

The site lies just outside the SSSI Impact Zones of Mickfield Meadow SSSI 3.1 km to the south east, Major Farm Braiseworth SSSI, 6.4 to the north, and Gipping Great Wood 5.4 km to the south west.

Currently these sites will not be affected. No details of future proposals have been supplied.

2. Priority Habitat Inventory

The following Priority Habitats are within 2km of the site, in each case the nearest example is given.

2.1 Woodpasture and Parkland 1 km to the north east.

2.2 Deciduous Woodland, 116 m to the east.

2.3 National Forest Inventory (GB) Category: Woodland. Interpreted Forest Type: Broadleaved

2.4 Traditional Orchards 950 m to the north east.

2.5 No main habitat but additional habitat exists: Deciduous Woodland, 1.4 km to the southeast.

3. Local Nature Reserves

There are no local nature reserves within a 2km radius of the site.

4. County Wildlife Sites (6)

There are no County wildlife Sites within a 2 km radius.

5. Sites with Statutory Protection

There are no Ramsars, SAC's, or SPA's within a 2 km radius.

Please see SBIS Sites Map and MAGIC Map information in the appendix for more location and further details.

6. Summarised Botanical Value Map 2021

Unique 1km grid square reference:TM1064

(Based on the number of recorder days, either 'good survey coverage' where 3 or more recorder days, or 'poor survey coverage' where less than 3 recorder days observed).

Poor survey coverage

Value category for Rare, Scarce and Threatened (RST) species (high, moderate, low, further survey required)

No indicators, poor survey coverage.

5.1.2.2. Protected Species Records and Protected Species Scoping Survey

The data search returned 423 records of protected species within a two-kilometre radius of the site, of which 303 are for birds covering 56 species, seven of which are Schedule 1.

None of the existing records pertain to the proposed site area. The nearest specific records are for mallard (*Anas platyrhynchos*) *BAmb, BD2.1, CMS_A2, CMS_AEWA-A2*, and moorhen (*Gallinula chloropus*), *BAmb, BD2.2, CMS_A2, CMS_AEWA-A2*, from 156 m to the southeast, both dated 2009.

All records have been analysed in terms of their relevance to the site area and any possible impact the proposed development may have upon the species. This information is contained with the field survey results in 5.2 below.

Records are only a small indicator of what may or may not be present within an area depending on the knowledge of the recorder and the amount of survey effort undertaken. A species may be present on the site or within a 2km radius even though there are no records.

The development site habitats and those with ecological continuity to it were evaluated for the potential or actual presence of or signs of protected species. All existing protected species data for within a 2km radius was used to make an evaluation as to the likely constraints to development and to inform any requirement for further survey, mitigation, compensation or enhancement.

Where there is negligible likelihood of a protected species being present, such as in the case of marine or freshwater species on a site with no aquatic habitats, then these species have been omitted from consideration.

In each case the designation for each species is given in an abbreviated form in brackets after the name. A key to these designation abbreviations is given in the appendix.

Special note

'Absence of evidence is not evidence of absence' a field survey is only a reflection of a short visit and data records are not comprehensive.

On this site, the species listed below were searched for and/ or present within the recorded data for a 2 km radius.

The nearest and most recent records within the 2km search are detailed below together with an abbreviation of their legal protection, please see Designation Key in the Appendix for further details.

1. Vascular plants

No plants with special protection were observed within the field survey. There are 20 records for flowering plants within the data search. The nearest are just over 1 km to the northwest for black poplar (*Populus nigra subsp. Betulifolia*) (Scot BL) dated 2017.

The nearest recorded notable tree is for a pedunculate oak located 260 m to the south east, recorded in 1999. The remainder of the records for notable trees within a 2 km are for oak, horse chestnut (*Aesculus hippocastanum*), ash, or *Cedrus sp.*

2. Lichen

There is one record for lichen *Lecania suavis* (*Lecania suavis*) from Mendlesham Churchyard, 1.7 km to the west, dated 2004.

3. Reptiles

There is one record for reptile within the search radius, for grass snake *Bern3, Sect.41, UKBAP, WCA5/9.1k/l, WCA5/9.5a*, from 1.7. km to the east dated 2020.

There is very little habitat for reptiles in the south section of the site it being improved close-mown grass sward. The north section contains longer grass, hedgerow bottoms, and some patches of open mosaic vegetational heights. It is more suitable for reptiles and any proposals should take these species into account as per the recommendations.

An enhancement of the site for these species would be more dead-wood piles. Prior to any works, the SQE should reference this species in the on-site Toolbox Talk.

4. Birds

There are 303 are for birds covering 56 species, seven of which are Schedule 1, these being: Greylag goose (*Anser anser*), marsh harrier (*Circus aeruginosus*), red kite (*Milvus milvus*), merlin (*Falco columbarius*), hobby (*Falco subbuteo*), barn owl (*Tyto alba*), fieldfare (*Turdus pilaris*), and redwing (*Turdus iliacus*). No Schedule 1 birds have been recorded from the site area or to its boundaries.

All breeding birds are protected under the Wildlife and Countryside Act 1981 (as amended) with Schedule 1 birds receiving special year-round protection.

The nearest bird records are for mallard and moorhen (please see above). The site has habitats for breeding birds within the hedgerows and trees, and multiple birds' nests were observed to the boundaries.

If works are planned to any trees or hedgerows across the site bird species must be taken into consideration and recommendations are made below. The SQE should reference bird species in an on-site Toolbox Talk prior to any works.

5. Hedgehog

There are 43 records for hedgehog *Bern3*, *ScotBL*, *Sect.41*, *Sect.42*, *UKBAP*, within the search radius. The nearest being 360 m to the east, dated 2014. It is highly likely that this species will be present on site at times and prior to any works an SQE should reference care for this species in the on-site Toolbox Talk.

6. Bat species

There are 39 records for bats covering at least nine species, these being common pipistrelle (*Pipistrellus pipistrellus*), *HabRegs2*, *WCA5*, soprano pipistrelle (*Pipistrellus pygmaeus*), *HabRegs2*, *HSD4*, *Sect.41*, *UKBAP*, *WCA5*, Natterer's bat (*Myotis nattereri*), *HabRegs2*, *HSD4*, *WCA5*, noctule (*Nyctalus noctula*), *Bern2*, *CMS_A2*, *CMS_EUROBATS-A1*, *HabRegs2*, *HSD4*, *ScotBL*, *Sect.41*, *UKBAP*, *WCA5/9.4b*, *WCA5/9.4c*, *WCA5/9.5a*, Leisler's bat (*Nyctalus leisleri*), *Bern2*, *CMS_A2*, *CMS_EUROBATS-A1*, *HabRegs2*, *HSD4*, *RLGB.Lr(NT)*, *WCA5/9.4b*, *WCA5/9.4c*, *WCA5/9.5a*, barbastelle (*Barbastella barbastellus*), *Bern2*, *CMS_A2*, *CMS_EUROBATS-A1*, *HabRegs2*, *HSD2p*, *HSD4*, *RLGB.VU*, *Sect.41*, *UKBAP*, *WCA5/9.4b*, *WCA5/9.4c*, *WCA5/9.5a*, serotine (*Eptesicus serotinus*), *Bern2*, *CMS_A2*, *CMS_EUROBATS-A1*, *HabRegs2*, *HSD4*, *RLGB.VU*, *WCA5/9.4b*, *WCA5/9.4c*, *WCA5/9.5a*, whiskered bat (*Myotis mystacinus*), *Bern2*, *CMS_A2*, *CMS_EUROBATS-A1*, *HabRegs2*, *HSD4*, *RLGB.DD*, *ScotBL*, *WCA5/9.4b*, *WCA5/9.4c*, *WCA5/9.5a*, and brown long-eared bat (*Plecotus auritus*), *Bern2*, *CMS_A2*, *CMS_EUROBATS-A1*, *HabRegs2*, *HSD4*, *ScotBL*, *Sect.41*, *Sect.42*, *UKBAP*, *WCA5/9.4b*, *WCA5/9.4c*, *WCA5/9.5a*.

The nearest bat record is 668 m to the north east for brown long-eared bat, common and soprano pipistrelle, Leisler's bat, noctule, and barbastelle, all recorded on Hockey Hill in 2020.

All bats are protected under UK and European legislation under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The site contains habitat for foraging and roosting bats within the trees and hedgerow lines. Any tree which may be subject to pruning or removal must have a potential bat roost assessment undertaken prior to works. Landscape planting off the new dog park area should include invertebrate friendly planting which would benefit bat species.

7. Water vole

There are three records for water vole *Sect.41*, *UKBAP*, *WCA5*, the nearest being from 440 m to the west for a breeding colony in a pond dated 2004. There is no water vole habitat on the site.

8. Invertebrates

There are 11 records for invertebrates covering ten species all from 2 km to the south dated 2020. Species are:

Mordellistena parvula (*Mordellistena parvula*), beetle (*Coleoptera*), *RDBGB.IK*.
Anoscopus albifrons (*Anoscopus albifrons*), true bug (*Hemiptera*), *Nb*
Asiraca clavicornis (*Asiraca clavicornis*), true bug (*Hemiptera*), *Nb*
Chlamydatus (*Eurymerochoris*) (*Chlamydatus* (*Eurymerochoris*)), true bug (*Hemiptera*), *RDBGB.R*
Lygus pratensis (*Lygus pratensis*) true bug (*Hemiptera*), *RDBGB.R*
Megalonotus antennatus (*Megalonotus antennatus*), true bug (*Hemiptera*), *Nb*
Megalonotus praetextatus (*Megalonotus praetextatus*), true bug (*Hemiptera*), *Nb*
Trigonocranus emmeae (*Trigonocranus emmeae*), true bug (*Hemiptera*), *Nb*
Meromyza femorata agg. (*Meromyza femorata* agg.) true fly (*Diptera*), *RDBGB.IK*
Orellia falcata (*Orellia falcata*), true fly (*Diptera*), *N*
Sarcophaga vicina (*Sarcophaga vicina*), true fly (*Diptera*), *RDBGB.R*
Lecania suavis (*Lecania suavis*), true fly (*Diptera*), *RLGB.DD*

The site boundaries which contain scrub and tall ruderals and hedgerow trees are excellent habitat for invertebrates and must be retained wherever possible. Any loss of invertebrate habitat which could be lost in future proposals for the north site area must be compensated for within the proposed developments landscaping scheme. An enhancement for the south (dog park) site area would be the planting of invertebrate friendly plants to the centre and/or margins to increase the biodiversity of this predominantly improved grass sward.

9. Evidence of other species

There was evidence of rabbit (*Oryctolagus cuniculus*) within the north site boundary. Green woodpecker, crows, robin (*Erithacus rubecula*), blackbird and great tit were also observed.

5.2 Field Survey

5.2.1 Timing and Weather

The site was surveyed on Friday 28th during daylight hours.

5.2.2 Survey Conditions

Temp / and Relative Humidity (average)	Wind direction	Wind speed	Cloud cover	Visibility
22° C / 63%	WSW	9 mph gusts	Sunny	Excellent

5.2.3 Phase 1 Scoping Survey

The site was examined for any signs of a protected species or their potential habitat. The habitats have been classified using the JNCC Phase I system with appropriate coding in brackets. Please see the appendix for Phase I Habitats Map, Target Notes, photographs of the site, and sections above for further details.

The habitats consist of the following.

1. Improved grassland (B4)

This habitat is found across most of the south (dog park) site, where it is kept close-mown, and to the central trackway running east west dividing the two areas surveyed. It is dominated by perennial rye-grass, annual and rough stalked meadow-grass, and arable escapees, with patches of dandelion (*Taraxacum officinale*), buttercup (both creeping *Ranunculus repens* and meadow *Ranunculus acris*), greater plantain, ribwort plantain (*Plantago major*, *Plantago lanceolata*), daisy (*Bellis perennis*), and low common forbes. It is also found largely growing uncut within the thicker sward of the north section.

2. Hedgerow with trees species- rich (J2.1.1) x 2

This habitat is found to the west, south, and partially to the east boundaries, species include hawthorn, willow, sycamore, elder, ash, oak, and hazel.

3. Hedgerow species -poor (J2.1.2)

This consists of a continuous line of hawthorn hedgerow to the sites northern boundary.

4. Tall ruderals (C3.1)

This habitat is found to all site margins, particularly to the east boundary of the north site area. Species include: Hemlock, rosebay willow herb, thistle, common nettle, lesser burdock, fat hen, and ragwort, with some small pockets of bramble.

5. Fencing (J5)

This is post and wide-gauge wire fencing found to all boundaries of the southern (dog park0 section of the site.

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6 EVALUATION

An evaluation of the site’s ecological features regarding species and habitats following the Guidelines for Ecological Impact Assessment (CIEEM 2006) and using the recommended geographic frame of reference is presented in Table 2 below.

6.1 Evaluation of Ecological Value

Level of Ecological Value of habitats on site or within a 2km radius	Description and discussion	Level of impact
<p>International</p> <p>Features of international value are sites with international protection or designations, e.g. sites designated under the 2010 Habitats Directive, these include RAMSARS, Special Protection Areas and Special Areas of Conservation</p>	<p>There are no sites of international importance within a 2-km radius.</p> <p>Whilst it is possible that other protected (such as bats and birds,) with European and UK protection are present within the existing site area, they are unlikely to be in a sufficient assemblage, or rarity value to be of international importance.</p>	<p>None.</p> <p>None.</p>
<p>National</p> <p>Features of national value are sites with statutory protection e.g. Sites of Special Scientific Interest, or sites designated as being of national importance for nature conservation either for their habitat or the species assemblage present, or possibly present, such as National Nature Reserves.</p>	<p>There are no sites of national importance within a 2 km radius.</p> <p>It is possible that species with European and UK protection are present within the proposed site area, in particular bats and great crested newts, but they are unlikely to be of sufficient assemblage, or rarity value to be of national importance.</p> <p>The site lies just outside the SSSI Impact Zones of surrounding SSSI’s. Please see details within.</p>	<p>None.</p> <p>None</p>

<p>County/District Local authorities and The Wildlife Trusts have designated sites that are recognised as of importance at regional/county, district/borough levels. A variety of names are used to identify these sites, e.g. County Wildlife Sites, Local Nature Reserves, Roadside Nature Reserves, Local Sites.</p>	<p>There are no County Wildlife Sites or Roadside Nature Reserves within the search radius.</p> <p>Even if not recorded, the following protected species are potentially present within the site area at times: bats, breeding birds, brown hare, hedgehog, and reptiles.</p> <p>Potential presence of great crested newts within 250m,</p> <p>Potential bat roosts in boundary trees.</p>	<p>None.</p> <p>There are no details of any new proposed works on this site. However, if any ground works are proposed, then an SQE should be appointed to advise on potential avoidance of harm and mitigation measures for these species.</p> <p>Potentially high if there are plans for any ground clearance or excavation works.</p> <p>Further surveys would be required to ascertain the presence/absence of great crested newts in all ponds within close proximity (250 m) with ecological continuity to the site.</p> <p>Potentially high Any trees likely to be subject to works will need assessing for bat roost potential.</p>
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	<p>The following Priority Habitats are within 2 km of the site. In each case the nearest example is given.</p> <p>Woodpasture and Parkland 1 km to the north east. Deciduous Woodland, 116 m to the east. National Forest Inventory (GB) Category: Woodland. Interpreted Forest Type: Broadleaved Traditional Orchards 950 m to the north east. No main habitat but additional habitat exists: Deciduous Woodland, 1.4 km to the southeast.</p>	<p>At present these sites remain unaffected. If there are future proposals for the north site area, then any potential impact on surrounding Priority Habitat would need to be reassessed when details of proposals are known.</p>
<p>Local/Parish</p> <p>Impacts within the immediate local area and surroundings, such as village greens, parks, small wildlife areas, spinneys, verges, local habitat connectivity including steams, brooks, and ditches, as well as local or potential species assemblages or habitats e.g. bat roosts, great crested newt, or water vole presence.</p>	<p>The existing dog park area to the south is not impacting on any local sites or species assemblage. So long as there is no work to the surrounding trees and no new lighting.</p> <p>Reptiles, small mammals, and nesting birds may be utilising the north section of the site and its boundaries.</p> <p>Any proposals for works to the north section of the site would need to be reviewed in terms of impact once all details are known. However, recommendations for further actions/survey made in Section 7.3 of this report should act as a guide to likely potential impacts.</p>	<p>None.</p> <p>Any tree work must be proceeded by a potential bat roost assessment beforehand.</p> <p>No breeding bird habitat should be removed between March – September inclusive.</p>

7 ECOLOGICAL CONSTRAINT AND RECOMMENDATIONS

The Legislation referred to in this section is not fully comprehensive and does not take account of all possibilities of infringement or detail every possible application. It is the responsibility of the client to ensure that they are familiar with all relevant legislation prior to any works.

7.1 On-Site Habitats

7.1.1 Semi-mature and mature trees and hedgerow

These trees provide habitat for nesting birds and potentially roosting and foraging bat species, they should all be retained and remain unlit across both sections of the site. Should the north section of the site be subject to development proposals in the future, all trees should be protected during development in accordance with BS 5837:2012 Trees in relation to design, demolition, and construction which site contractors must follow.

7.1.2. Improved grassland.

This habitat is found in abundance locally and is to be retained. It would be an enhancement to increase the species diversity of the south site area with the planting of invertebrate friendly native species of plant.

None of this habitat has been lost under the existing dog park creation.

7.1.3 Tall ruderals and scrub

This habitat is important for invertebrates and the breeding birds and bat species which depend upon them, as well as small mammals and reptiles, all areas should be retained. New landscape planting to the south dog park section is recommended as an enhancement to the monoculture here.

If any future development of the north site area requires removal of the banks of tall ruderals to the site boundaries this must be done under SQE supervision, and an adequate amount of habitat-loss compensation must be agreed with the LPA beforehand.

7.1.5 Ponds off-site

Ponds within 250 m may provide habitat for great crested newts. If there are any proposals involving ground clearance or excavation, then further survey is likely to be required.

7.2 Species

7.2.1 Small mammals, larger mammals, reptiles

These species are potentially present across the site but especially to the north site area which remains undisturbed by the dog park facility.

Should any development be planned to the north section of this site in the future the following will need to be taken into consideration.

There are multiple local records of hedgehog.

Direct mortality to any small mammal or reptile during the construction phase can be avoided through implementation of best practice, details of which should be followed by all site personnel.

Care should be taken to ensure that no trenches or ground excavations are left open without a means of small mammals, and reptiles being able to find their way out. Any dug pits or unfilled deep foundation work should either be covered or have mammal ramps positioned in them to allow any trapped animals to escape. This is particularly important as there are records of otter in the local area.

All piles of spoil, timber, or rubble should be kept clear of the ground, by removal either to a skip, or by being elevated, to ensure that potential refugia sites are not inadvertently created.

Care should also be taken if lighting any bonfires may have potential as refugia/hibernation sites. Any brash and log piles on site should be searched by hand before removal/burning and if hedgehogs are discovered that they should be translocated to a suitable location.

All chemicals and plant machinery should be stored in allocated areas away from trees and possible wildlife corridors.

7.2.2 Bats

There are records of bat species within the immediate area. Any trees likely to be subject to works will require a potential bat roost assessment. Light levels must not be increased during or after works.

7.2.3 Birds

Irrespective of the requirements for bats (above). If in the future works to the hedgerow trees are scheduled to take place between March to September inclusive, they must be checked for breeding bird presence immediately beforehand by an SQE. If breeding birds are found to be present, then works must be so planned as to avoid disturbance until the young have fledged.

7.2.4 great crested newts

If any future proposals for the north site area necessitate ground clearance works or excavations, further surveys of all ponds within 250 m with ecological continuity to the site must be undertaken to ascertain the presence/absence of this species and inform any mitigation which may be required before works begin.

7.3 Summary of Further Actions/Survey Requirements

Applicable to the north section of the surveyed area.

Habitat/Species	Action	Enhancement Opportunity
Bats	<p>If any trees are to be removed or subject to works, these must be subject to a potential bat roost assessment before felling or pruning.</p> <p>Lighting must be kept to low lux levels on this rural site.</p>	<p>New landscaping with native pollinating plants around any proposed development would benefit invertebrate and bat species as would the in-fill planting of a native species rich hedgerow with standard broadleaved trees to the south section of the east boundary.</p>
Birds	<p>Any tree, hedgerow, or scrub removal between March to September inclusive will require an SQE to check for presence of breeding birds before removal.</p>	<p>Species-specific nest boxes should be included at the design stage of any proposals for the Suffolk BAP¹⁴ species e.g. song thrush (<i>Turdus philomelos</i>) and UK BAP species house sparrow (<i>Passer domesticus</i>). A 'sparrow hotel' could be affixed to any structure of boundary tree.</p>
Reptiles, small and larger mammals.	<p>Best practice should be observed on site during works. An SQE must deliver a Toolbox Talk to all contractors before any clearance work begins.</p>	<p>Areas of tall ruderals should be retained to the site boundaries. The addition of log-piles would be advantageous for reptiles and small mammals, as well as invertebrates.</p>
Invertebrates	<p>The local area is already floristically impoverished by arable farmland.</p> <p>Any retention of tall ruderals or, new planting of invertebrate friendly plants and tree species will be beneficial.</p>	<p>Dead wood piles and native pollen rich planting, as above would be advantageous to all invertebrates.</p> <p>Further advice on plant species which would be beneficial can be found at: https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs-perfect-for-pollinators-garden-plants.pdf</p>
Hedgerow	<p>Any removal of a treed hedgerow during breeding bird season will require an SQE check as above.</p>	<p>Any removal of hedgerow must be compensated for by planting of similar volume and native species mix.</p>
Trees	<p>Any trees within or close to or bordering the site area to the north field will need root protection during any ground works in accordance with BS5837:2012 Trees in relation to design, demolition, and construction which site contractors must follow.</p> <p>Any trees which will be subject to works or removal must first be subject to a potential bat roost assessment to ensure any mitigation or licence of derogation can be in place before works.</p>	<p>Any tree removal must be compensated for by the planting of native species trees on site. These trees should be of standard size with a clear stem of 1.8m and a head of branches.</p>
Great crested newts	<p>There are several ponds with ecological continuity to the site. If any groundworks are proposed, then all ponds within 250 m should be tested for the presence/absence of GCN eDNA. This will inform the client of any need for further surveys or mitigation works to ensure that works proceed without the risk of committing an offence.</p>	
Bats	<p>If any trees are to be removed or pruned these must be subject to a potential bat roost assessment before felling or pruning.</p> <p>Lighting must be kept to low lux levels on this rural site.</p>	<p>New landscaping with native pollinating plants around the proposed development would benefit invertebrate and bat species as would the planting of native species broadleaved trees to the new proposed wooded area.</p>

¹⁴ Biodiversity Action Plan species

Table 2 Summary of further actions/survey requirements

Applicable to the south section of the surveyed area.

Habitat/Species	Action	Enhancement Opportunity
Bats	<p>If any trees beyond the existing fenced boundaries of the dog park are to be removed or subject to works, these must be subject to a potential bat roost assessment before felling or pruning.</p> <p>Lighting must be kept to low lux levels on this rural site.</p>	<p>New landscaping with native pollinating plants to the border areas or potentially an inset central area would benefit invertebrate and bat species on this improved grass sward.</p>
Reptiles, and small mammals.		<p>Areas of tall ruderals should be retained to the site boundaries. The addition of log-piles would be a simple yet highly advantageous addition to the dog park area for reptiles and small mammals, as well as invertebrates.</p>
Invertebrates	<p>The local area is already floristically impoverished by arable farmland.</p> <p>Any retention of tall ruderals or, new planting of invertebrate friendly plants and tree species will be beneficial.</p>	<p>Dead wood piles and native pollen rich planting, as above would be advantageous to all invertebrates.</p> <p>Further advice on plant species which would be beneficial can be found at: https://www.rhs.org.uk/science/pdf/conservation-and-biodiversity/wildlife/rhs-perfect-for-pollinators-garden-plants.pdf</p>

8 ENHANCEMENT/OPPORTUNITIES

The following are suggested enhancements for this site.

1. New landscaping with native pollinating plants within the dog park area would benefit invertebrate and bat species.
2. Species-specific nest boxes should be included at design stage for the Suffolk BAP species e.g. song thrush (*Turdus philomelos*) and UK BAP species house sparrow. At least three 'sparrow hotels' could be affixed to mature trees and three bird boxes for song thrush could also be erected. Examples of suitable boxes are given below.
- 3.. Further dead wood piles or 'bug hotels' within the wider site area would be advantageous to all invertebrates.

Please see below for a list of useful links to facilitate some of the above, along with suggestions for bat boxes:

1. Invertebrate friendly native plants <http://www.essexbiodiversity.org.uk/app/webroot/files/ibd/creation.pdf>
2. Bat boxes http://www.bats.org.uk/pages/bat_boxes.html
3. Bird boxes <https://www.birdfood.co.uk/about-our-nest-boxes>
4. Log-piles and bug hotels <https://www.buglife.org.uk/activities-for-you/wildlife-gardening/create-your-own-dead-wood-habitats>



9 REFERENCES

Joint Nature Conservation Committee (2010). Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit. Reprinted by JNCC, Peterborough.

Institute of Environmental Assessment (1995). *Guidelines for Baseline Ecological Assessment*. E & FN Spon, London.

Sheail J and Bunce RGH (2003). The development and scientific principles of an environmental classification for strategic ecological survey in the United Kingdom. *Environmental Conservation*, **30**: 147-159.

Bunce RGH, Barr CJ, Gillespie MK, Howard DC, Scott WA, Smart SM, van de Poll HM and Watkins JW (1999). *EcoFact 1: Vegetation of the British countryside - the Countryside Vegetation System*. Centre for Ecology and Hydrology.

Bunce RGH, Smart SM, van de Poll HM, Watkins JW and Scott WA (1999). *EcoFact 2: Measuring Change in British Vegetation*. Centre for Ecology and Hydrology.

Bat Conservation Trust (2016) Bat Surveys – Good Practice Guidelines, 3rd Edition, Bat Conservation Trust, London

CIEEM Guidelines for Preliminary Ecological Appraisal (GPEA) (2013) Chartered Institute of Ecology and Environmental Management, Winchester, Hampshire.

CIEEM, Guidelines for Ecological Impact assessment in the United Kingdom (2006) Chartered Institute of Ecology and Environmental Management, Winchester, Hampshire.

DEFRA Magic Map search – August 2023

Suffolk biological Information Service Data Search August 2023

Mead Chris (2000) State of the Nations Birds. Whittet Books Stowmarket, Suffolk

Mitchell-Jones, A.J. & McLeish, A.P. (2004). *Bat Workers' Manual* (3rd Edition). JNCC, Peterborough.

<https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals>

The Mid Suffolk Core Strategy Review Document: <https://www.midsuffolk.gov.uk/planning/planning-policy/adopted-documents/mid-suffolk-district-council/core-strategy/>

10 APPENDICES

Regarding this site and the species likely to be present within it or within habitats linked to it, the following legislation and planning policies may apply. Below represents a summary only, it is the client's responsibility to ensure they are aware of the details of legislation and planning policy regarding this site.

10.1 Legislation and Planning Policy

10.1.1 Legislation

The Conservation of Habitats and Species Regulations 2010

On this site, this legislation may be particularly applicable for bat and bird species and potentially great crested newt.

The Regulations make it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2, or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 4. However, these actions can be made lawful through the granting of licenses by the appropriate authorities.

Licenses may be granted for several purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on wild population of the species concerned.

It is a criminal offence liable to prosecution, which could result in imprisonment or fine if these regulations are contravened without one of the detailed defences outlined within the regulations.

European Protected Species are animals and plants that receive protection under The Conservation of Habitats and Species Regulations 2010 (SI 2010/490); from 1st April 2010 this legislation updates and consolidates all the amendments to the Regulations since they were first made in 1994.

Please refer to the actual legislation for the precise wording, which can be found at:

http://www.legislation.gov.uk/ukxi/2010/490/pdfs/ukxi_20100490_en.pdf

Natural England SNCO full guidelines can be found at: <https://www.gov.uk/protected-species-and-sites-how-to-review-planning-proposals>

The Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act protects wild birds, from being killed, injured or captured, and in addition, their nests and eggs are protected from being damaged, destroyed, or taken. Certain reptiles and amphibians also receive protection under this act.

Some breeding birds, (such as some of those recorded within the 2-km search radius for the site), receive additional protection through being listed on Schedule 1 of the Act, which also makes it an offence to intentionally or recklessly disturb this species whilst it is nest-building, is at or near a nest with eggs or young, or to disturb dependent young.

There are over multiple records of bird species recorded within a 2-km radius, all of which are protected when breeding and some of which have Schedule 1¹⁵ protection. Habitat loss such as scrub removal, may affect other

¹⁵Schedule 1 species: WCA1i Wildlife and Countryside Act 1981 (As amended) Schedule I birds are birds which receive the highest level of protection.

protected species such as reptiles and hedgehogs. Reptiles are protected from being killed or injured under section 5 of the Wildlife and Countryside Act.

The Natural Environment and Rural Communities Act (2006)

Part III, (40): Duty to conserve biodiversity.

Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity.

Conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat. Section 41 of The NERC Act lists all species which list of habitats and species that are of principal importance for the conservation of biodiversity in England. The list covers 56 habitats and 943 species and is based on the UK Biodiversity Action Plan (BAP) List of Priority Species and Habitats Action Plans (HAPs).

In addition to the above:

‘The presence of a protected species is a material consideration when a planning authority is considering a development proposal (para 98, ODPM circular 06/2005). It is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision’. (para 99, ODPM¹⁶ circular 06/2005).

Countryside and Rights of Way Act 2000

This act places a duty on Government Departments to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

Schedule 9 of the Act amends SSSI provisions of the Wildlife and Countryside Act 1981, including provisions to change SSSIs and providing increased powers for their protection and management. Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981, strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', create a new offence of reckless disturbance, confer greater powers to police and wildlife inspectors and enables heavier penalties on conviction of wildlife offences.

Wild Mammals (Protection) Act 1996

This Act makes it an offence for any person to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

¹⁶ Office of the Deputy Prime Minister

The Protection of Badgers Act 1992

Badgers are protected and so are the setts (burrows) they live in. In England and Wales (the law is different in Scotland) it is an offence to: Willfully kill, injure or take a badger (or attempt to do so). Cruelly ill-treat a badger. Dig for a badger. Intentionally or recklessly damage or destroy a badger sett or obstruct access to it. Cause a dog to enter a badger sett. Disturb a badger when it is occupying a sett.

The Hedgerow Regulations 1997

These regulations 1997 protect most countryside hedgerows from being removed (including being uprooted or otherwise destroyed). There are rules you must follow to avoid breaking the law.

Clients need to consult the details of these regulations, particularly around the full criteria for what constitutes an 'important' hedge, to make sure they fully comply with the rules.

Full details can be found at: <https://www.gov.uk/guidance/countryside-hedgerows-regulation-and-management>.

10.1.2 Planning Policies

Much of the pressure on biodiversity is related to development and land use. Consequently, the planning and development process has a fundamental role to play in controlling and relieving this pressure. Failure to address biodiversity issues may cause a planning application to be refused.

This important role for the planning system has been recognised in legislation and the Government's planning guidance. The principle is continued through the draft Regional Planning Guidance for the East of England to 2021 (RPG14) and applied at local level through development plans, e.g. <https://www.babergh.gov.uk/planning/planning-policy/new-joint-local-plan/>

Within the Local Government Act 2000 (Part 1, Section 2.1.c), local authorities are given powers to improve the environmental well-being of their area, of which biodiversity is a key element.

Restoration and enhancement may be necessary to rebuild what has been lost as well as maintain what we have at present. It is also important that monitoring post development is undertaken through the land-use planning system.

The loss of biodiversity and the subsequent negative environmental impact runs contrary to the aims and objectives of sustainable development. In principle, sustainable development should not lead to a 'net loss' in biodiversity or natural resources.

National Planning Policy Framework (NPPF) March 2012. Revised National Planning Policy Framework 20 July 2021.

The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. Planning law requires that applications for planning permission must be determined in accordance with the development plan, unless material considerations indicate otherwise.

The National Planning Policy Framework must be considered in the preparation of local and neighbourhood plans and is a material consideration in planning decisions.

Planning policies and decisions must reflect and where appropriate promote relevant EU obligations and statutory requirements.

Section 11 points 109 – 124 relates to 'Conserving and enhancing the natural environment'.

The National Planning Policy Framework constitutes guidance for local planning authorities and decision-takers both in drawing up plans and as a material consideration in determining applications.

The Natural Choice- securing the value of nature, Natural Environment White paper

In 2011 this White Paper set out how the value of nature could be mainstreamed across our society. It set out 92 specific commitments for action. commitment 90 promised to "develop a set of key indicators...to track progress on the ambitions of this White Paper". These are now in place and are entitled the England Natural Environment Indicators (ENEIs).

Of relevance to proposed development in communities are commitments 4-7' Local Nature Partnerships', Commitments 8-13 'Nature Improvement Areas', Commitment 14 'Protecting Natural Value Through the Planning System' Commitment 15 'Offsetting the Impact of Development on Biodiversity' Commitments 20-22 'Protecting and improving our woodland and forests' (Commitments and commitments 23-24 'Diverse and living landscapes'.

The Environment Act 2021

The Act introduces a requirement to ensure that all new development will achieve ten per cent biodiversity net gain. This is a significant shift away from the current National Policy requirement to mitigate biodiversity impacts. Mandatory net gain requirements will be in place late 2023.

<https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted>

10.2 Phase 1 Survey Map

Brockford Sidings, Brockford Green, Brockford Stowmarket Suffolk IP14 5NN

NGR: TM 12440 65924

Not to exact scale, please refer to architect's plans.



10.3 Target Notes

TN1 Treed hedgerows to the south, west and partially to the east boundaries of the site. These provide habitats for bats and breeding bird species. No treed hedgerow should be removed between March – September inclusive, and any trees scheduled for removal must be subject to a potential bat roost assessment.

Figure 3 Section of west boundary hedgerow looking south (left) and examples of potential bat roost habitat (right) and breeding birds (below).



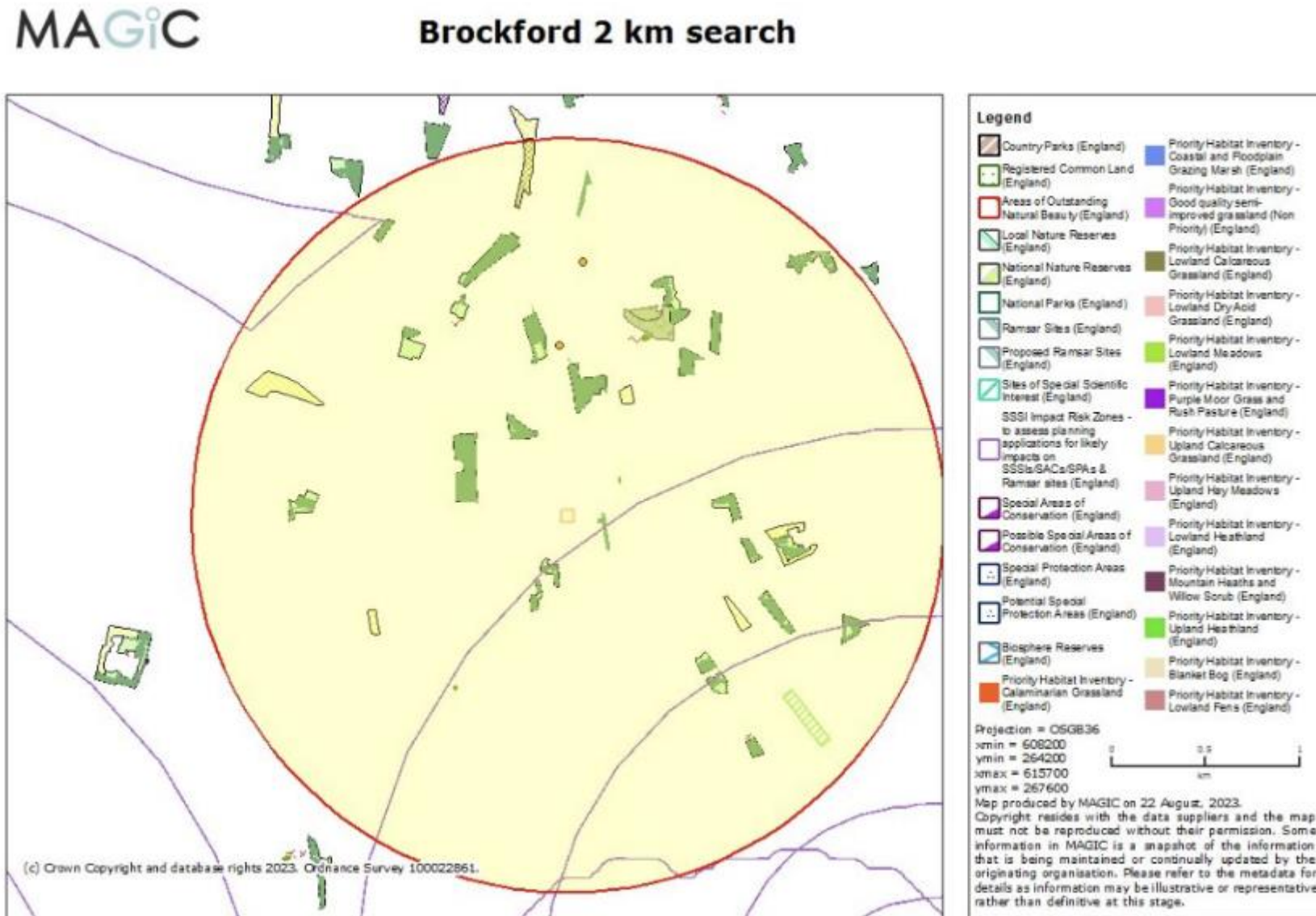
TN2 Areas of tall ruderals to boundaries and to the central dog park area. These areas must be hand searched by an SQE prior to any removal by mechanical means, preferably they should remain undisturbed and unaltered.

Figure 2 Tall ruderals to the margins of the dog park area (top) and to the margins of the field to the north (bottom), particularly along the east boundary here.



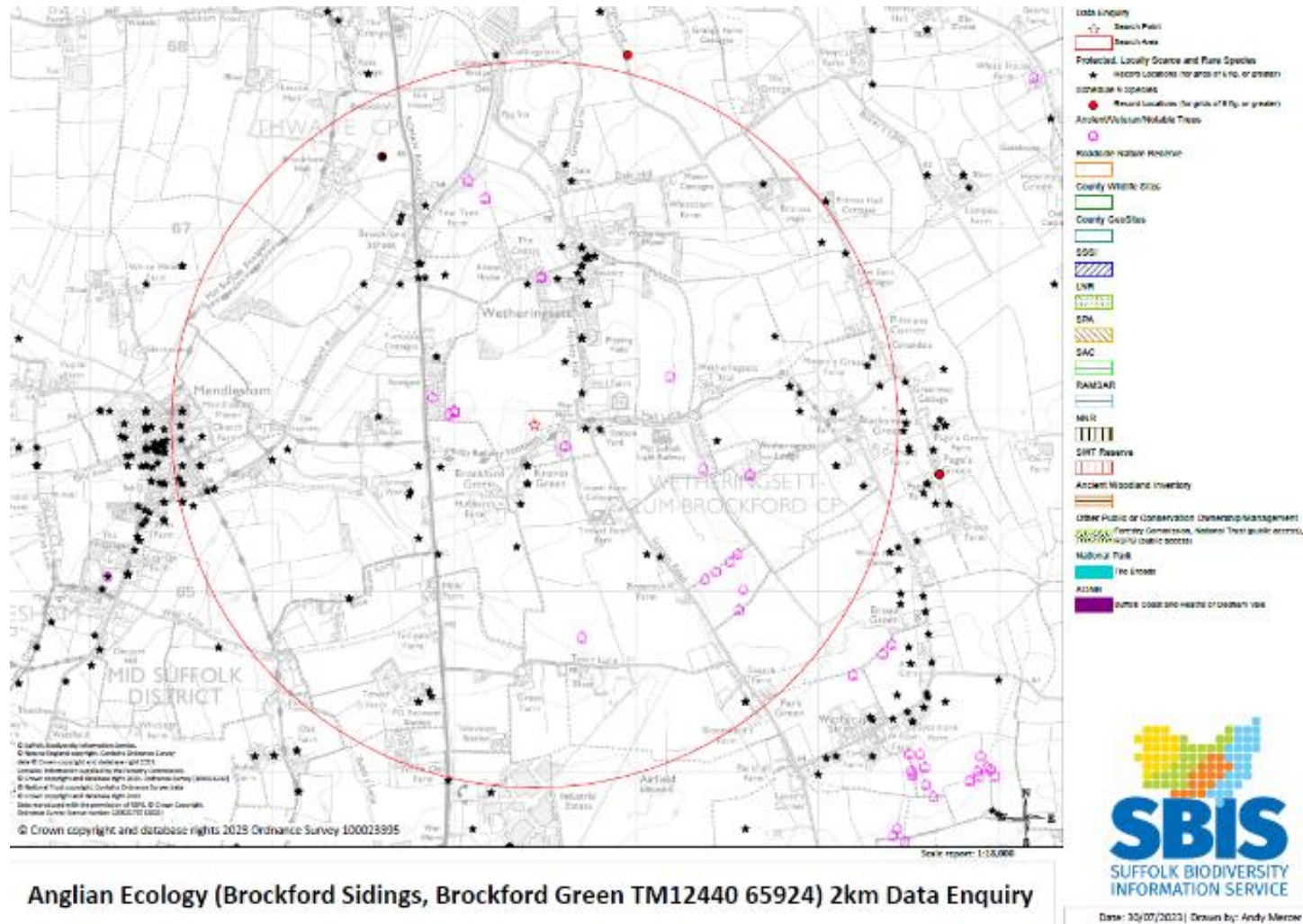
10.4 MAGIC Search Map

2 km radius from site area



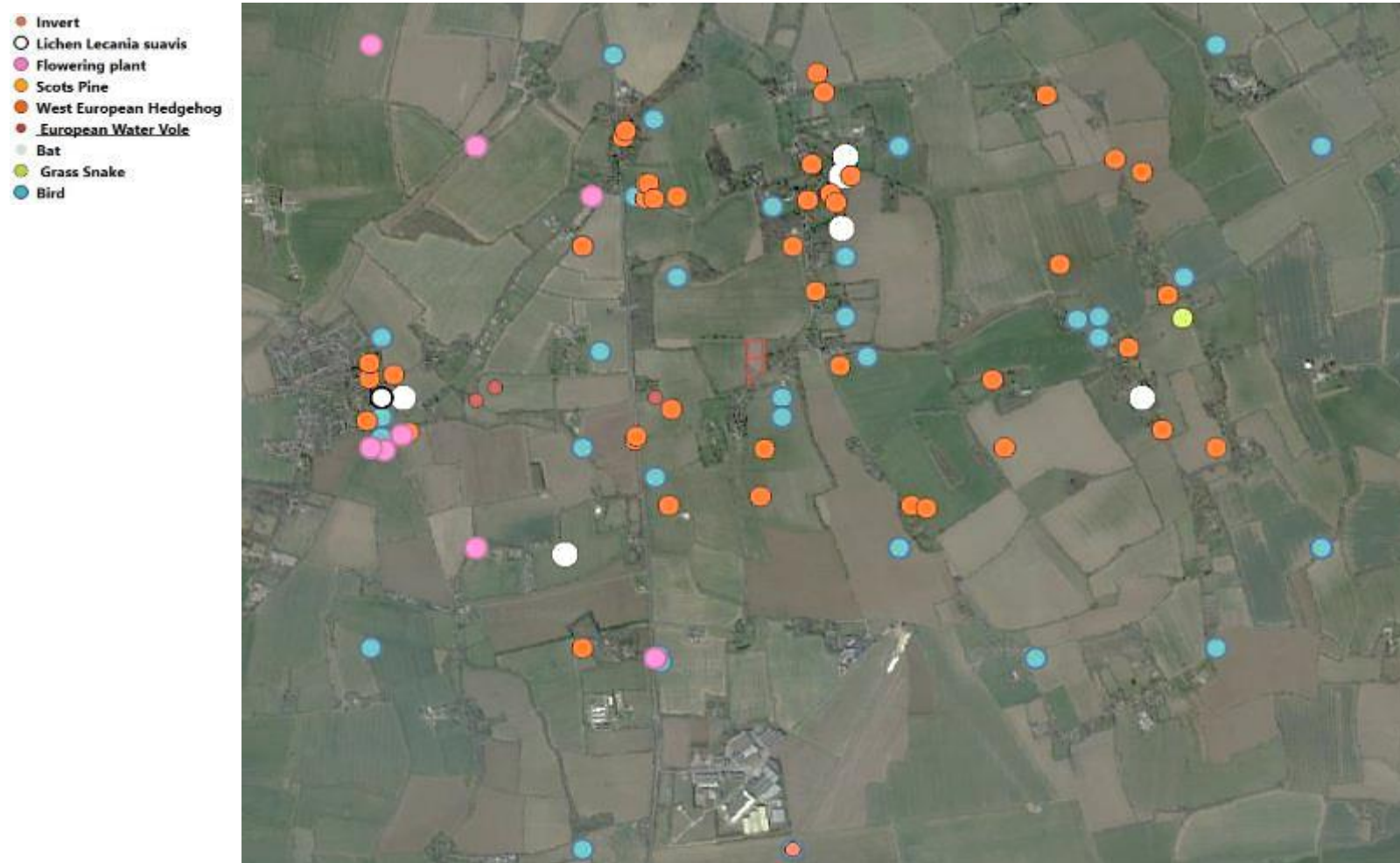
10.5 Protected sites within 2 km SBIS Map search (Copyright SBIS).

There are no protected sites within a 2 km radius, Cf. SSSI Impact Zones previously mentioned.



10.6 All records within 2 km of the site area.

The site is marked by the red rectangles.



10.7 Designations Key

Status Abbreviation	Status Short Name	Status Long Name	Kind	Status Description
BD1	BirdsDir:A1	Birds Directive Annex 1	International	Birds which are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. As appropriate, Special Protection Areas to be established to assist conservation measures. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.
HSD2np	HabDir-A2	Habitats Directive Annex 2 - priority species	International	Species which are endangered, the conservation of which the Community has a particular responsibility in view of the proportion of their natural range which falls within the territory of the Community. They require the designation of special areas of cons
HSD2p	HabDir-A2*	Habitats Directive Annex 2 - non-priority species	International	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) whose conservation requires the designation of special areas of conservation. Note that the contents of this annex have been updated in
HSD4	HabDir-A4	Habitats Directive Annex 4	International	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat. Note that the c
HSD5	HabDir-A5	Habitats Directive Annex 5	International	Animal and plant species of Community interest whose taking in the wild and exploitation may be subject to management measures.
HabRegs2	HabReg-Sch2	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)	Nat Legislation	Schedule 2- European protected species of animals.
HabRegs4	HabReg-Sch4	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 4)	Nat Legislation	Schedule 4- Animals which may not be taken or killed in certain ways
HabRegs5	HabReg-Sch5	The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 5)	Nat Legislation	Schedule 5- European protected species of plants.
WCA1i	WACA:Sch1_part1	Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Nat Legislation	Birds which are protected by special penalties at all times.

WCA5	WACA:Sch5	Wildlife and Countryside Act 1981 (Schedule 5 except for 9.5 sale only)	Nat Legislation	Section 9.1. Animals which are protected from intentional killing or injuring. Animals which are protected from taking. Section 9.2 Animals which are protected from being possessed or controlled (live or dead). Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection. Section 9.4 Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection. Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection. Animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.
WCA8	WACA:Sch8	Wildlife and Countryside Act 1981 (Schedule 8)	Nat Legislation	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
WCA9i	WACA:Sch9_part1	Wildlife and Countryside Act 1981 (Schedule 9 Part 1)	Nat Legislation	Animals which may not be released or allowed to escape into the wild.
WCA9ii	WACA:Sch9_part2	Wildlife and Countryside Act 1981 (Schedule 9 Part 2)	Nat Legislation	Plants which may not be planted or caused to grow in the wild.
PBA	Protection of Badgers Act (1992)	Protection of Badgers Act (1992)	Nat Legislation	The Protection of Badgers Act 1992 protects badgers from taking, injuring, killing, cruel treatment, selling, possessing, marking and having their setts interfered with, subject to exceptions.
Sect.41	England NERC S.41	Natural Environment & Rural Communities Act 2006 - Species of Principal Importance in England (s41)	Nat Legislation	Species of principal importance for the purpose of conserving biodiversity covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.
UKBAP	BAP:2007	UK Biodiversity Action Plan priority species	UK BAP	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).
CPASI	CPASI	Cambridgeshire and Peterborough Additional Species of Interest	CPASI	Species not on the UKBAP Priority species list but considered to be species of interest in Cambridgeshire and Peterborough (as defined by the Cambridgeshire and Peterborough Biodiversity Partnership in 2016 - see http://www.cpbiodiversity.org.uk/biodiversity-action-plans/priority-species)
BRed	Bird-Red	Bird Population Status: red	Red Data List	Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.

BAmb	Bird-Amber	Bird Population Status: amber	Red Data List	Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
NR	Status:NR	Nationally rare	Other rare/scarce	Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
NS	Status:NS	Nationally scarce	Other rare/scarce	Occurring in 16-100 hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
N	Notable	Nationally Notable	Other rare/scarce	Species which are estimated to occur within the range of 16 to 100 10km squares. (subdivision into Notable A and Notable B is not always possible because there may be insufficient information available). Superseded by Nationally Scarce, and therefore no longer in use.
Na	Notable:A	Nationally Notable A	Other rare/scarce	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Nb	Notable:B	Nationally Notable B	Other rare/scarce	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
FEP7/2	FEP:007_tab2	Farm Environment Plan Guidance 007: Table 2	Other rare/scarce	Species is listed in 'Table 2: Farm Environment Plan Species to be recorded in Part 2 of the FEP' of the DEFRA document 'Environmental Stewardship Farm Environment Plan Guidance 007: Plant & animal species in the Farm Environment Plan (FEP)'.
FEP7/3	FEP:007_tab3	Farm Environment Plan Guidance 007: Table 3	Other rare/scarce	Species is listed in 'Table 3: High Value Arable Margin Indicator Species' of the DEFRA document 'Environmental Stewardship Farm Environment Plan Guidance 007: Plant & animal species in the Farm Environment Plan (FEP)'.
ERL:CR	ERL: Critically Endangered	England Red List: Critically Endangered	Other rare/scarce	See 'A Vascular Plant Red List for England', BSBI (2014)
ERL:EN	ERL: Endangered	England Red List: Endangered	Other rare/scarce	See 'A Vascular Plant Red List for England', BSBI (2014)
ERL:VU	ERL: Vulnerable	England Red List: Vulnerable	Other rare/scarce	See 'A Vascular Plant Red List for England', BSBI (2014)
ERL:NT	ERL: Near Threatened	England Red List: Near Threatened	Other rare/scarce	See 'A Vascular Plant Red List for England', BSBI (2014)

REPORT ENDS