Tyrer Ecological Consultants Ltd
Specialist in Protected Species

Bringing Together Over 30 Years of
Ecological Excellence

Tyrer Ecological Consultants Ltd, Roselands, Suite 1, 3, Cross Green, Formby, L37 4BH

Preliminary Ecological Appraisal

May 2024

Project Reference: PR-0065-24

The Fox Public House
Haverhill Road
Little Wratting
Cambridgeshire
CB9 7UD

National Grid Reference: TL67894675

Document Title	Preliminary Ecological Appraisal
Project Reference	PR-0065-24
Issue Number	1.0
Prepared for	Wellsfield Associates
Prepared by	Tyrer Ecological Consultants Ltd

Surveyor	Mr. J. Pescod Qualifying CIEEM & Mr. B. Richards Qualifying CIEEM
Author	Mr. B. Richards Qualifying CIEEM
Survey Date	20/02/2024
Reviewed by	Mr. J. Pescod Qualifying CIEEM
Review Date	11/04/2024
Approved by	Mrs. K. Wilding CEnv MIEMA ACIEEM
Date of Issue	20/05/2024

Terms of use:

This report has been prepared by Tyrer Ecological Consultants Ltd with all reasonable skill, care and diligence within the terms of the instruction and permissions granted by the client. The results, conclusions and recommendations of this report are proportionate and in line with the British Standard 42020:2013.

Tyrer Ecological Consultants Ltd have produced this report with all due integrity and adhere to the CIEEM Professional Code of Conduct, with the aim of upholding these objectives and the reputation of the profession.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client.

This report and contents therein are to be used only in conjunction with the Planning Application for which the report has been produced. It must not be used for any other purpose, copied, re-produced or sent to any other party other than the Local Planning Authority Department without the express permission of Tyrer Ecological Consultants Ltd. Furthermore. the data contained herein must not be copied, re-produced or sent to any other party/organisation whatsoever without the express permission of Tyrer Ecological Consultants Ltd.

Tyrer Ecological Consultants Ltd will however consider forwarding data that is collected as part of its reports to the relevant wildlife records centre.

Executive Summary

As part of a proposed planning application at The Fox Pub, Little Wratting (termed as 'the site'), Tyrer Ecological Consultants carried out a Preliminary Ecological Appraisal (PEA) in February 2024.

The PEA was commissioned by Wellsfield Associates; proposals are understood to involve the demolition of an existing, derelict public house and the erection of several retail structures with associated access and landscaping.

Extensive findings, conclusions and recommendations are presented throughout the report; however, the reader should be aware of the following further surveys and key recommendations.

Key recommendations:

Habitats

The other native hedgerow is designated as a priority habitat under both the UK BAP and a Suffolk BAP.

This feature warrants protective measures during the works to prevent any negative impacts arising. Enhancement measures could also improve the value of the feature for biodiversity.

Construction works pose a risk of impact to the site-adjacent priority woodland to the south.

It is recommended that protective measures are enacted at the site prior to any works to ensure that no negative impacts will occur. A lighting plan is also recommended to be produced for the site to prevent spill into the priority woodland.

Bats

Based upon the findings of the desktop and field survey, covered through sections 5.0 – 6.0 of the report and supported by **Appendix I**, The Fox Public House is duly categorised as pertaining to '**Moderate**' bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey[a] (structures). No further surveys required (trees).	Two separate dusk emergence survey visits[b].	Three separate dusk emergence survey visits[b].

*It is recommended that **two dusk emergence surveys** are conducted at the site within the season of bats (May – August, extending into September in some cases), in order to establish if / how the building is being used by bats, and if so, identify the species present, abundance, roost locations and flight lines around the site following emergence. A total of **four surveyors** would be required to cover the potential roosting features as described for each survey, and the surveys must be spaced a minimum of three weeks apart in accordance with current BCT guidance.*

Birds

Regarding wider breeding bird species, there are a range of viable nesting platforms within the site boundary, including the hedgerows to the boundaries, scrub and the former pub, all of which could provide suitable nesting locations within the nesting bird season of March – August, inclusive.

Any works impacting upon these areas of potential suitability, inclusive of the vegetation and the structure, should therefore be carried out outside of the breeding bird season, typically March – September inclusive. For works within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing.

Other terrestrial mammals

Badger, hedgehog and hazel dormouse have the potential to be impacted upon by the works.

A programme of Reasonable Avoidance Measures (RAMs) are recommended to be enacted on the site to prevent impacting these species. See ***Section 7.0*** *for details.*

Herpetofauna:

Regarding GCN, the combined results of the desktop and field study suggest that this species could feasibly exist within proximity to the application site. The five waterbodies ranged from average – excellent in their HSI scores, and several of these have feasible connectivity to the site itself.

It is therefore recommended that an Environmental DNA (eDNA) survey should be undertaken at all five of the ponds within 250m of the site, to reasonably ascertain presence / absence of GCN at these ponds. Any eDNA approach would need to be carried out from mid-April to June 30th when local planning authorities will accept data as part of a planning application. The information gathered will help provide an initial impact assessment. Following the eDNA survey, depending on the results, a development license may or may not be required; further surveys to reinforce the license may also be required.

Common amphibians and reptiles have the potential to be impacted upon by the works.

The RAMs discussed should be extended to cover the additional species.

Biodiversity enhancement:

As a means of improving biodiversity value / enhancing the site any new landscaping should aim to incorporate majority use of native species as opposed to non-native exotic species which offer significantly fewer benefits to our native fauna. Suitable species for native landscaping have been provided in **Appendix III**. Examples of suitable measures in respect of faunal species are also provided in **Appendix III**.

Table of Contents

1.0 Introduction & Scope

1.1 As part of a proposed planning application at The Fox Pub in Little Wratting (termed as 'the site'), Tyrer Ecological Consultants carried out a Preliminary Ecological Appraisal (PEA) in February 2024.

1.2 The PEA was commissioned by Wellsfield Associates; proposals are understood to involve the demolition of an existing, derelict public house and the erection of several retail structures with associated access and landscaping. See **Figure 1.1** for a proposed site plan.

Figure 1.1 – *Proposed site plan (preliminary) © Wellsfield Associates*

1.3 A previous planning application has been conducted at the site (Application Reference: **DC/20/0479/FUL**), with works entailing '*Construction of Public House and Restaurant (Sui generis) (following demolition of existing derelict Public House) and associated access, parking and landscaping'*. This was granted by West Suffolk Council on 14th April 2021.

1.4 As part of the Local Planning Authorities (LPA) planning policies and obligations to the Planning Framework, ecological surveys are generally required prior to planning permission being granted, particularly where protected / priority habitats or species are, or may be, present, and where these species have the potential to be impacted by the proposals for which the applicant seeks consent.

1.5 The PEA was carried out in accordance with the 'Guidelines for Preliminary Ecological Appraisal, 2nd Edition' (CIEEM, 2017) and all associated 'CIEEM Competencies for Species Survey (CSS)', whilst this report has been presented in accordance with the British Standard 42020:2013 Biodiversity – Code of Practice for Planning and Development.

Aims & Objectives

1.6 The appraisal aims to ascertain the baseline nature of the site and, where possible, obtain information on any priority wildlife habitats, or species, that may be present and if so determine if they will be affected by the proposals. The survey, therefore, includes the following objectives:

- Gather and present baseline ecological information on site/off site (as necessary) within a suitable report,
- Identify, measure and map habitats using UK Habitat Classification – Habitat Definitions Version 2.0 (2023) habitats,
- Identify any likely ecological constraints associated with the proposals for the site (i.e. the presence of protected / priority habitats or species that exist within the confines of the application boundary, or zone of influence (ZOI),
- Identify measures likely to be required in line with the mitigation hierarchy (i.e. impact avoidance > minimisation > mitigation > compensation),
- Identify any additional survey requirements,
- Identify enhancement opportunities for biodiversity in line with national and local planning policy,
- Set out any requirements for post-development monitoring, management, or other commitments, and how they can be secured, where required.

1.7 As a functioning component of this specific ecological appraisal:

- Habitats on site were identified, measured and mapped using the UK Habitat Classification – Habitat Definitions Version 2.0 (2023),
- Any buildings and trees, where present, were subject to preliminary roost assessment (PRA) for Bats and scored against the bat roost suitability parameters defined in the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023),
- Any accessible ponds located within a 250m radial buffer of the site were subject to the industry standard Habitat Suitability Index (HSI) assessment in relation to great crested newt (*Triturus cristatus*), in accordance with ARG UK Advice Note 5 (2010), where applicable,
- An Unmanned Aerial Vehicle (UAV) was utilised to overcome access constraints, where feasible.

1.8 This report therefore provides important baseline information as derived from the diurnal appraisal process outlined above and recommends any necessary additional surveys, or work, where applicable, to provide a conclusive ecological impact assessment.

1.9 The Applicant should be aware then that if during the appraisal:

- The application site/area was found to be suitable for any European Protected Species (EPS), otherwise protected, or priority habitats / communities / species, or,
- Signs of use by particular protected species were found, or suspected, or,
- Seasonal constraints significantly limit the gathering of ecological information to arrive at an accurate conclusion on which the planning application can proceed;

Then more detailed surveys may be recommended where necessary, to allow the ecologist to arrive at a conclusive impact assessment.

1.10 If protected species were subsequently found either during appraisal or during detailed further surveys and / or may be affected by the development proposals, then a European Protected Species Mitigation Licence (EPSML) may be required to proceed with the development.

1.11 Where more detailed surveys are recommended by the Ecologist, following ecological appraisal, then LPAs, on the advice of their ecological advisors, may not grant permission until such time that all relevant material information is gathered in accordance with their obligations to the legislature.

1.12 Protected / priority species omitted from this report have been discounted due to negating factors including obvious absence / isolation of suitable habitats, and / or distributional aspects negating the necessity to survey for them, and / or the proposed works were not considered to impact the species or encroach on areas where the species may be present.

2.0 Legislation & Policy

2.1 The legislature considered for the purposes of this report includes the following:

- Biodiversity Net Gain: Good practice principles for development (2019),
- BS 42020:2013 Biodiversity – Code of Practice for Planning and Development (2013),
- Conservation of Habitats and Species Regulations (2017) (as amended),
- Countryside Rights of Way (CRoW) Act (2000),
- Natural Environment and Rural Communities (NERC) Act (2006),
- National Planning Policy Framework (2023) (as last revised),
- Protection of Badgers Act (1992),
- The Hedgerow Regulations (1997),
- The Invasive Alien Species (Enforcement and Permitting) Order 2019,
- Town and Country Planning Act (1990),
- Wild Mammals Protection Act (1996),
- Wildlife and Countryside Act (1981) (as amended).

2.2 These acts entail relevance to both protected and invasive species. The degree of protection offered to taxa provided within existing UK and EU legislature often varies depending on species / group, for example, some species may purely be protected during one of its life stages (e.g. common species of breeding bird whilst nesting / with eggs / young); some species may receive full protection within the EU, whereas others may be protected solely on a national basis (e.g. grass snake).

2.3 **Table 2.1** contains appropriate legislature to each species / group specifically respective to the site and provides the relevance of said legislation.

Table 2.1 – Relevant legislation

Species Group / Species	Relevant Legislature	Level of Protection
Badger	Protection of Badgers Act (1992), Wildlife and Countryside Act (1981) (as amended)	Illegal to: Wilfully kill, injure or take a badger (or attempt to do so), cruelly ill-eradicate 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.
Bats	CRoW Act (2000) Conservation of Habitats and Species Regulations (2017) (as amended) Wildlife and Countryside Act (1981) (as amended)	All British bats and their roosts are afforded full protection from damage/destruction and bats may not be injured/killed/taken at any life stage. Once identified, roosts are protected whether the bat is in occupation or not.

Species Group / Species	Relevant Legislature	Level of Protection
Birds	CRoW Act (2000) Wildlife and Countryside Act (1981) (as amended)	All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected. Birds listed on Schedule 1 Wildlife & Countryside Act (1981) (as amended) are afforded a greater level of protection.
Great Crested Newt (GCN)	CRoW Act (2000) Conservation of Habitats and Species Regulations (2017) (as amended) Wildlife and Countryside Act (1981) (as amended)	Great Crested Newts (GCN's) are fully protected from disturbance, killing, injuring or possession at any life stage. Confirmed breeding ponds and resting places are afforded the same protection.
Hazel Dormice	Conservation of Habitats and Species Regulations (2017) (as amended) Wildlife and Countryside Act (1981) (as amended)	It is an offence to: deliberately kill, injure, disturb or capture, damage or destroy their breeding sites and resting places & possess, control, transport (alive or dead). Also illegal to disturb hazel dormice while they occupy a structure or place used for shelter or protection & obstruct access to a place of shelter or protection.
Invasive Plant Species	Wildlife and Countryside Act (1981) (as amended) The Invasive Alien Species (Enforcement and Permitting) Order 2019	Species listed within Schedule 9/Schedule 2 as invasive, including Japanese knotweed (*Reynoutria japonica*) and Himalayan balsam (*Impatiens glandulifera*), for example, carry notoriety regarding development. The Acts make it an offence for any person to grow or cause to grow in the wild any plants listed as invasive.
Reptiles	Conservation of Habitats and Species Regulations (2017) (as amended) – SL/SS Wildlife and Countryside Act (1981) (as amended) CRoW Act (2000)	All native reptile species have some degree of protection in the UK, through section 8(1) and (5) (specified in Schedule 5) of the Wildlife and Countryside Act 1981 (as amended). Sand lizard and smooth snake are species of principal importance however with greater protection..

Relevant policy

2.4 Guidance for Local Authorities: Extract from Office of the Deputy Prime Minister – Circular 06/2005:

"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision".

2.5 Paragraph 186 of the National Policy Planning Framework (as revised in December 2023) states:

"When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

2.6 The West Suffolk Joint Development Management Policies Document, which was adopted in 2015, combines two former policies for the areas of Forest Heath and St Edmundsbury, and echoes this national focus on biodiversity within Policy DM10, titled 'Impact of Development on Sites of Biodiversity and Geodiversity Importance', stating:

"Proposals which would result in significant harm to biodiversity, having appropriate regard to the 'mitigation hierarchy', will not be permitted."

2.7 Further consideration for biodiversity is provided within Policy DM11, titled 'Protected Species', which states:

"Development which would have an adverse impact on species protected by the Conservation of Habitats and Species Regulations (2010) (as amended), the Wildlife and Countryside Act (1981), the Protection of Badgers Act (1992), and listed in the Suffolk Biodiversity Action Plan, or subsequent legislation, will not be permitted unless there is no alternative and the local planning authority is satisfied that suitable measures have been taken to:

a. reduce disturbance to a minimum; and
b. i. maintain the population identified on site; or
ii. provide adequate alternative habitats to sustain at least the current levels of population.

Where appropriate, the local planning authority will use planning conditions and/or planning obligations to achieve appropriate mitigation and/or compensatory measures and to ensure that any potential harm is kept to a minimum."

Priority Habitats & Species

2.8 In the United Kingdom, legal protection and otherwise legislative recognition is afforded to particular habitats and species based on a variety of ecological factors. These are typically referred to as priority habitats and species, and can be identified under a variety of legislation and local policy, notably the UK Biodiversity Action Plan (UKBAP), Section 41 (s.41) of the NERC Act as well as under Local Biodiversity Action Plans (LBAPS).

3.0 Methodology

3.1 As part of the ecological appraisal report, a desk-top and field-based study is conducted. Methods for both components of the appraisal are given below.

Desktop study

3.2 Prior to a site visit, a desktop study was conducted using online resources to obtain information pertaining to any sites afforded statutory (e.g. SSSI) and non-statutory (e.g. LWS) designations for nature conservation within 2.0 kilometres of the site boundary. To do so, the Multi Agency Geographic Information for the Countryside (MAGiC – provided by DEFRA) was accessed to gather such information; this particular interactive mapping service was also used to locate any locally granted European Protected Species Mitigation Licenses (EPSML) and species records to further inform conclusions concerning such species in the context of the study site and its proposed development.

3.3 Historic satellite imagery was reviewed using sources such as Google Earth (© 2023/24) to help establish past use of the land and determine the nature of adjoining and extending habitats; such information aids in the understanding of how the site might interact with its surroundings ecologically and its value in that context, and how the development may impact at a wider scale.

3.4 In addition, the West Suffolk Council 'View or comment on planning applications' online function was utilised to help inform the desktop study by analysis of existing publicly accessible ecological survey results that have been carried out locally within the previous five years.

3.5 A commercial data request to the Local Environment Records Centre serving the area, in this case Suffolk Biodiversity Information Service (SBIS), has not been sourced at this time, with the combination of online EPSML data, previous ecological reporting at the site and in close proximity and the daytime survey data available to the ecologist considered to contain enough information in relation to the protected species likely to be present on site. **If, however, a data search is considered to be necessary by the Local Authority or advisory body to better inform the appraisal, a proportionate data search should be commissioned with results interpreted into the conclusions and recommendations of a re-issued / updated report.**

1) The Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2020) states data searches in:

"*Situations where the data search would be extremely unlikely to provide information needed to inform the assessment, due to the scale and location of the proposed development. The appropriateness of excluding a data search will need to be judged on a case-by-case basis as, in most situations, it will be essential to carry out such a search even if the development is very small or is likely to have a low impact."*

Field survey

3.6 A daytime preliminary ecological appraisal (PEA) was conducted on the 20th February 2024 in dry, windy conditions (10ºC), average wind 4/12 (Beaufort scale), average 80% cloud cover, by the following surveyors (see **Table 3.1** overleaf).

Table 3.1 – Site surveyor credentials

Name	Description of most relevant credentials
Mr. J. Pescod Qualifying CIEEM	• Senior Ecologist with extensive training and six years of professional consultancy experience, • MRes Advanced Biological Sciences, BSc (Hons), • Holder of a Natural England Great Crested Newt: CL08 Class 1 licence (2022-10653-CL08-GCN), • Accredited agent on the Natural England Class 2 bat license of Mrs K Wilding CEnv MIEMA ACIEEM (CLS-14227), • Holder of a FISC Level 4 (2022) (Botanical competency), • Holder of a Civil Aviation Authority Flyer ID.
Mr. B. Richards Qualifying CIEEM	• Consultant Ecologist with 2 years training and experience, • MBiolSci in Biological Sciences (Zoology), • Accredited agent on the Natural England Great Crested Newt: CL08 Class 1 licence (2018-34062-CLS-CLS) of Mr. M. Pritchard ACIEEM, • Accredited agent on the Natural England Class 2 bat license of Mrs K Wilding CEnv MIEMA ACIEEM (CLS-14227), • Holder of a FISC Level 3 (2023) (Botanical competency), • Holder of Civil Aviation Authority Operator & Flyer ID.

Floristic assessment

Habitats

3.7 The survey followed the UK Habitat Classification Version 2.0 (UKHabs, 2023) methodology, which was introduced as the successor to the Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Methodology standards (JNCC, 2010) in conjunction with the nationwide roll out of Biodiversity Net-gain. Survey techniques were also carried out with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Technical Guidance Series "Guidelines for Preliminary Ecological Appraisal, 2nd Edition" (CIEEM, 2017).

Vegetation

3.8 During the survey walkover, botanical assemblages were assessed, and the land was inspected for the presence of red-listed (Stroh et al., 2014; Hodgetts, 2011), s.41 and LBAP species alongside specially protected species as listed under Schedule 8 of the Wildlife and Countryside Act (WCA) (1981) (as amended) and / or Schedule 5 The Conservation of Habitats and Species Regulations (2017) (as amended). Species nomenclature follows Stace, C. (2019) – definitive English names.

3.9 In addition to attributing ecological value to red-listed / BAP species, in accordance with existing CIEEM guidance, a geographic frame of reference is also adopted. Plant species and habitats may be recognised for their ecological value on a geographical scale which is adopted on a site-to-site basis (*International – National – Regional – County/Vice-County – Local*). For botanical species list compiled in full, see **Appendix II**.

3.10 In combination with assessing the area in relation to flora and habitats of conservation importance, the land was also assessed in relation to the presence of invasive non-native species (INNS) as listed under Schedule 9 (Part II) of the Wildlife and Countryside Act (1981)

(as amended) and Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019 (IASO).

Faunal assessment

3.11 During site walkover, direct presence and / or evidence of priority fauna encountered was documented, whilst in tandem the area was assessed for the potential to support the priority species discussed in **Section 6.0**. The walkover also aimed to identify any ephemeral pools or unmapped waterbodies.

Bats

3.12 Criteria for preliminary bat roost assessment are based upon the determinants given in the Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023) (see **Figures 3.1 – 3.3**).

3.13 The site was assessed for bats; a daytime bat walkover (DBW) was undertaken to observe, assess and record any habitats or features suitable for usage by bats, either as commuting, foraging or roosting provision. Wider connectivity to other habitats was also considered during the DBW.

3.14 Buildings and other permanent / semi-permanent structures were subject to a preliminary roost assessment (PRA), to identify potential areas which may be of value to bats and to determine evidence of use. This typically involves a systematic search of the external aspects of any structure(s), comprising an investigation of features known to be used by bats (for example roofing material, soffits, fascia, lead flashing hanging tiles) using a high-powered torch and close-focus binoculars, where necessary. Where possible, an internal assessment of the structure was also carried out, with the aid of a high-powered torch and endoscope, where necessary, to identify any evidence of bat use of a structure. Field signs of bats typically comprise bat droppings, urine splashing, fur-oil staining, incidental animal presence, dead specimens and / or the presence of prey items, such as moth wings.

3.15 Trees (where present) would be subject to a ground level tree assessment (GLTA) using equipment such as close-focus binoculars and a high powered-torch. Potential roost features (PRFs) can include woodpecker holes, rot holes, hazard beams, other vertical or horizontal cracks or splits in stems and branches, partially decayed lifted bark, knot holes, man-made holes, tear-outs, cankers in which cavities have developed, other hollows or cavities, including butt-rots, double-leaders forming compression forks with included bark, gaps between overlapping stems or branches, partially detached climbing species with stem diameters in excess of 50mm or pre-existing bat / bird boxes. These PRFs can then be determined as PRF-I or PRF-M, dependent on their suitability for individual / low numbers of bats or their capability to host multiple bats.

3.16 Factors considered during the preliminary roost assessment include:

- Practical experience of the surveyor,
- Knowledge of bat species relevant to the site location and geographical range,
- Nature of the immediate / surrounding habitat in relation to foraging opportunities,
- Presence / absence of roost potential,
- Value and types of roost potential, if present (i.e. – maternity, hibernation, transitional).

Table 4.1. Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Potential suitability	Description	
	Roosting habitats in structures	**Potential flight-paths and foraging habitats**
None	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).
Negligible[a]	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[b] and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats[c]).	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions[b] and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions[b] and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

a Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant'. This category may be used where there are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute).

b For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

c Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2016 and Jansen *et al.*, 2022). Common pipistrelle swarming has been observed in the UK (Bell, 2022 and Tomlinson, 2020) and winter hibernation of numbers of this species has been detected at Seaton Delaval Hall in Northumberland (National Trust, 2018). This phenomenon requires some research in the UK, but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in prominent buildings in the landscape, urban or otherwise.

Figure 3.1 – *BCT guidelines extract*

Table 4.2. Guidelines for assessing the suitability of trees on proposed development sites for bats, to be applied using professional judgement.	
Suitability	**Description**
NONE	Either no PRFs in the tree or highly unlikely to be any
FAR	Further assessment required to establish if PRFs are present in the tree
PRF	A tree with at least one PRF present

Figure 3.2 – *BCT extract on tree roost suitability criteria*

Table 6.2. Guidelines for categorising the potential suitability of PRFs on a proposed development site for bats, to be applied using professional judgement.	
Suitability	**Description**
PRF-I	PRF is only suitable for individual bats or very small numbers of bats either due to size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

Figure 3.3 – *BCT extract on tree roost categorisation criteria*

Birds

3.17 The site was inspected for evidence of nesting and suitability for relevant species. Bird species observed and heard were recorded on site, and a search was made for nest material, or areas suitable for nesting – this can take the form of searching structures, woody vegetation, semi-aquatic vegetation such as reeds and / or ground flora. Elevations of any buildings or structures on site were inspected for evidence of birds that show a high dependency upon built structures, many of which are in a state of decline. These might include the following species for example (list non-extensive):

- **House martin** (*Delichon urbica*): Birds of Conservation Concern (BoCC) red status,
- **House sparrow** (*Passer domesticus*): BoCC red status,
- **Starling** (*Sturnus vulgaris*): BoCC red status,
- **Swift** (*Apus apus*): BoCC red status.

3.18 Additional to the site's capacity to support generally common species for breeding, the area was also subject to an assessment for wider capacity to support species with extra protection under Schedule 1 of the Wildlife & Countryside Act (1981) (as amended) and other priority species.

Other terrestrial mammals

3.19 The walkover included an assessment for the presence / suitability of badger (*Meles meles*), which includes signs of activity such as prints, hairs, digging, setts, 'runs' leading to and from a sett and the existence of latrines or 'snuffle' holes where badgers have foraged in the ground.

3.20 The site was also assessed for the presence / suitability of European hedgehog (*Erinaceus europaeus*) and other priority mammals.

3.21 A site-based assessment was undertaken in reference to hazel dormouse (*Muscardinus avellanarius)*. Direct evidence of this species can include gnawed hazel nuts with smoothed edges or nests in suitable vegetative features, though the surveyors also aimed to assess general suitability for this species, which are known to utilise a wide variety of 'woody' habitats such as plantations, hedgerow and scrub, as per The Dormouse Conservation Handbook 2nd Edition (English Nature, 2006). Signs of browsing by deer and other grazing animals, which are known to suppress scrub regeneration which provides suitable habitat for this species, were also recorded by the surveyors.

3.22 Where potential habitat suitability is confirmed, in areas where this species is known to be present, survey methodology can include searching for the aforementioned evidence, alongside the usage of hair tubes, nest boxes and nest tubes.

Herpetofauna

3.23 During desktop assessment, a 250 metres radial search was undertaken from a site central grid reference in relation to the presence of ponds, ditches or other water bodies that may support great crested newt (GCN) (*Triturus cristatus*). The information gathered would then be used to aid in establishing if more detailed surveys are required.

NB: *English Nature's (now Natural England) Great Crested Newt Mitigation Guidelines (2001) states ponds within 500m of a proposed development site should be considered for their potential to support GCN, however, in some instances this distance may be reduced to 250m due to the presence of physical barriers and obstructions or based on the likely magnitude of impacts arising from the proposed development.*

3.24 Following current best practice considering the partial roll out of District Level Licencing (DLL) across England and based on likely effects, a proportionate assessment of the water bodies range within 250m from site has been applied. Where a development is anticipated to affect GCN the search can be extended up to 500m or more.

3.25 The GCN Habitat Suitability Index (HSI) is a quantitative measure of habitat quality evaluating the suitability of habitat for GCN. The HSI outputs a result of between 0 and 1, derived from an assessment of ten habitat variables known to influence the presence of newts, with a result of 1 being optimal habitat (high probability of occurrence), while an HSI of 0 is very poor habitat (minimal probability of occurrence). The HSI is calculated on a single pond basis but takes into account surrounding terrestrial habitat and local pond density. The tool is particularly useful in survey and mitigation; one benefit is that it can be undertaken in a single field visit (with supporting desk work) and at any time of the year (though some variables are more easily measured in spring and summer).

Its main uses are:

- *In surveys, to assess habitat quality in a repeatable, objective manner. In particular, the HSI allows individual factors that influence newt presence to be easily identified. These factors could help explain a very high or very low count. A high HSI can justify employing additional survey effort or methods if no newts are found initially.*
- *In impact assessments, to allow a measure of how damaging a development could be. HSI might also be used as a screening tool to select no impact or minimal impact options.*
- *In risk assessments, helping to decide whether an offence might be committed, and therefore whether a licence should be applied for. If a pond has a very low HSI score (say <0.5) then there would typically be a minimal chance of GCN presence. Hence, with due care and in limited circumstances the HSI might be used in the absence of newt surveys to help conclude that an offence is highly unlikely and therefore work could proceed in that area without a licence. This application of the HSI should only be used*

where the predicted impacts - were newts to be present - would be low (e.g. development at least 100m from pond, permanent habitat loss <0.5ha or temporary habitat loss <5ha). The developer should be aware that there would still be a risk of committing an offence, but it would typically be so low as to be negligible. Obviously, note that if HSI >0.5, this is not confirmation of newt presence; a newt presence/absence survey would be required to confirm this.

- *In habitat enhancement, HSI could be used to identify the low-scoring factors in an existing pond that need addressing to improve its quality for newts.*
- *In post-development monitoring, to allow an assessment of habitat condition.*

3.26 GCN HSI Limitations:

The GCN HSI is not a substitute for undertaking newt surveys; it indicates but cannot confirm presence or absence of GCN. A licence application that infers GCN presence solely from HSI data (i.e. no newt survey data presented) will be rejected. Very low HSI scores may be used along with scheme details to infer a minimal chance of committing an offence in low impact situations. This is on a risk assessment basis and developers should be aware of the potential hazards of this approach. Care should be taken when interpreting low HSI scores; for example, a low scoring pond close to an occupied newt pond may still support newts.

3.27 The site and surrounding habitats were also assessed relative to their potential to offer suitability for wider, generalist amphibians, in addition to GCN, for example common toad (*Bufo bufo*) and common frog (*Rana temporaria*).

3.28 The site and its surroundings were assessed for suitability for use by reptiles, with particular attention paid to features that could be used as basking areas (*e.g.* south-facing slopes), hibernation sites (*e.g.* banks, walls, leaf litter, piles of hardcore) and opportunities for foraging (*e.g.* rough grassland and scrub). Beebee & Griffiths (2000) state specific habitat preferences of common UK reptiles:

- Common lizard (*Zootoca vivipara*) use a variety of habitats from woodland glades to heaths, walls and pastures, as well as brownfield sites.

3.29 In assessment of a site for reptiles several important habitat characteristics are considered, outlined in **Table 3.2** below, as derived from the Reptile Habitat Management Handbook (Edgar, 2010).

Table 3.2 – Important habitat characteristics for reptiles

1. Location (in respect of species range)	**7. Connectivity to good quality habitat**
2. Vegetation structure	**8. Prey abundance**
3. Insolation	**9. Refuge opportunity**
4. Aspect	**10. Hibernation habitat potential**
5. Topography	**11. Disturbance regime**
6. Surface geology	**12. Egg-laying site potential**

Invertebrates

3.30 The site was assessed for the presence of features that should be considered of high value to invertebrates. Several important features were considered, based on the assemblage descriptions provided within the Research Report "Surveying terrestrial and freshwater invertebrates for conservation evaluation" (NERR005, 2007), including but not limited to:

- Wood decay,
- Early successional mosaic habitat,
- Shaded ground layer,
- Still and flowing water.

Quality Assurance (QA)

3.31 The results, conclusions and recommendations of this report are based on a number of factors i.e.

- Skills and experience of the surveyor,
- Knowledge of flora and fauna relevant to the site location and geographical range,
- Nature of the immediate and surrounding habitat in relation to shelter, foraging and commuting opportunities.

3.32 The results, conclusions and recommendations of this report have been assessed by Mrs. K. Wilding, Director of Tyrer Ecological Consultants Ltd, and her assessment concurs with the findings and recommendations of the surveyors Mr. J. Pescod and Mr. B. Richards.

4.0 Limitations

4.1 This report does not contain a comprehensive list entailing the totality of botanical taxa on site. Species listed within **Appendix II** are recorded from a combination of the seasonal timing that the survey took place and botanical identification skills of the surveyor. Many plant species are only evident at certain times of the year; consequently, it is possible that some plant species may have gone undetected.

4.2 The optimal time of the year to carry out a preliminary ecological appraisal / UK Habitats survey is April to October; the survey was therefore carried out within a sub-optimal period. It is considered, however, that enough information was gathered during the diurnal appraisal on which to base ecological conclusions and recommendations, based on the habitat types encountered presenting no significant issues in such regard.

4.3 Significant access constraints are present at the site; no physical access was possible to the interior of the structure owing to its' unsafe and derelict nature. This constraint was overcome via the usage of close focus binoculars through the open windows as well as the operation of a UAV which allowed the surveyors to make a visual assessment of the roof the structure and other areas of the building which were not visible from ground level.

4.4 The survey took place outside of both the active bat season and the breeding bird season; whilst sub-optimal, survey timing is not considered a constraint in this instance as evidence of both of these species is evident all year round and suitability can be assessed by a competent surveyor at any time of the year.

4.5 In considering possible survey constraints, whilst a number of individual limitations were encountered by the surveyor, it is considered that enough evidence has been sourced from a combination of desktop and field assessments to form sound ecological conclusions, and that no significant limitations were experienced might adversely influence the results and recommendations of this report.

5.0 Desk Study Results

5.1 The site is located to the south of Haverhill Road, approximately 25.3km south-east of Cambridge city centre. The site broadly comprises a derelict structure, car park, grassland and successional scrub, with hedgerows and scattered trees also present, totalling an estimated area of 0.3 hectares (ha) (see **Figure 5.1** below for location of the site within the surrounding landscape).

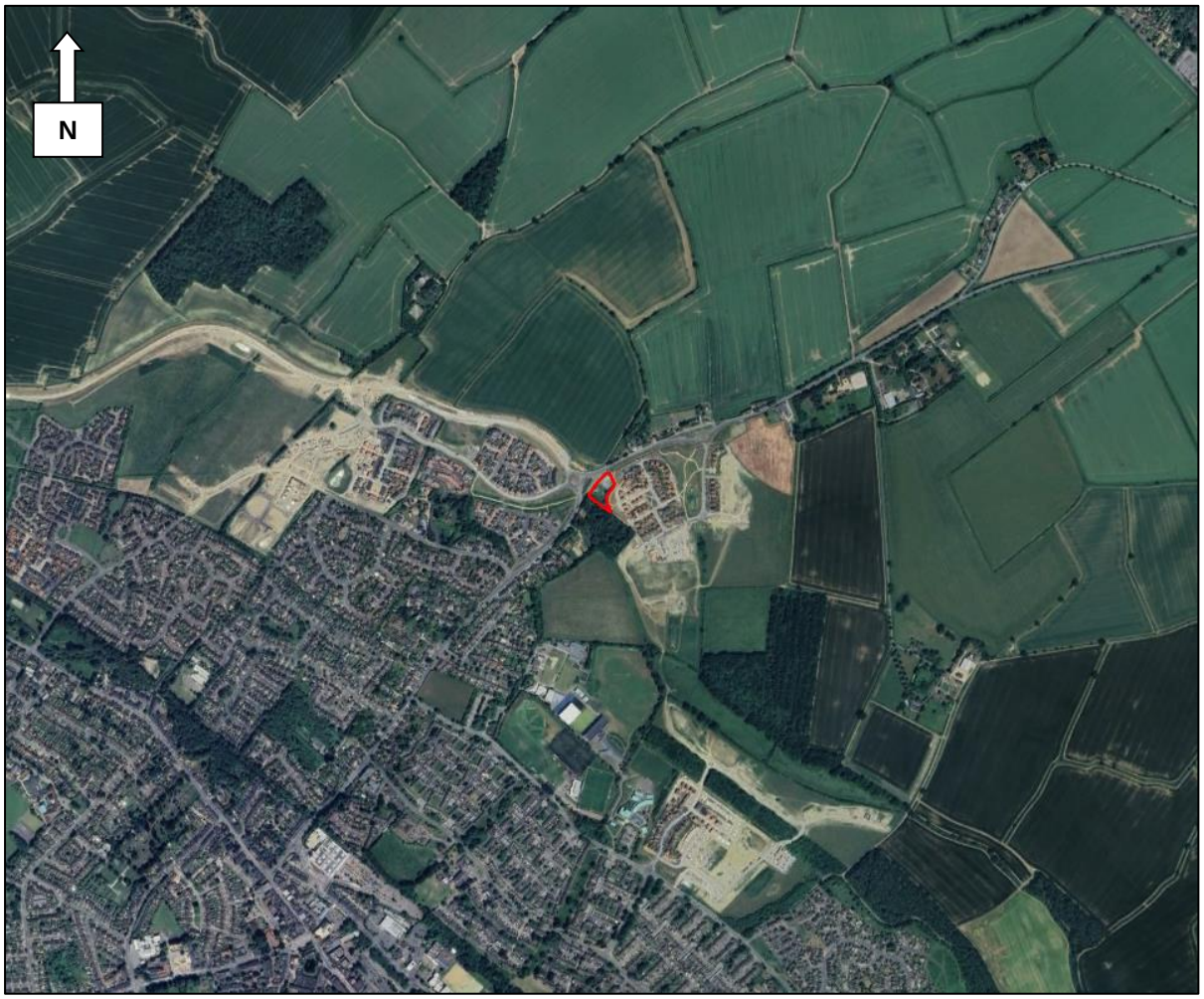


Figure 5.1 – *Location of red line boundary within surrounding landscape (© Google Earth Pro 2024)*

5.2 The immediate environment is sub-urban to the east and west, with two large scale residential developments present, with associated landscaping, sustainable drainage systems (SuDS), road networks and walkways. To the south-west, the town of Haverhill can be found, with typical infrastructure and development. Beyond Haverhill and to the north of the site is located expanses of agricultural arable land, demarcated by hedgerows and tree lines.

Relevant planning history

5.3 A previous application has been undertaken at the site (Application Reference Number: **DC/20/0479/FUL**), for which a PEA was produced by T4 Ecology Ltd in March 2020. Notable recommendations from the report include a bat considerate lighting scheme, precautionary measures for badger, timing implications for nesting birds and ecological enhancements.

5.4 Several large-scale housing developments have been constructed in close proximity to the site, under a large number of application references, though those considered most applicable are **SE/09/1283** & **DC/15/2151/OUT**.

Designated sites

5.5 There is one statutory designated site for nature conservation within 2.0km of the site (see **Table 5.1** for details and **Figure 5.2** overleaf for a visual aid).

Table 5.1 – Statutory designation type and reason for designation within 2.0km buffer

Site name	Designation type	Interest features
Haverhill Railway Walks (1.1 km south)	Local Nature Reserve (LNR)[1]	A 14.09 ha site for which the Natural England citation states: "*With much of its length now covered with scrub and larger trees, the railway provides a valuable wildlife corridor. It offers food and shelter to a wide range of birds, animals, insects and plants. All five kilometres (3 miles) of the disused line is now part of the Haverhill Local Nature Reserve*."

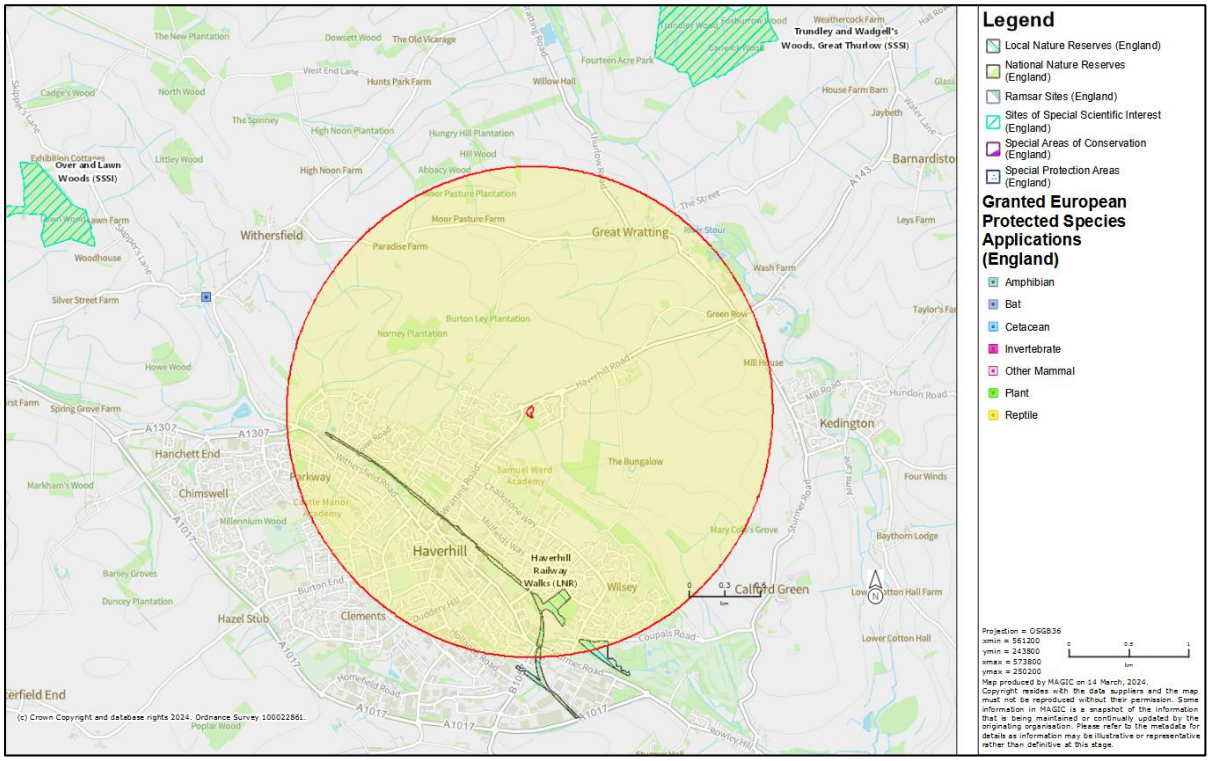


Figure 5.2 – *Designated site data for the area within 2.0km of application site © MAGiC Maps 2024*

5.6 The site is positioned within the Impact Risk Zone (IRZ) for a number of designated sites in the wider landscape, with the nearest being Trundley and Wadgell's Woods, Great Thurlow Site of Special Scientific Interest (SSSI) at a distance of 3.0km. Based on the IRZ information available on MAGiC Maps, the site does not fall under any of the categories which would trigger further consultation with Natural England.

5.7 A number of non-statutory designated sites exist within a 2.0km buffer, with the most relevant being Ann Suckling Way County Wildlife Site (CWS). Given the degree and the nature of spatial separation, at a distance of at least 0.8km and buffered via dense residential development, the works are considered unlikely to impact upon this site.

[1] Citation available: https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1082982

Habitats

5.8 An online search of MAGiC Maps identified the following priority habitats within a 2.0km search radius (see **Table 5.2** overleaf).

Table 5.2 – Priority habitats located within 2.0km buffer

Habitat Type	Designation	Distance to site
Ancient woodland	Ancient & semi-natural woodland	0.9km north-west
Ancient woodland	Ancient replanted woodland	1.0km north-west
Coastal and floodplain grazing marsh	Priority Habitat Inventory	1.9km north-east
Deciduous woodland	Priority Habitat Inventory	Adj. to south
Good quality semi-improved grassland	Priority Habitat Inventory	1.4km south
Traditional orchard	Priority Habitat Inventory	1.8km north-east
Woodpasture and parkland	BAP Priority Habitat	1.7km north-east

Vegetation

5.9 The site is positioned within a moderate' zone of the 'summarised botanical value map 2022[2], in the moderate category for boundary and woodland habitats, indicating that the area is host to some Rare, Scarce and Threatened (RST) botanical species and / or has a moderate proportion of species indicative of priority habitats within the prior discussed broad habitat types.

5.10 A detailed desktop assessment of publicly accessible ecological reports revealed no evidence of protected botanical species within the site or a 2.0km buffer.

Bats

5.11 An online search of MAGiC Maps 2024 revealed that no European Protected Species Mitigation Licences (EPSMLs) have been granted within a 2.0km buffer of the site. The closest EPSML is located at a distance of 2.0km to the west and pertains to the damage of a breeding site for common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) bats.

5.12 A detailed desktop assessment of publicly accessible ecological reports revealed that a number of further bat species have been recorded using the area surrounding the site, notably barbastelle (*Barbastella barbastellus*), serotine (*Eptesicus serotinus*), brown long-eared (*Plecotus auritus*) and a myotis (*Myotis sp.*).

5.13 Whilst the housing developments to the west and east are typically highly illuminated, both have been subject to some form of ecological lighting plan which has retained commuting value for bats within the landscape. In addition, the hedgerows and tree lines which demarcate field margins provide bats with a network of commuting routes through the landscape, and link the site to large parcels of woodland, which are located both immediately adjacent to the site in the form of priority deciduous woodland as well as ancient woodland, both semi-natural and replanted.

[2] Further information available here

Birds

5.14 The site does not fall within areas of grassland, farmland, woodland or wetland which are typically associated with notable bird assemblages, though bird species present in the area would have easy access to the site via the open farmland to the north and east. These areas of farmland provide potentially suitable hunting habitat for barn owls (*Tyto alba*) and other raptors.

5.15 The aforementioned linear features suitable for bats would also afford connective habitat for bird species in the wider landscape.

5.16 A detailed desktop assessment of publicly accessible ecological reports revealed the presence of a number of protected bird species within the search buffer, though notably species returned include yellowhammer (*Emberiza citrinella*), lapwing (*Vanellus vanellus*) and sparrowhawk (*Accipiter nisus*).

Other terrestrial mammals

5.17 The site lies in close proximity to semi-natural habitats including a parcel of priority deciduous woodland immediately adjacent to the south of the site. Protected mammal species such as badger and European hedgehog would find favourable habitat within feasible connectivity to the site. Whilst brown hares may utilise the agricultural land in the wider area, the location of the site in proximity to extensive residential developments is likely to discourage this species.

5.18 Potentially suitable habitat for hazel dormouse is present within the surrounding habitat, with this species known to utilise coniferous plantations as well as broadleaved woodland, and the number of hedgerows scattered through the landscape afford potential pathways by which this species could disperse across the landscape.

5.19 A detailed desktop assessment of publicly accessible ecological reports revealed the presence of European hedgehog, badger and hazel dormouse from within a 2.0km search radius.

Herpetofauna

5.20 No EPSMLs in relation to GCN have been granted within a 2.0km search radius of the site (see **Figure 5.2** for a visual aid).

5.21 A single ‘GCN Class Survey Licence Return’ is present within the search buffer, pertaining to a presence record from 2014 at a distance of 1.2km to the north-east.

5.22 A total of five waterbodies were identified within a 250m radius of the site (see **Figure 5.3** overleaf).

5.23 Given the presence of a pond network in proximity to the site and the mosaic of part semi-natural surrounding habitat, the presence of common amphibians such as common frog and common toad is possible, as well as reptile species such as grass snake, common lizard and slow-worm.

5.24 A suite of GCN presence / absence surveys were undertaken in relation to **DC/15/2151/OUT** in 2015, which subsequently revealed the presence of no GCN in any of the ponds to the east of the site. The remaining ponds within 250m of the current application site appear to have all been constructed since this time.

5.25 A detailed desktop assessment of publicly accessible ecological reports revealed the presence of GCN, common toad, common frog, grass snake, slow-worm and common lizard within a 4.0km buffer of the Fox Public House.

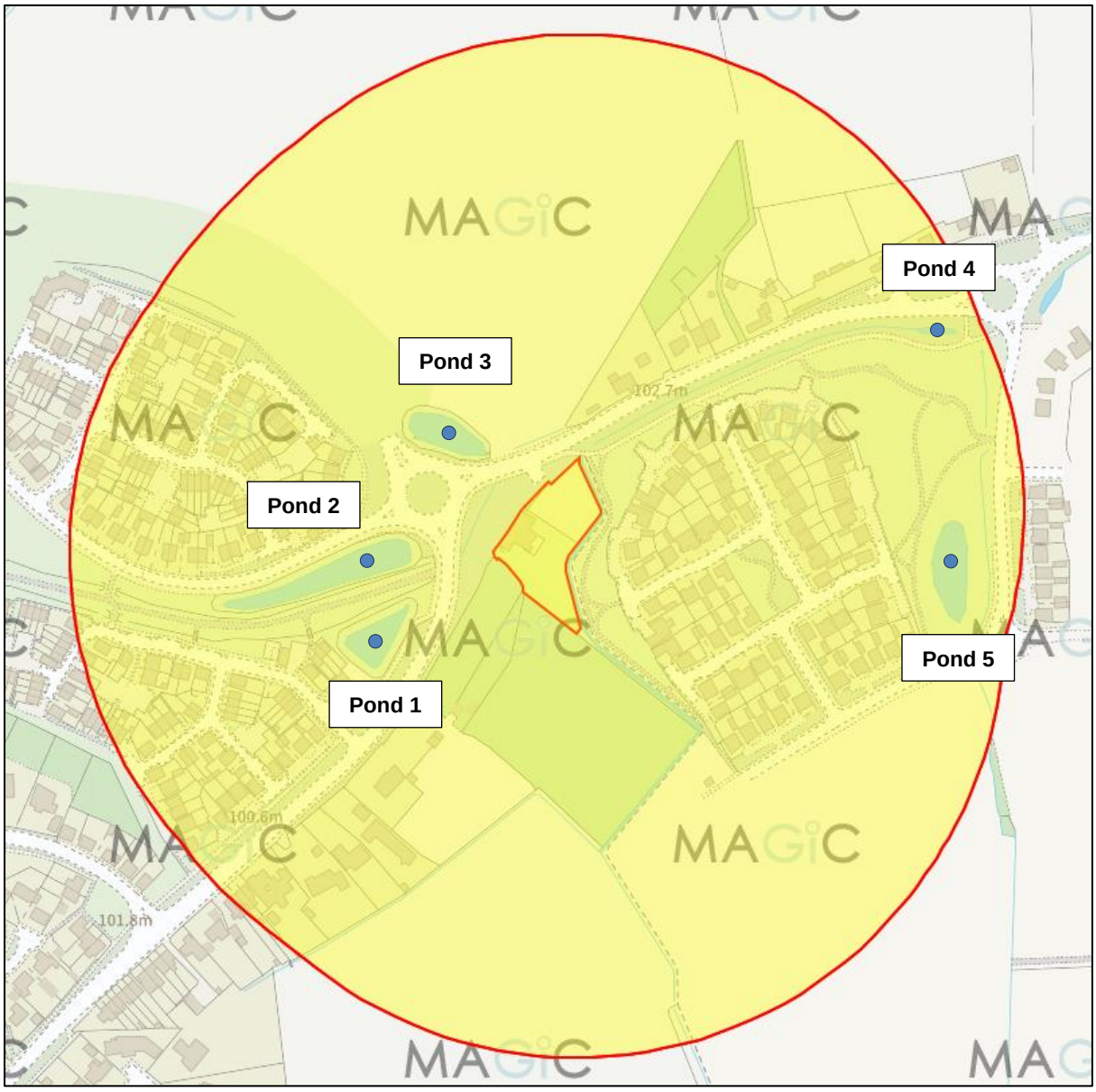


Figure 5.3 – *Location of ponds in 250m buffer © MAGiC Maps 2024*

Invertebrates

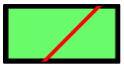
5.26 The developed areas to the west and east and the agricultural fields to the north are collectively unlikely to host nationally significant invertebrate populations. The ponds in proximity have the potential to support a diverse invertebrate assemblage, though given the high levels of development in the vicinity of the site this is considered unlikely.

6.0 Field Survey Results

6.1 Habitat survey

6.1.1 See **Table 6.1.1** (below) for baseline information and habitat descriptions; refer to **Appendix I** for any supporting imagery; additional scientific names are given in **Appendix II**. Refer to **Appendix IV** – UK Habitats Map for the location of described habitats & Target Notes (TN).

Table 6.1.1 – UK Habitat types within the survey area

Area habitat	Sec. Codes	Description
 **g4** Modified grassland	**10** Scattered scrub **16** Tall forbs **81** Ruderal or ephemeral **128** Tall or tussocky sward **816** Commercial premises open space	A number of parcels of modified grassland are present across the site, likely at one point forming the 'pub garden' of the now vacant public house. The parcels have a total estimated area of 0.0584ha, and feature graminoids such as abundant Yorkshire-fog (*Holcus lanatus*), red fescue (*Festuca rubra* **agg**.) and perennial rye-grass (*Lolium perenne*), as well as tussocky false oat-grass (*Arrhenatherum elatius*) and cock's-foot (*Dactylis glomerata*). Forb species present are typical of enriched grassland, and include yarrow (*Achillea millefolium*), ribwort plantain (*Plantago lanceolata*), dandelion (*Taraxacum*), white clover (*Trifolium repens*), ox-eye daisy (*Leucanthemum vulgare*), dove's-foot crane's-bill (*Geranium molle*), germander speedwell (*Veronica chamaedrys*) and mugwort (*Artemisia vulgaris*), as well as taller species such as hogweed (*Heracleum sphondylium*), common nettle (*Urtica dioica*), cow parsley (*Anthriscus sylvestris*), wild teasel (*Dipsacus fullonum*) and rosebay willowherb (*Chamerion angustifolium*). Also present within the parcel are small stands of bramble (*Rubus fruticosus* **agg**.), willow (*Salix spp*.), blackthorn (*Prunus spinosa*) and hawthorn (*Crataegus monogyna*), which are encroaching from the neighbouring scrub habitats due to a lack of management.
 **h3a** Blackthorn scrub	**16** Tall forbs	A parcel of scrub dominated entirely by blackthorn is present to the east of the site, with an estimated area of 0.0143ha. Other species present include tall forbs such as hogweed, common nettle and rosebay willowherb, though ground cover is typically somewhat sparse given the dense blackthorn above. Some patches of false oat-grass are also present.
 **h3d** Bramble scrub	**16** Tall forbs	Several spatially distinct though functionally identical parcels of bramble scrub are present, totalling an area of circa 0.0659ha. These parcels are dominated by bramble, with giant blackberry (*Rubus armeniacus*) making up a large portion of the dense scrub, though the scrub appears to have succeeded over historically managed habitats within the last 5 years following the halting of management on site.
 **h3j** Willow scrub	**16** Tall forbs	Within the bramble scrub to the east of the site is a distinct parcel of what appears to be secondary successional willow growth, with bramble cover greatly reduced. This parcel is dominated by regenerative willow and has an estimated area of 0.0094ha.

 **u1b5** Buildings	**825** Ruined building	The former Fox Public House is present to the west of the site, totalling an estimated 0.0264ha. See Section 6.3 for information regarding the structural composition of the building and further information in relation to its suitability for protected species.
 **u1b6** Other developed land	**81** Ruderal or ephemeral **804** Car park	A large area of tarmacked hardstanding is present to the north of the site, understood to have been used for parking, with additional areas of paved hardstanding also present around the former pub. These parcels total an area of circa 0.1194ha, with the car park also having low levels of encroachment from vegetative species, largely from bryophytes such as springy turf-moss (*Rhytidiadelphus squarrosus*) and rough-stalked feather-moss (*Brachythecium rutabulum*).
Linear habitat	**Sec. Codes**	**Description**
 **h2a6** Other native hedgerow	**522** Native	An other native hedgerow is present to the eastern and northern site boundaries, with an estimated length of 0.058km. The feature is dominated entirely by blackthorn, with occasional hawthorn scattered throughout. Ground cover is typically bare soil with minimal vegetation, though occasional common nettle can be found.
 **h2b** Non-native & ornamental hedgerow	**523** Non-native	An ornamental hedgerow dominated entirely by cherry laurel (*Prunus laurocerasus*) is present to part of the western site boundary, with an approximate length of 0.023km. Ground cover is again sparse given the dense nature of the cherry laurel.
Target Notes		
1	Location of piles of log / waste material	

6.1.2 One priority habitat was recorded on site, namely the other native hedgerow which is designated both as a UK BAP and a Suffolk BAP habitat.

6.2 Vegetation

Notable species

6.2.1 No species of conservation importance were located anywhere within the site during the appraisal.

Invasive non-native species (INNS)

6.2.2 No INNS, listed as such under either Schedule 9 (Part II) of the Wildlife & Countryside Act (1981) or Schedule 2 of The Invasive Alien Species (Enforcement and Permitting) Order 2019 (IASO) were recorded within or adjacent to the site boundary.

6.3 Bats

6.3.1 One structure is present on site; a large, complex, multi-storey former public house, which is brick-built with a part pitched and part hipped slate roof, with approximate maximum dimensions of 25m x 16m x 5m (length x width x height). The structure features components

such as timber barge boards, timber soffits, timber sills, concrete lintels, lead-flashing and what, from external observation, appear to be cavity walls. Single storey extensions are present to the north, east and south, with timber cladding on the southern extensions. In respect of its condition, the surveyor is not qualified to assess structural state; however, the aesthetic condition of the building was adjudged to be very poor, with clear evidence of vandalism, abundant missing slates and missing windows.

6.3.2 Internally, no access was possible given the poor state of repair and safety concerns for the surveyors. The UAV allowed the surveyors to look into the building through missing windows, which allowed for an assessment of the construction style. A loft is present, though the floor has partially fallen through, with the roof being of purlin and rafter construction. Given the missing windows and slates, the main body of the loft is likely cool and draughty, and was observed to be highly illuminated in part.

6.3.3 Based on the above, the loft space is considered unsuitable for the breeding purposes of loft-dwelling bat species such as the brown long-eared bat; these species require dark loft spaces with constant warm and non-draughty thermal dynamics. This does not necessarily rule out usage of the structure for alternative roosting purposes, with favourable foraging and commuting habitat in proximity to the site. No evidence of loft-dwelling species was encountered by the surveyor, though this is to be expected given the access constraints.

6.3.4 A bitumastic underfelt is visible beneath the rafters of the roof; where present, underfelt or other such roof lining typically improves a buildings value to bats, notably for crevice-dwelling bats of the Pipistrellus genus, whereby the bats roost between overlaps of the bitumen and other material. No evidence of crevice-dwelling species was encountered by the surveyor, though this is to be expected given the access constraints.

NB: *The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.*

6.3.5 Externally, the roof itself is almost entirely missing, with ingress to the interior of the structure and potential crevices / suitable roosting locations present in abundance, including missing windows, doors and splits in the bitumen underfelt. External PRFs also include potential access to the cavity wall at several locations, areas of degradation in the timber sills which could provide potential crevices, as well as gaps beneath the timber barge boards and soffits. See **Appendix I** for indicative examples of PRFs.

6.3.6 Whilst no access to the structure was possible due to safety concerns, a detailed investigation of publicly accessible ecological reports indicates that a basement is present beneath the former pub. The previous ecological report at the site states that this is entirely flooded and unsuitable for roosting bats, both in the active and the hibernation season. The author sees no reason to discount the previous findings, and the conclusions in respect of the cellar are considered to still apply.

6.3.7 Although the internal conditions were draughty and illuminated in part, given the abundance of crevice PRFs, presence of highly suitable habitat and the knowledge that at least 6 bat species are present in the surrounding landscape, the structure is duly categorised as pertaining to '**Moderate**' bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

6.3.8 No individual trees capable of hosting PRFs were located on site, though trees within the woodland to the south could potentially hold suitable features.

6.3.9 From a habitat suitability assessment in relation to bat activity, the site provides a mosaic of grassland and scrub, with these habitats likely to provide moderate value foraging habitat for the bat species in vicinity of the site. Immediately adjacent to the south of the site is priority deciduous woodland which would provide high value habitat for bats, and the hedgerows provide suitable commuting habitat, loosely linking the site to areas of ancient woodland in the wider landscape.

6.4 Birds

6.4.1 In relation to WCA Schedule 1 specially protected bird species such as barn owl (*Tyto alba*), no areas suitable for nesting were identified by the surveyor on site, with an absence of built or natural features suitable for usage by this species. The agricultural land to the north of the site could provide hunting value, though the habitat on site is of low value for this species and even occasional presence is considered unlikely.

6.4.2 Whilst no direct evidence of nesting birds was located on site, the hedgerows and scrub habitats could potentially support breeding common passerine species during the nesting bird season of March – August inclusive, and the building itself would provide a suitable nesting platform for birds associated with urbanisation, starling or house sparrow for example.

6.4.3 The grassland on site is not considered suitable for ground nesting species, though given the unmanaged nature of the site habitats they cannot be entirely ruled out.

6.5 Other terrestrial mammals

Badger & hedgehog

6.5.1 No field signs of badger, such as latrines, pathways, hairs, footprints, or feeding signs, for example snuffle holes and scratched trees / logs, were located within the site boundary. This species could feasibly access the site at will, however, with areas of woodland both immediately adjacent to the site and within the contiguous landscape. This species could, therefore, access the site at will, though site usage is likely restricted to foraging and commuting given the absence of suitable habitat features within the site itself.

6.5.2 Whilst no direct evidence of hedgehog was identified, the site habitats provide highly suitable habitat with a mosaic of grassland for foraging and scrub for refuge, with the hedgerows providing commuting pathways for this species. Their presence on site is therefore considered likely.

Hazel dormouse

6.5.3 No evidence of hazel dormouse, such as gnawed hazel nuts or nests in hedgerows / scrub, was identified on site by the surveyors. The site itself contains no hazel or honeysuckle, typically favoured by this species for food and nesting resources, and whilst the woodland to the south of the site is priority deciduous woodland, its small size decreases the viability of a potential population.

6.5.4 Whilst records of this species are visible in publicly accessible ecological reports in vicinity of the site, these appear to be focussed in areas surrounding large regions of woodland and other semi-natural habitats, or places where fruiting broadleaved trees are dominant.

6.5.5 Deer tracks were noted on site by the surveyors; the presence of these mammals indicates that the grazing pressure within the sites surrounding habitat may suppress the succession of habitat typically favoured by hazel dormouse.

6.6 Herpetofauna

Great crested newt (GCN)

6.6.1 Important elements to consider when assessing likely impacts against GCN includes:

- The scale, nature and magnitude of proposals,
- Site proximity to a potential breeding pond and to any additional ponds,
- Habitat linkage / barriers between potential breeding ponds and the site,
- Nature and extent of available terrestrial habitat around the pond,
- Area of site habitat loss,
- Nature of habitat to be lost and potential value to GCN,
- Most up to date Government guidance considering EPS.

6.6.2 As derived from the desktop assessment, a single 'GCN Class Survey Licence Return' is present approximately 1.2km north-east of the site.

6.6.3 The GCN HSI was applied to all five water bodies within 250m of the survey boundary (**P1 – 5**). See **Table 6.6.1** for ponds description and **Tables 6.6.2 – 6.6.3** for detailed HSI results in line with current guidance. **Figure 6.6.1** showcases relative pond occupancy proportions.

Table 6.6.1 – Pond description within 250m radial buffer, with included HSI score

Pond 1 (P1)	
P1 is located approximately 60m to the south-west of the site, has an estimated area of 600m^2, likely never dries, is 0% shaded 1m from shore, with no waterfowl impacts evident, a likely absence of fish, approximately 15 ponds within 1km, and is surrounded by poor quality terrestrial habitat. No assessment was made on water quality or macrophyte cover, given the time of year. Based on the above, the HSI value of the pond has been calculated as pertaining to **0.86 – Excellent**. See **Table 6.6.2** below for further information on the individual category scorings.	
Pond 2 (P2)	
P2 is located approximately 50m west of the site, has an estimated area of 1300m^2, likely never dries, has poor water quality with litter and a clear evidence of pollutant present at surface level, is 0% shaded 1m from shore, with no waterfowl impacts evident, a likely absence of fish, approximately 15 ponds within 1km, and is surrounded by poor quality terrestrial habitat. No assessment was made on macrophyte cover, given the time of year. Based on the above, the HSI value of the pond has been calculated as pertaining to **0.76 – Good**. See **Table 6.6.2** below for further information on the individual category scorings.	

Pond 3 (P3)	
P3 is located approximately 40m north-west of the site, has an estimated area of 700m^2, likely dries annually, has poor water quality with large amounts of litter and an extremely high turbidity, is 0% shaded 1m from shore, with no waterfowl impacts evident, a likely absence of fish, approximately 15 ponds within 1km and is surrounded by poor quality terrestrial habitat. No assessment was made on macrophyte cover, given the time of year. Based on the above, the HSI value of the pond has been calculated as pertaining to **0.61 – Average**. See **Table 6.6.2** below for further information on the individual category scorings.	
Pond 4 (P4)	
P4 is located approximately 220m north-east of the site, has an estimated area of 60m^2, likely dries sometimes, is 0% shaded 1m from shore, with no waterfowl impacts evident, a likely absence of fish, approximately 15 ponds within 1km, and is surrounded by poor quality terrestrial habitat. No assessment was made on water quality or macrophyte cover, given the time of year. Based on the above, the HSI value of the pond has been calculated as pertaining to **0.60 – Average**. See **Table 6.6.2** below for further information on the individual category scorings.	
Pond 5 (P5)	
P5 is located approximately 200m east of the site, has an estimated area of 900m^2, likely never dries, is 0% shaded 1m from shore, has evidence of minor waterfowl impacts, with potential presence of fish, approximately 15 ponds within 1km, and is surrounded by poor quality terrestrial habitat. No assessment was made on water quality or macrophyte cover, given the time of year. Based on the above, the HSI value of the pond has been calculated as pertaining to **0.78 – Good**. See **Table 6.6.2** below for further information on the individual category scorings.	

Table 6.6.2 – HSI quantitative assessment of the ponds

Pond ref	P1	P2	P3	P4	P5
SI1 – Location	1	1	1	1	1
SI2 – Pond area	1	0.9	1	0.1	0.98
SI3 – Pond drying	0.9	0.9	0.1	0.5	0.9
SI4 – Water quality		0.33	0.33		
SI4 – Shade	1	1	1	1	1
SI6 – Fowl	1	1	1	1	0.67
SI7 – Fish	1	1	1	1	0.67
SI8 – Ponds	1	1	1	1	1
SI9 – Terr'l habitat	0.33	0.33	0.33	0.33	0.33
SI10 – Macrophytes					
HSI	**0.86**	**0.76**	**0.61**	**0.60**	**0.78**

Table 6.6.3 – HSI scoring chart (a suitability scoring method for GCN developed by Mr. L. Brady)

Great Crested Newt (GCN) HSI Scoring					
HSI Score	<0.50	0.50 - 0.59	0.60 - 0.69	0.70 - 0.79	>0.80
Pond Suitability	Poor	Below Average	Average	Good	Excellent

NB: *The HSI for great crested newts is a measure of habitat suitability. It is not a substitute for newt surveys. In general, ponds with high HSI scores are more likely to support great crested newts than those with low scores. However, the system is not sufficiently precise to allow the conclusion that any particular pond with a high score will support newts, or that any pond with a low score will not do so. There is a positive correlation between HSI scores and the numbers of great crested newts observed in ponds. So, in general, high HSI scores are likely to be associated with greater numbers of great crested newts. However, the relationship is not sufficiently strong to allow predictions to be made about the numbers of newts in any particular pond.*

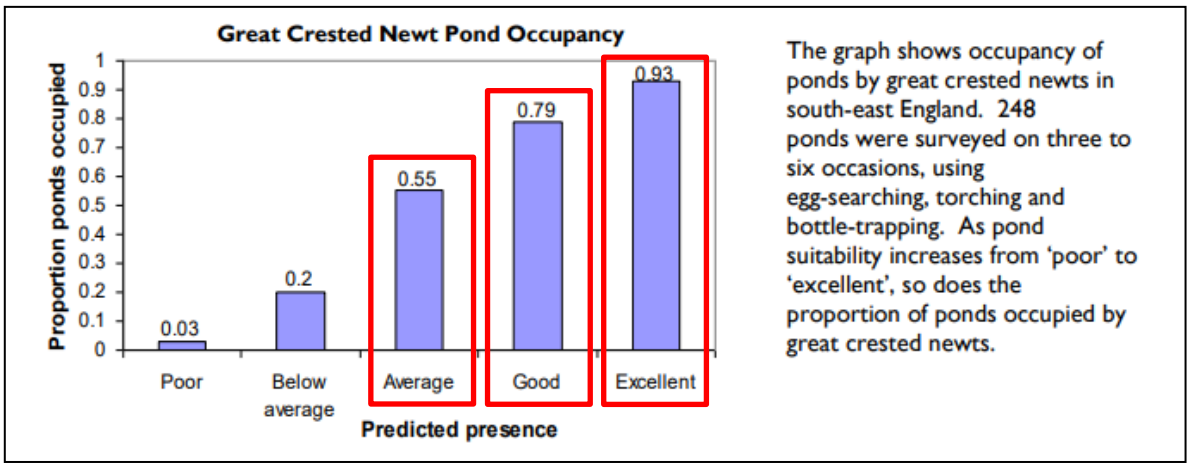


Figure 6.6.1 – *GCN pond occupancy © ARC UK*

6.6.4 In a terrestrial contextual assessment, areas of the site constitute suitable habitat for this species, with the scrub and hedgerow providing potential refuge opportunities. The areas surrounding the site, with the exception of the woodland to the south, have been subject to

extremely high disturbance over the previous 10 years with extensive residential development under several planning applications. These works are likely to have impacted significantly upon the ability of both individual and metapopulations of GCN, subject to their presence in the landscape, to move effectively between ponds, likely fragmenting the population, should it exist. Despite the lack of records in feasible connectivity to the site, the presence of individual GCN cannot be ruled out at this stage.

Wider amphibians

6.6.5 Given the presence of water bodies within 250m of the site boundary, the presence of more common, generalist amphibians during both their aquatic and terrestrial phase is considered likely in the site surrounding habitats. Given the on-site habitats, their presence within the site is considered possible.

Reptiles

6.6.6 The site itself is considered broadly unsuitable for reptiles, with no typical habitat features such as ecotones, basking areas or south-facing slopes. Despite the site providing minimal habitat value, given that reptiles are present in the surrounding ecosystem their presence is considered plausible, though only for very occasional commuting purposes.

6.7 Invertebrates

6.7.1 The site is absent of any habitats likely to support specially protected invertebrate species such as well-established woodland or unimproved grasslands and is similarly absent of habitat mosaics which provide a range of ecotones suitable to support a locally notable invertebrate assemblage.

7.0 Conclusions & Recommendations

Designated sites

7.1 The site is positioned within the Impact Risk Zone (IRZ) for a number of designated sites in the wider landscape, with the nearest being Trundley and Wadgell's Woods, Great Thurlow Site of Special Scientific Interest (SSSI) at a distance of 3.0km. Based on the IRZ information available on MAGiC Maps, the site does not fall under any of the categories which would trigger further consultation with Natural England.

7.2 A number of non-statutory designated sites exist within a 2.0km buffer, with the most relevant being Ann Suckling Way County Wildlife Site (CWS). Given the degree and the nature of spatial separation, at a distance of at least 0.8km and buffered via dense residential development, the works are considered unlikely to impact upon this site.

Habitats

7.3 The other native hedgerow to the northern and eastern site boundary is designated as a priority habitat under both the UK BAP and a Suffolk BAP. A study of the proposed plan for the site indicates that the hedgerow is being retained in full, though this feature warrants protective measures during the works to prevent any negative impacts arising. Enhancement measures could also improve the value of the feature for biodiversity; planting of additional woody species within the hedge could form a species-rich native hedgerow (h2a5). Suitable species have been suggested within **Appendix III**.

7.4 Construction works pose a risk of impact to the site-adjacent priority woodland to the south. It is therefore recommended that protective measures are enacted at the site prior to any works to ensure that no negative impacts will occur. A lighting plan is also recommended to be produced for the site to prevent spill into the priority woodland.

Vegetation

7.5 No priority vegetative species were identified on the site by the surveyor during the diurnal appraisal to warrant any specific intervention measures.

7.6 No INNS were identified on site by the surveyors.

7.7 Any landscaping or planting carried out during the works should consider local soil types and habitats, and as such should prioritise native species which will better tolerate the soil type present on site and provision for faunal species present in the immediacy.

Bats

7.8 Based upon the findings of the desktop and field survey, covered through sections 5.0 – 6.0 of the report and supported by **Appendix I**, The Fox Public House is duly categorised as pertaining to '**Moderate**' bat roost suitability, in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

Table 7.2. Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).

Low roost suitability or PRF-I	Moderate roost suitability	High roost suitability or PRF-M
One survey visit. One dusk emergence survey[a] (structures). No further surveys required (trees).	Two separate dusk emergence survey visits[b].	Three separate dusk emergence survey visits[b].

Figure 7.1 – *BCT extract on 'Moderate' suitability criteria*

7.9 Whilst consideration has been given to the previous PEA carried out at the site in 2020 which categorised the building as 'negligible', it is considered that the structure has deteriorated in key areas sufficiently to incur significant changes in the bat roost suitability of the structure.

7.10 It is recommended that **two dusk emergence surveys** are conducted at the site within the season of bats (May – August, extending into September in some cases), in order to establish if / how the building is being used by bats, and if so, identify the species present, abundance, roost locations and flight lines around the site following emergence. A total of **four surveyors** would be required to cover the potential roosting features as described for each survey, and the surveys must be spaced a minimum of three weeks apart in accordance with current BCT guidance.

7.11 The applicant should be aware that, if during further surveys, evidence is gathered that confirms bat(s) or their roost(s) are found on site and will be impacted upon, then a Protected Species licence may be required to legally commence with the proposals.

7.12 Natural England provides information and guidance about licensing and the following extract is included in that guidance:

"If you intend to apply for a licence for development, you are advised to seek the guidance of a consultant ecologist. Natural England's view is that a licence is needed if the consultant ecologist, based on survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably likely to result in an offence under the Conservation of Habitats & Species Regulations 2017 (as amended).

If the consultant Ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If European protected species are found, cease the work until you have assessed whether you can proceed without committing an offence. A licence should be applied for if an offence/s is unavoidable, and the work should not commence until a licence is obtained.

The application should be completed by the developer and a consultant ecologist. The ecologist will need to be able to demonstrate to the satisfaction of Natural England that they have the relevant skills and knowledge of the species concerned.

7.13 Where more detailed bat surveys are recommended by the Ecologist, following an initial daytime investigation, then Local Planning Authorities, on the advice of their ecological advisors, may not determine the application until such time that all relevant information is gathered, i.e., by conducting dusk / dawn surveys. The advice that is provided by the ecological advisors is also in accordance with the obligations placed upon Local Authorities by way of its duties under the Conservation of Habitats & Species Regulations 2017 (as amended). Therefore, it would be prudent to make enquiries to the relevant departmental

Planning Officer before submitting a Planning Application that includes an ecological survey report that recommends more detailed surveys.

7.14 During the GLTA all of the immature trees on site were assessed to pertain to a bat roost suitability of '**None**' in accordance with Bat Conservation Trust – Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed. (2023).

7.15 Installation of overly harsh artificial lighting as part of any development that exceeds current levels may have a negative impact upon foraging / commuting bats in the landscape, subject to their presence, particularly if increased light spillage occurs in areas of that are currently free from illumination, particularly including woodland and hedgerows. A bat-sensitive lighting plan is therefore recommended in order to avoid potential impacts to bats that may use the surrounding treelines. Several options to consider have been listed below, though the reader is referred to the Bat Conservation Trust's 'Bats and Artificial Lighting at Night' guidelines (August 2023) for further information.

Appropriate luminaire specifications: Light sources, lamps, LEDs and their fittings come in a myriad of different specifications which a lighting professional can help to select. However, the following should be considered when choosing luminaires and their potential impact on Key Habitats and features:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed (as opposed to using a pendant fitting) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges.
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered - See ILP GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion-sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

Birds

7.16 No impacts are applicable in relation to any Sch.1 (WCA) specially protected raptor species such barn owl, and no further surveys or recommendations are necessary in relation to specially protected birds, with no viability of nesting within the site boundary.

7.17 Regarding wider breeding bird species, there are a range of viable nesting platforms within the site boundary, including the hedgerows to the boundaries, scrub and the former pub, all of which could provide suitable nesting locations within the nesting bird season of March – August, inclusive.

NB: *All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected from destruction, damage and disturbance under the Wildlife & Countryside Act 1981 (as amended). It is a punishable offence to interfere in any way with an active nest.*

7.18 Any works impacting upon these areas of potential suitability, inclusive of the vegetation and the structure, should therefore be carried out outside of the breeding bird season, typically March – September inclusive. For works within the breeding bird season, any areas that can support nesting birds should be checked by a professional Ecologist for nesting birds within 48 hours or less prior to works commencing.

Point 3.24 of the British Standards Publication 42020:2013 defines a professional ecologist as: "*a person who has, through relevant education, training or experience, gained recognised qualifications and expertise in the field of ecology and environmental management.*"

7.19 Where / if active nests are / have been located by the Ecologist, then any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, this can be aided, for example, via implementation of appropriate buffer zone(s) around the nest site (typically 5 – 10 metres) in which no disturbance is permitted until the nest is no longer in use. This would have to be coordinated through the expert judgement of the professional ecologist and species pending.

Other terrestrial mammals

<u>Badger & hedgehog</u>

7.20 Whilst no direct evidence of badger or hedgehog was identified on site, no barriers exist to prevent them accessing the red line boundary, and their presence on site on an occasional basis is considered plausible.

7.21 It is therefore recommended that Reasonable Avoidance Measures (RAMs) are enacted at the site to avoid any impacts to either of these species. RAMs to minimise construction impacts and prevent harm or injury to badgers and hedgehog should include, as a minimum:

- All working hours should be limited to daylight (dawn – sunset, or dawn – 6pm in winter) to avoid disturbing any badger or hedgehog in vicinity of the development area.
- A pre-commencement check of the site, any stored materials and the immediate vicinity of development footprint will be carried out prior to any works each morning in order to check for the presence of badger or hedgehog.
- Materials that may cause entrapment such as plastic / metal fencing, as well as those which could be potentially harmful to terrestrial mammals such as chemicals, should not be left around the site following the cessation of daytime work.
- No bulky equipment / general construction aggregates should be left around the development area, instead leave them on bare ground away from the risk zone.

- Stock piling of spoil material MUST be left un-compacted and not allowed to grass over, as if grassed over and compacted, terrestrial mammals may be encouraged to excavate new areas for refuge.
- Fires must not be used as a means of the disposing of waste materials.
- Any trenches or excavations must either be covered at the end of each working day, or a low angle (no more than 45°) sloping board of approximately 300mm width should be provisioned within any uncovered excavations to provide a means of escape for any terrestrial mammals.
- Any temporarily exposed open pipe system MUST be capped in such a way as to prevent badgers gaining access, as may happen when contractors are off site.
- In the event an underground void / potential sett entrance is exposed during the works, work must cease immediately; and an Ecologist must be contacted to determine if the opening forms part of a previously undiscovered tunnel network of a badger sett. If this cannot be ruled out, works will cease, and Natural England consulted for further advice.

Hazel dormouse

7.22 Based on the combination of the desktop and field assessment, the presence of hazel dormouse within the site is considered unlikely. Despite this, given the presence of records within a 2.0km buffer of the site it is considered that a programme of RAMs should be actioned to prevent risk of impacts to this species. Given the small scale of the works this could take the form of a pre-commencement check of vegetation on site.

7.23 Timing implications may also be necessary; vegetation clearance should avoid the dormouse breeding period of May – September, and ground disturbance should avoid April – October to negate the risk to hibernating dormice.

Herpetofauna

Great crested newt (GCN)

7.24 Regarding GCN, the combined results of the desktop and field study suggest that this species could feasibly exist within proximity to the application site. The five waterbodies ranged from average – excellent in their HSI scores, and several of these have feasible connectivity to the site itself.

7.25 Whilst no ponds are present within the site itself, there are suitable terrestrial features within the red line boundary for newts when in their terrestrial phase, and these lie within feasible connectivity of a number of ponds. These ponds, whilst appearing to have been constructed within the past 6 years, scored between average and excellent in the HSI score, indicating that they provide suitable habitat for GCN in their aquatic phase. Given the suitability of the ponds and the terrestrial features on site, the presence of GCN within the red line boundary cannot be discounted.

7.26 It is therefore recommended that an Environmental DNA (eDNA) survey should be undertaken at all five of the ponds within 250m of the site, to reasonably ascertain presence / absence of GCN at these ponds. The results could scope in a wider assessment.

7.27 Any eDNA approach would need to be carried out from mid-April to June 30th when local planning authorities will accept data as part of a planning application. The information gathered will help provide an initial impact assessment. Following the eDNA survey, depending on the results, a development license may or may not be required; further surveys to reinforce the license may also be required.

7.28 Where GCN would be impacted, a development license (options include District Level License, Traditional development mitigation license, low impact class license) informed by survey data and a mitigation strategy may be required to legally proceed with the works. In some cases, a licence may not be necessary where risks can be avoided, minimised, or mitigated for through reasonable avoidance measures (RAMS), if the consultant Ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed.

Wider amphibians

7.29 Similarly, the presence of common amphibians is considered possible based on the site-specific and site-surrounding habitats. Any works on site should therefore have due regard to local wildlife as discussed, and the RAMs detailed previous for terrestrial mammals should be extended to cover common amphibians.

7.30 Should any frogs or toads be encountered within the works area, they should be handled with wet gloves to prevent impact / injury and moved to an area of like for like habitat outside of the works area away from potential harm. The applicant and all contractors would be aware that if at any stage newts are encountered during works, or at any other stage of the programme of works, such works would be required to immediately cease and the Ecologist / ECoW would be made aware as to provide further guidance, if an Ecologist is not already present.

7.31 The applicant should be aware that where it is discovered GCN would be impacted by the proposals, a development licence (options include District level licence, traditional development mitigation licence, low impact class licence or other) informed by survey data, and a suitable mitigation strategy may be required to legally proceed with the works. In some cases, a licence may not be necessary where risks can be avoided, minimised or mitigated for through reasonable avoidance measures (RAMs), if the consultant Ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence being committed.

Reptiles

7.32 Whilst the site lacks typical habitat features favoured by this taxon, given the records which exist in the surrounding search radius their presence cannot be entirely ruled out. It is recommended that the RAMs discussed above should also be extended to cover reptiles.

Invertebrates

7.33 The site is not considered to be notable on even a local scale for invertebrates, and is unlikely to host specially protected species or a diverse species assemblage; no specific intervention measures apply. Enhancement options have been presented in **Appendix III**.

8.0 Bibliography

- **Amphibian and Reptile Groups of the United Kingdom (ARG UK)**. 2010. *ARG UK Advice Note 5 - Great Crested Newt Habitat Suitability Index*.
- **Baker, J., Beebee, T., Buckley, J., Gent, T. and Orchard, D.** 2011. *Amphibian Habitat Management Handbook*. Amphibian & Reptile Conservation, Bournemouth.
- **Bat Conservation Trust (BCT),** 2023. *Bats and Artificial Lighting at Night, Guidance Note GN08/23.* Available from: https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/
- **Beebee, T. & Griffiths, R**. 2000. *Amphibians and Reptiles.* Collins
- **British Standards Institution (BSI)**. 2012. *Trees in relation to design, demolition and construction - recommendations*. BS 5837:2012. ISBN 978 0 580 69917 7.
- **BSBI**, 2020. *BSBI Online Plant Atlas*. Available from: https://plantatlas2020.org/atlas
- **CIEEM**, 2018. *Guidelines for Ecological Impact Assessment in the UK and Ireland*, 2nd edition. Available from: www.cieem.net/data/files/Publications/EcIA_Guidelines_Terrestrial_Freshwater_and_Coastal_Jan_2016.pdf
- **CIEEM**. 2020. *Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK*. 2nd Edition. Chartered Institute of Ecology and Environmental Management. Winchester, UK
- **CIEEM**, 2017. *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Available from: www.cieem.net/data/files/Publications/Guidelines_for_Preliminary_Ecological_Appraisal_Jan2018_1.pdf
- **CIEEM**, 2019. *Biodiversity Net Gain: Good practice principles for development*. Available from: www.cieem.net/data/files/Publications/Biodiversity_Net_Gain_Principles.pdf
- **CIEEM**, 2019. *ON THE LIFESPAN OF ECOLOGICAL REPORTS & SURVEYS*. Available from: https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf
- **Collins, J** (ed.) 2023. *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edition). The Bat Conservation Trust, London.
- **Communities & Local Government (C&LG)**, 2019. *National Planning Policy Framework*. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf
- **Dean, M., Strachen, R., Gow, D. and Andrews, R.**, 2016. *The Water Vole Mitigation Handbook (The Mammal Society Mitigation Guidance Series).* The Mammal Society, London.
- **DEFRA**, 2018. *Net gain: Consultation Proposals*. Available from: https://consult.defra.gov.uk/land-use/net-gain/supporting_documents/netgainconsultationdocument.pdf
- **DEFRA**, 2022. *Keepers of time: ancient and native woodland and trees policy in England*. Available from: https://www.gov.uk/government/publications/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england
- **Drake, C. M., Lott, D. A., Alexander, K. N. A. and Webb, J.**, 2007. *Surveying terrestrial and freshwater invertebrates for conservation evaluation*. Natural England. Available from: https://publications.naturalengland.org.uk/file/63016
- **Edgar, P., Foster, J. and Baker, J**. 2010. *Reptile Habitat Management Handbook*. Amphibian & Reptile Conservation. Bournemouth.
- **English Nature**, 2001. *Great Crested Newt Guidelines. Version Aug 2001.*

- **English Nature**, 2006. The dormouse conservation handbood Second edition. Available from: https://cieem.net/resource/the-dormouse-conservation-handbook-english-nature/
- **Froglife**, 2015. *Surveying for reptiles*. Available from: https://www.froglife.org/wp-content/uploads/2013/06/Reptile-survey-booklet-3mm-bleed.pdf
- **Global Biodiversity Information Facility (GBIF)**, 2019. Available from: https://www.gbif.org/.
- **GOV.UK**. 2015. *Reptiles: surveys and mitigation for development projects.* Available online www.gov.uk/guidance/reptiles-protection-surveys-and-licences.
- **Gunnell, K. Grant, G. and Williams, C.**, 2012. '*Landscape and urban design for bats and biodiversity*'. Bat Conservation Trust.
- **Harris, J. E., Markwell, H. J., and Raybould, B. R.**, 2009. *A method for assessing water vole habitat suitability*. In Practice: Bulletin of the Institute of Ecology and Environmental Management. 65: 28 – 31.
- **Hodgetts, N.** 2011*. A revised Red List of bryophytes in Britain*. Field Bryology 103: 40-48.
- **Joint Nature Conservancy Council (JNCC)**, 2010. *Handbook for Phase 1 habitat survey.* Available from: http://jncc.defra.gov.uk/PDF/pub10_handbookforphase1habitatsurvey.pdf
- **Magic Maps Application**, 2024. Available from: www.natureonthemap.naturalengland.org.uk/MagicMap.aspx
- **Mitchell-Jones, A. J. (ed.)**, 1987. *The bat worker's manual*. Dept. BWM, Nature Conservancy Council, Northminster House, Peterborough, PE1 1UA
- **Natural England**, 2015. *Great Crested Newts: Surveys and mitigation for developments and projects*. Available from: https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects.
- **North West Biodiversity Audit Group (NWBAG)**, 1999. *A biodiversity audit of north-west England.*
- **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.
- **Reason, P.F. & Wray, S.** 2023**.** *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Chartered Institute of Ecology and Environmental Management, Ampfield
- **Rose, F, 1999.** *Indicators of ancient woodland: The use of vascular plants in evaluating ancient woods for nature conservation.* Available from: http://pad.basingstoke.gov.uk/documents/4753/01/02/76/01027625.PDF
- **Sewell, D., Griffiths, R. A., Beebee, T. J., Foster, J., and Wilkinson, J. W.**, 2013. *Survey protocols for the British herpetofauna*. Available from: http://www.narrs.org.uk/documents/Survey_protocols_for_the_British_herpetofauna.pdf
- **Stace, C**. 2019. *New Flora of the British Isles*, 4th edition. Cambridge University Press, The Edinburgh Building, Cambridge, CB2 2RU.
- **Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., 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.
- **Strachen. R; Moorhouse. T.**, 2011. *The Water Vole Conservation Handbook*, 3rd ed. Wildlife Conservation Research Unit, University of Oxford.

- **Stroh. P. A; Leach. S. J; August. T. A; Walker. T. J; Pearman. D. A; Rumsey. F. J; Harrower. C. A; Fay. M. F; Martin. J. P; Pankhurst. T; Preston. C. D; Taylor. I**., 2014. *A Vascular Plant Red-List for England*, 2nd edition. Trollius Publications.
- **UKHab Ltd.**, 2023. *UK Habitat Classification Version 2.0*. Available from: https://ukhab.org/

Appendix I: Site Photographs

Plate 1 – *Western elevation of the Fox Public House, note poor condition*

Plate 2 – *PRF potentially leading to wall cavity*

Plate 3 – *Further PRF on western elevation*

Plate 4 – *Northern aspect*

Plate 5 – *Easten elevation of the structure*

Plate 6 – *Southern aspect*

Plate 7 – *Nature of the car park*

Plate 8 – *Cherry laurel hedgerow*

Plate 9 – *Native hedgerow to eastern and northern boundary*

Plate 10 – *Bramble scrub grading into willow scrub to east of site*

Plate 11 – *Dense bramble scrub to east of building*

Plate 12 – *Bramble scrub grading to grassland to blackthorn scrub*

Appendix II: Botanical Species List

Species nomenclature follows Stace, C (2019) – definitive English names; scientific names for given flora are presented below.

Any invasive non-native species are denoted by the acronym (**INNS**).

Each species recorded was given an abundance value according to the standard DAFOR scale, where:

- D = Dominant
- A = Abundant*
- F = Frequent*
- O = Occasional*
- R = Rare*

(*These values can be prefixed by the letter L (locally) to provide more subtle biogeographical data.)

Common Name	**Scientific Name**	**Abundance**
Bitter-cress	*Cardamine spp.*	R
Blackthorn	*Prunus spinosa*	LD
Bramble	*Rubus fruticosus* **agg**.	LD
Bristly Oxtongue	*Helminthotheca echioides*	R
Cherry Laurel	*Prunus laurocerasus*	LD
Cleavers	*Galium aparine*	R
Cock's-foot	*Dactylis glomerata*	O
Common & Atlantic Ivy	*Hedera helix* ***s.l.***	LA
Common Knapweed	*Centaurea nigra* ***s.l.***	R
Common Nettle	*Urtica dioica*	R
Cow Parsley	*Anthriscus sylvestris*	R
Creeping Buttercup	*Ranunculus repens*	R
Creeping Cinquefoil	*Potentilla reptans*	LO
Creeping Thistle	*Cirsium arvense*	R
Curled Dock	*Rumex crispus*	R
Daffodils	*Narcissus*	R
Dandelion	*Taraxacum*	R
Dog-roses	*Rosa canina* **agg**.	LA
Dove's-foot Crane's-bill	*Geranium molle*	R
False Oat-grass	*Arrhenatherum elatius*	O
Germander Speedwell	*Veronica chamaedrys*	R
Giant Blackberry	*Rubus armeniacus*	LD
Ground-elder	*Aegopodium podagraria*	O
Groundsel	*Senecio vulgaris*	R
Hawthorn	*Crataegus monogyna*	R
Hogweed	*Heracleum sphondylium*	O
Mouse-ear	*Cerastium spp.*	R
Mugwort	*Artemisia vulgaris*	R
Oxeye Daisy	*Leucanthemum vulgare*	R

Common Name	Scientific Name	Abundance
Perennial Rye-grass	*Lolium perenne*	A
Perennial Sow-thistle	*Sonchus arvensis*	R
Poplar	*Populus spp.*	R
Red Fescue	*Festuca rubra* **agg**.	A
Ribwort Plantain	*Plantago lanceolata*	R
Rosebay Willowherb	*Chamerion angustifolium*	O
Rough-stalked Feather-moss	*Brachythecium rutabulum*	R
Spear Thistle	*Cirsium vulgare*	R
Springy Turf-moss	*Rhytidiadelphus squarrosus*	R
White Clover	*Trifolium repens*	O
Wild Teasel	*Dipsacus fullonum*	R
Willow	*Salix spp.*	LD
Wood Avens	*Geum urbanum*	R
Yarrow	*Achillea millefolium*	O
Yorkshire-fog	*Holcus lanatus*	A

Appendix III: Biodiversity Enhancement: General Recommendations

Breeding Birds – House Sparrow

The sparrow terrace has been designed to help redress the balance of falling house sparrow numbers. The current UK population is now half of what it previously was in 1980 and this is widely attributed to habitat destruction and lack of suitable nesting spaces. House sparrows are social birds and like to nest in company, therefore, this terrace provides ideal nesting opportunities for three families. The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of buildings.

Breeding Birds – Other

This traditional design has proved to be highly effective in attracting robins, as well as other small species such as black redstart, spotted flycatcher and wren. It is designed to be installed on the walls of houses, barns, garden sheds or other buildings and should be hung so that the entrance is to one side (at an angle of 90° to the wall). The front panel can be easily removed for cleaning.

This type of box should not be made conspicuous on a tree or bush because small predators can enter through the unprotected opening. By hanging on a wall, predators won't be able to reach the box. Alternatively hide the box in Ivy, Honeysuckle or other climbing plants.

Hedgehog Home

Exterior quality 12mm resin bonded ply. The box remains untreated on the inside. Best situated in a quiet corner of the garden, and covered with leaves and other garden debris. Removable lid for cleaning purposes and reinforced corners, manufactured with surface sunk nails to resist rusting.

Nest box size: Height 22cm x Width 38cms x Length 47cm

Environmentally positive: Direct action to help hedgehog survival rates, encouraging biodiversity; FSC timber; Zero carbon footprint in use.

Amphibians – Hibernacula

Hibernacula are underground chambers that amphibians and reptiles use throughout the winter to protect themselves from the cold. Creating a hibernaculum will provide a safe space for amphibians and reptiles to hibernate over winter, as well as a spot for solitary bees to soak up the sun and for birds to relax. These habitats can be integrated into a wide variety newly created or enhanced habitats and attract herps to new areas.

You will need:

- A spade
- Logs and branches
- Rocks and bricks
- 2-3 drainpipe cut-offs or cement pipes (if using plastic drainpipes, roughen the insides with sandpaper, so that they are not too slippery for animals to climb
- Turf or meadow flower seeds (optional)

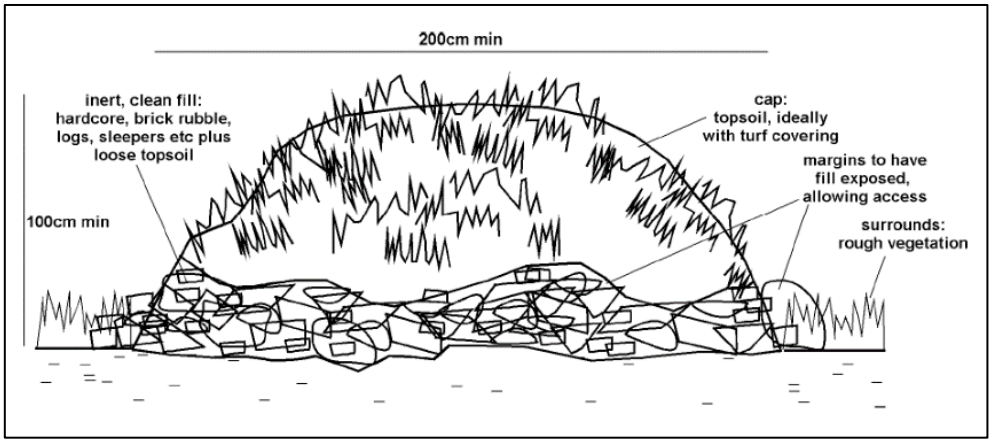
How to make your hibernaculum yourself:

- In a sunny spot, dig a hole about 50cm deep and 1.5 metres across.
- Fill with logs, branches, bricks and rocks, leaving plenty of gaps in between.
- Insert entrance tubes (drainpipes) at ground level into the hole.
- Cover the pile with soil (to about 50cm high).
- Plant meadow seeds or long grasses over the mound to create a feast for summer pollinators.

To construct a hibernaculum to Natural England standard:

- In desired areas, remove the turf from the footprint of the hibernaculum and set aside.
- On well-drained soil excavate to a depth of approximately 500 mm and set aside spoil (this is unnecessary on poorly drained soils).
- Fill the footprint or pit with core material. Materials likely to retain moisture are preferable, such as cut timber, brash and grubbed up tree roots. Other material such as inert hardcore, bricks, rocks, and building rubble may also be used. Materials that will decompose should not be placed beneath heavy components such as bricks or rocks, to reduce the risk of collapse.
- Pack the larger spaces within the core materials with wood chippings, loose topsoil or spoil.
- Cover the hibernaculum with the turves removed from the footprint.
- Take care not to create structures that might attract rodents, such as piles of rubble with many entrance holes. There has been no rigorous investigation of the optimum size of hibernacula, but larger hibernacula are probably more useful than small constructions because they contain a variety of different microhabitats and are more likely to maintain stable conditions.
- A suggested minimum size is 4.0 m long by 2.0 m wide by 1.0 m deep. 2.0 x 2.0 x 1.0 metres (length x width x height) as a minimum.

Illustrative aid for hibernaculum:



Invertebrates – Insect Hotels

Insect hotels provide a habitat for a variety of insects. Designs can be small or large enough to create a focal point in a wildlife garden and sturdy enough to last for years. Ensure hotels are made from untreated wood, which is important as insects need natural materials to thrive, and split into sections that each contain a different nesting material. There should be pine cones for ladybirds, wood slits for butterflies and moths, bamboo canes for solitary bees, and loose pieces of wood for beetles. Placement: Size against walls or fences and fix to prevent toppling. The feet keep the main body off the damp ground. You could push bricks against them to keep the bug hotel upright, which would also encourage woodlice and even frogs that enjoy cool stone conditions.

Invertebrates – Bee bricks

The Bee Brick can be used in place of a standard brick or block in construction to create habitat for solitary bees. Alternatively, it can be used as a standalone bee house in your garden or wild patch. It will provide much needed nesting space for solitary bee species such as red mason bees and leafcutter bees, both of which are non-aggressive.

Each Bee Brick contains cavities in which solitary bees can lay their eggs before sealing the entrance with mud and chewed-up vegetation. The offspring will emerge the following spring and the cycle will begin again. Each cavity goes part way into the brick, which is solid at the back. Bee Bricks should be placed in a warm sunny spot on a south-facing wall at a minimum height of 1m, with no vegetation obstructing the holes. It is highly recommended that bee-friendly plants should be located nearby so that the bees using the bricks have food, otherwise it is unlikely that the brick will be used. Available in a choice of four colours: white grey, dark grey, yellow and red.

Specification

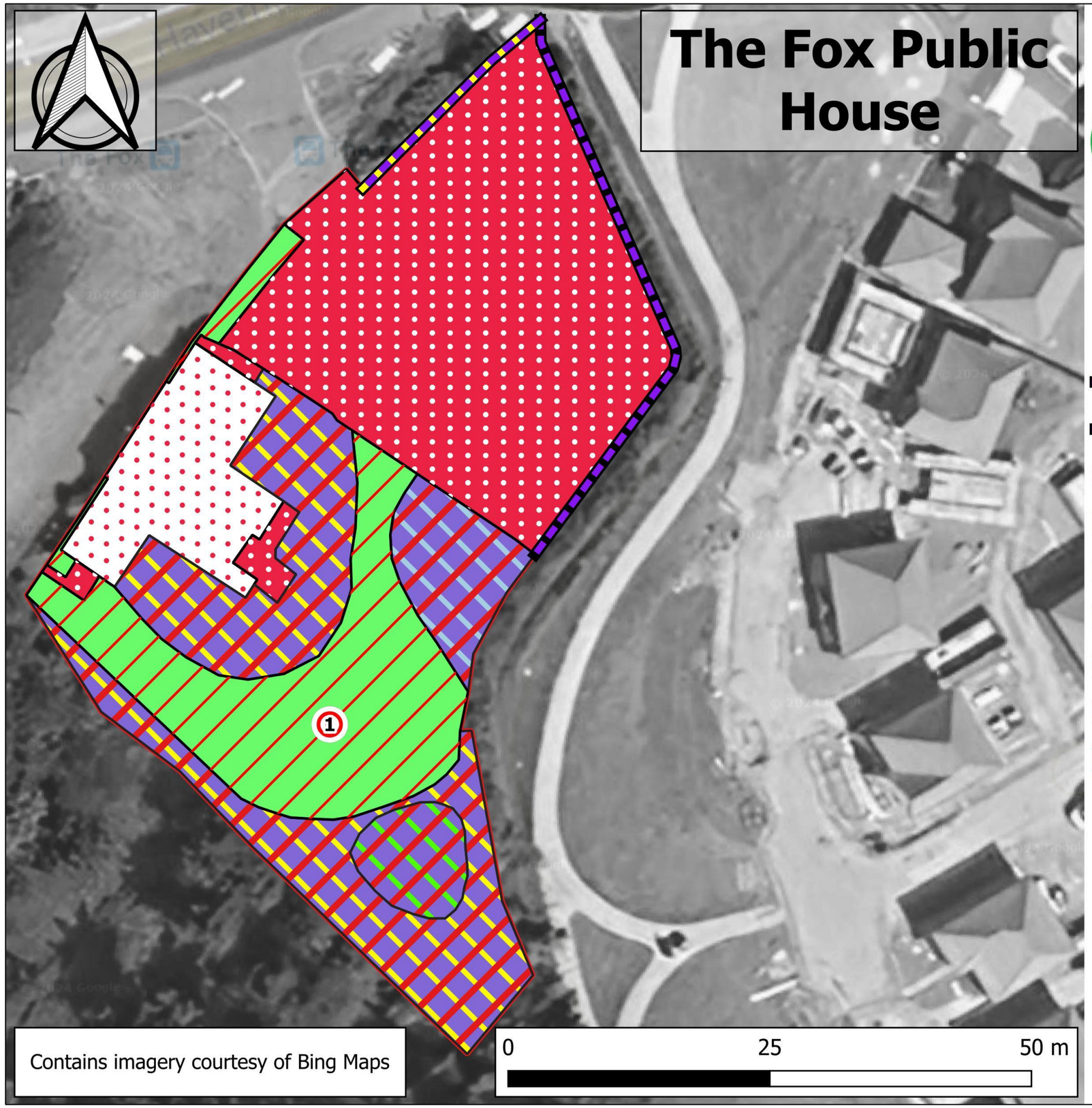
* Material: Concrete
* Dimensions: W 215mm x D 105mm x H 65mm
* Weight: 2.9kg
* Colours: White grey, yellow, dark grey and red

Native Planting and/or Landscaping

The below species have been assessed against the local soil and habitat types and are deemed suitable for the site. All plant material should comply with the minimum requirements in BS 3936-1: 1992 Specification for trees and shrubs and BS 3936-4: 2007 Specification for forest trees and BS 8545: 2014 Trees from Nursery to Independence in the Landscape. Any plant material, which in the opinion of the appointed Landscape Architect, does not meet the requirements of the Specification, or is unsuitable, or defective in any other way, will be rejected. The minimum specified sizes in the plant schedule will be strictly enforced. The contractor should replace all plants rejected at own cost. New hedgerows should be primarily comprised of blackthorn, hawthorn, hazel, and holly, whilst climbers/creepers such as hops and honeysuckle can be planted at the base of boundary features such as fences and walls, and new tree planting should include species such as pedunculate oak, wild cherry, and alder buckthorn.

	Common Name	Scientific Name	Planting Preference
Ferns	Male Fern	*Dryopteris filix-mas*	Semi-shade or shaded
	Soft Shield-fern	*Polystichum setiferum*	Semi-shade or shaded
	Maidenhair Fern	*Adiantum capillus-veneris*	Suitable for rockeries / walled gardens
	Royal Fern	*Osmunda regalis*	Full sun in moist-damp areas
Herbaceous plants	Bloody Crane's-bill	*Geranium sanguineum*	Dry soils - suitable for rockeries
	Columbine	*Aquilegia vulgaris*	Semi-shade or open areas
	English Bluebell	*Hyacinthoides non-scripta*	Moist soils in semi-shade or open areas
	Giant Bellflower	*Campanula latifolia*	Semi-shade or open areas
	Greater Knapweed	*Centaurea scabiosa*	Dry-moist soils. Suitable for borders
	Greater Woodrush	*Luzula sylvatica*	Moist soils in semi-shade or open areas
	Meadow Crane's-bill	*Geranium pratense*	Humid-moist soils. Suitable for borders
	Musk Mallow	*Malva moschata*	Dry-moist soils. Suitable for borders and rockeries
	Sea Campion	*Silene uniflora*	Dry soils - suitable for rockeries
	Stinking Hellebore	*Helleborus foetidus*	Semi-shade or open areas
Climbers	Honeysuckle	*Lonicera periclymenum*	Dry-moist soils
	Hops	*Humulus lupulus*	Dry-moist soils
	Ivy	*Hedera helix*	Dry-moist soils
	Sweet-briar	*Rosa rubiginosa*	Dry-moist soils
Woody Shrubs	Dogwood	*Cornus sanguinea*	-
	Guelder Rose	*Vibernum opulus*	-
	Hawthorn	*Crataegus monogyna*	-
	Hazel	*Corylus avellana*	-
	Holly	*Ilex aquifolium*	-
Trees	Alder Buckthorn	*Frangula alnus*	-
	Osier	*Salix viminalis*	-
	Pedunculate Oak	*Quercus robur*	-
	Purple Willow	*Salix purpurea*	-
	Rowan	*Sorbus aucuparia*	-
	Silver Birch	*Betula pendula*	-
	Wild Cherry	*Prunus avium*	-
	Wych Elm	*Ulmus glabra*	-

Appendix IV: UK Habitats Map



Tyrer Ecological Consultants Ltd
Specialists in Protected Species

UK Habitats Key

- Target Notes
- h2a6 - Other native hedgerow (522)
- h2b - Non-native & ornamental hedgerow (523)
- g4 - Modified grassland (10, 2, 81, 128, 816)
- h3a - Blackthorn scrub (16)
- h3d - Bramble scrub (16)
- h3i - Willow scrub (16)
- u1b5 - Buildings (825)
- u1b6 - Other developed land (81, 804)
- Red Line Boundary

Survey Date: 20/02/2024
Drawn: Mr. B. Richards
Date Drawn: 14/03/2024
Checked & Approved: Mrs. K. Wilding
Size: A3
Scale: 1:500

Tyrer Ecological Consultants Ltd
Roselands, Suite 1
3, Cross Green,
Formby,
L37 4BH
Tel: 01704 875781
enquiries@tyrer-ecologicalconsultants.co.uk
www.tyrer-ecologicalconsultants.co.uk