
Ecology Report

PROPOSED BARN CONVERSION
Old Rectory, The Street, Drinkstone, Suffolk

September 2023



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Executive Summary

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of an existing barn and adjacent land at the Old Rectory, The Street, Drinkstone, Suffolk. A planning application is to be submitted to Mid Suffolk District Council to convert part of the barn into a studio and an office.

The application site is located off the Street, Drinkstone and comprises a barn situated within the grounds at the Old Rectory. Adjacent habitats include surfaced areas (e.g., gravel and concrete) and short grassland containing several mature and veteran broadleaved trees.

Several waterbodies exist within 250m of the application site – including three within the applicant's landholding (beyond application site boundary). GCN eDNA surveys of a wetland P2 and a pond P3 within a walled garden were undertaken in April 2023. A positive result was returned for P2 (indicating that GCNs are very likely to be present) and a negative result returned for P3 (GCNs likely absent).

Bat surveys confirmed the presence of a small number of day roosting common pipistrelle (*Pipistrellus pipistrellus*). The barn conversion will result in the destruction of the roosts which will therefore require a bat licence.

Recommendations are made to avoid wildlife offences and ecological impacts, particularly in relation to protected species. Where impacts cannot be avoided, measures are proposed to mitigate remaining effects including timing of works, good working practices and a protected species mitigation licence (e.g., GCN DLL), with necessary compensation detailed. Biodiversity enhancements are proposed.

1 Introduction

1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of an existing barn and adjacent land at the Old Rectory, The Street, Drinkstone, Suffolk. (TL 95903 61814; Figure 1). A planning application is to be submitted to Mid Suffolk District Council to convert part of the barn into a studio (ground floor) and office (first floor) with some new roof lights and alterations to existing window and door openings, and some brick detailing to match existing around existing windows.

The ecological survey and this report are necessary to:

- Identify the existing ecological value of the site;
- Identify the need for further (e.g., protected species) surveys;
- Assess any potential adverse impacts of the proposed development on ecological features of the site or nearby designated sites;
- Make recommendations for mitigation (if required); and
- Identify opportunities for biodiversity enhancements and, consistent with national and local planning policy, net gains.

This report will be used to develop the proposals as necessary, and to form the basis for the submission of biodiversity information with any planning application. It reflects the site at the time of the survey and should be reviewed and revised as appropriate.

1.2 SITE LOCATION AND DESCRIPTION

The application site (Figure 1) is located off the Street, Drinkstone and comprises a large barn situated in the grounds to the southwest of the Old Rectory (Photos 1 to 4). Adjacent habitats include a gravel yard and driveway, a stone path, and a large area of short grassland containing several mature/veteran trees (Photos 5 to 7).

Photos are provided in Appendix A1.

2 Planning policy and legislation

2.1 INTRODUCTION

This chapter summarises the key legislation and policies relevant to assessing the biodiversity impacts of the scheme upon habitats and species.

2.2 PLANNING POLICY

2.2.1 *National Planning Policy Framework (NPPF)*

The National Planning Policy Framework was originally published in 2012 and most recently revised in July 2021. The document sets out the Government's planning policies for England and provides guidance on how these policies are expected to be applied. It provides a framework for, and must be taken account of within, locally prepared plans for housing and other development, and is a material consideration in planning decisions.

An overarching objective of the NPPF, which aims to integrate and secure net gains, is to contribute to protecting and enhancing the natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

The full NPPF is available to view online using the gov.uk website: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf . Policies of particular relevance to development and biodiversity include 174, 180, 181 and 182.

174. Planning policies and decisions should contribute to and enhance the natural and local environment by:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

180. 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 (SSSI), 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 SSSI;

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.

181. The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;

b) listed or proposed Ramsar sites; and

c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

182. The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects) unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

2.2.2

Local Plan

Adopted local plans provide the framework for development across England, and include policies related to conserving and enhancing the natural environment.

Existing planning policies and supporting documents used to plan, deliver, and monitor development across the Mid Suffolk District Council area can be found at:

<https://www.midsuffolk.gov.uk/planning/planning-policy/adopted-documents/mid-suffolk-district-council/mid-suffolk-local-plan/>.

Babergh and Mid Suffolk Councils are currently in the process of creating a joint local plan.

2.3

LEGISLATION

2.3.1

Environment Act 2021

The Environment Act received royal assent in November 2021. The Act will set clear statutory targets for the recovery of the natural world in four priority areas: air quality, biodiversity, water and waste, and includes an important new target to reverse the decline in species abundance by the end of 2030. Of particular relevance to development planning will the requirement for all new development to deliver a quantified (10%) Biodiversity Net Gain.

2.3.2 *Natural Environment and Rural Communities (NERC) Act 2006*

Section 40 places a duty on every public body in exercising its functions, to have regard to the purpose of conserving biodiversity; this includes restoring or enhancing populations or habitats. A key purpose of this duty is to embed consideration of biodiversity as an integral part of policy and public-sector decision making. *Species and habitats of principal importance* in this respect are those published under Section 41 (“S. 41”) of the NERC Act 2006.

2.3.3 *Wildlife and Countryside Act 1981 (as amended)*

Rare and scarce habitats and species are afforded varying levels of protection under the Wildlife and Countryside Act 1981 (as amended) (hereafter “WCA 1981”). Some species and groups are afforded full protection (e.g. Schedule 1 bird species, bats), whilst others receive partial protection (e.g. widespread reptiles). Section 3.1 provides further detail relevant to this scheme. Species afforded legal protection are referred to by their relevant schedule (“Sch.”) within the act, i.e. “Sch. 1” (birds), “Sch. 5” (other animals), or “Sch. 8” (plants).

Invasive plant species such as Japanese knotweed (*Reynoutria japonica*) and giant hogweed (*Heracleum mantegazzianum*) are listed on Schedule 9 of the WCA 1981. It is an offence to plant or otherwise cause these species to grow in the wild and this includes the development of sites such that the plant colonises land owned by a third party.

2.3.4 *The Countryside and Rights of Way (CROW) Act 2000*

The CROW Act 2000 strengthened and updated elements of the WCA 1981, and gave a statutory basis to biodiversity conservation, requiring government departments to have regard for biodiversity in carrying out its functions and to take positive steps to further the conservation of listed habitats and species. It strengthened the protection of SSSIs and threatened species. Many of its provisions have been incorporated as amendments into the WCA 1981 and some have been superseded by the NERC Act 2006.

2.3.5 *The Conservation of Habitats and Species Regulations 2017*

The Conservation of Habitat and Species Regulations 2017 (hereafter referred to as the Habitat Regulations 2017) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), and elements of the EU Wild Birds Directive, into national law. The 2017 Regulations provide for the designation and protection of ‘European sites’ (SPAs, and SACs), the protection of ‘European Protected Species’ (“EPS”), and the adaptation of planning and other controls for the protection of European Sites.

They have been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019, which continue the same provision for European protected species, licensing requirements, and protected areas after Brexit.

Under the Regulations, competent authorities i.e., any Minister, government department, public body, or person holding public office, have a general duty, in the exercise of any of their functions, to have regard to the relevant EC Directives.

2.3.6

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 (hereafter "PBA 1992") consolidates and improves upon the previous Badgers Act 1973, Badgers Act 1991, and Badgers (Further Protection) Act 1991. Under the PBA 1992 (except when holding a licence to do so) it is illegal for a person to wilfully; kill, injure, take, possess, sell, or otherwise cruelly treat a badger. It is also illegal to dig out, damage, destroy, or obstruct entry to setts (including by use of dog(s)). Further information on offences, exceptions, and penalties are listed on the PBA 1992 on legislation.gov.uk.

3 Methodology

3.1 INTRODUCTION

This report has been produced with reference to relevant guidance, most notably:

- Guidelines for Ecological Report Writing (CIEEM, 2017);
- Biodiversity – Code of Practice for Planning and Development (BS 42020:2013¹);
- Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018); and
- Biodiversity Net Gain: good practise principles for development (CIRIA, CIEEM and IEMA, 2016).

The following sections summarise the approaches used to review existing data, and to undertake appropriate field surveys to scope and inform an Ecological Impact Assessment (EclA) for the scheme. Where further surveys are considered necessary, this is identified in section 5.

3.2 DESK SURVEY

The following data sources were consulted to assess the potential for the application site to support protected or notable habitats/species:

- Aerial photos, Ordnance Survey maps, and the MAGIC website (<http://magic.defra.gov.uk/>): These were used to identify habitat types including priority habitats, suitability for particular species/groups, and the locality of nationally and internationally designated sites;
- Natural England (NE) open source protected species and habitat survey data; and
- Historical biological records: species and locally designated site records within 2km of the site were provided by the Suffolk Biodiversity Information Service (SBIS; Appendix A2).

From this exercise, it was concluded that the following legally protected species/groups may be present on the sites and/or land immediately adjacent:

- Amphibians and reptiles, including great crested newt (*Triturus cristatus*) and grass snakes (*Natrix helvetica*);
- Mammals including badgers² and bats³;
- Breeding birds⁴ including Red and Amber status⁵ species; and
- S. 41⁶ list habitats such as hedgerows, and species such as hedgehog.

In the context of the setting and nature of the developments, the 'zone of influence' of the scheme is considered restricted to habitats on the sites and species within 250m of the site boundaries.

3.3 FIELD SURVEY

An initial site walkover was undertaken on the 8 February 2023 to 1) record habitats present; and 2) assess the value of the habitats present for protected and notable species. A list of vascular plants and a description of the vegetation was made,

¹ BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.

² Badgers and their setts are afforded protection by the PBA 1992.

³ All species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.

⁴ All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

⁵ The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 5 (Stanbury *et al.*, 2021).

⁶ S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

including the location and extent of any Schedule 9 (WCA 1981) plants. Photos of the habitats present, and any field signs are provided in Appendix A1.

3.3.1 *Habitats and vascular plants*

The site was walked with all distinct vegetation and habitat types, and any features of interest identified using the UK Habitat Classification methodology (Butcher et al., 2020). Care was taken to record habitat indicator species.

3.3.2 *Amphibians and reptiles*

a) Amphibians

A small trout lake P1 (Photo 11), a wetland area P2 (Photo 12) and a pond P3 (Photo 13) are located within the wider grounds (Figure 2) were assessed for their suitability to support breeding GCNs, and other common amphibians, using the GCN Habitat Suitability Index (HSI) as developed by Oldham *et al.* (2000). A GCN eDNA sample was then taken (Biggs et al., 2014) from ponds P2 and P3 to determine presence of GCNs.

The terrestrial habitat suitability of the site was assessed with respect to refugia, and foraging habitat based on the known habitat preferences of GCN and widespread amphibians such as common frog (*Rana temporaria*), smooth newt (*Lissotriton vulgaris*), and common toad (*Bufo bufo*).

b) Reptiles

Habitats on and around the application site were assessed with respect to the known foraging and refuge habitat preferences of widespread reptile species.

3.3.3 *Bats*

The existing buildings were assessed for their suitability to support roosting bats with reference to the NE Bat Mitigation Guidelines (Mitchell-Jones, 2004) and the Bat Conservation Trust (BCT) “Bat Surveys: Good Practice Guidelines, 3rd edition” (Collins, 2016). The criteria used to determine the level of Bat Roost Potential (BRP) of buildings is outlined in Table 3.1.

Table 3.1 Bat Roost Potential (BRP) of buildings.

Bat Roost Suitability	Description
<i>Confirmed presence</i>	Bat presence confirmed during the scoping survey
<i>High</i>	Buildings that have many areas suitable for roosting which are obviously suitable for use by a larger number of bats including maternity colonies.
<i>Moderate</i>	Buildings with a small number of areas suitable for roosting, but still supporting features that could be attractive to bats and potentially support maternity colonies.
<i>Low</i>	Buildings with limited roosting opportunities but which could be used on a sporadic or occasional basis by a low number of bats, but which are unsuitable for maternity roosts.
<i>Negligible</i>	Buildings which appear unsuitable for roosting bats due to a clear lack of roosting spaces such as voids and/or absence of suitable access points.

b) Tree roost potential

Existing trees around the site boundaries were visually checked to assess their suitability for use by roosting bats, the criteria for assessing the levels of BRP for trees are listed below in Table 3.2.

Table 3.2 Categories of Bat Roost Potential (BRP) for trees.

Bat Roost Suitability	Description
<i>Confirmed presence</i>	Bat presence confirmed during the scoping survey
<i>High</i>	Trees 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 and surrounding habitat.
<i>Moderate</i>	Trees with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation.
<i>Low</i>	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential. However, the tree(s) are of a size and age that elevated surveys may result in features being found; or features which may have limited potential to support bats.
<i>Negligible</i>	Trees with negligible bat roost potential.

Where potential niches existed, niches below 5m high were physically inspected, using ladders as required. Any cavities with the potential to support roosting bats were inspected with a SeeSnake endoscope and/or a small LED torch as necessary. All potential roosting niches were checked for the presence of bats (alive or dead), faecal staining, fur and/or scratch marks around the entrance and droppings within the cavities or attached to the trunk/bough below the entrance (Table 3.2) according to Bat Conservation Trust (BCT) protocols (Collins, 2016).

d) Foraging and commuting habitat

Consideration is given to the value of any potential foraging and commuting habitats (i.e., hedgerows, trees, streams, ponds, composting areas) on the application site as per Table 3.3 of the BCT guidelines.

Table 3.3 Commuting and foraging habitats

Suitability	Description
<i>High</i>	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>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, trees-lined watercourses, and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>
<i>Moderate</i>	Continuous habitat connected to the wider landscape that

	could be used by bats for commuting 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.
<i>Low</i>	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e., not very well connected to the surrounding landscape by other habitats. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in parkland situation) or a patch of scrub.
<i>Negligible</i>	Negligible habitat features on site likely to be used by commuting and foraging bats.

d) Dusk emergence survey

Dusk emergence surveys of the stables were undertaken (17/05/23 and 07/06/23) as per the following methodology:

- The emergence surveys commenced 15 minutes prior to and for up to 1.5 hours after sunset to cover the main emergence period and when some bats may return;
- Bat activity such as bats leaving or returning to roost within buildings on site was recorded. In addition, commuting bats and foraging bats were recorded;
- Numbers and species of bats were recorded to determine the significance of any roosts identified; and
- Ecologists used full spectrum Wildlife Acoustic Echo Meter Pro and Elekon Batlogger M full spectrum detectors; and
- A Hikmicro Lynx Pro LH Thermal Imaging camera covered the north and east elevations of the building during both surveys; and a Song Meter Mini Bat Ultrasonic static detector was placed inside the building each time.



Plate 1 - Lynx Pro LH Thermal Imaging camera covering the NE elevation.

3.3.4

Nesting birds

The value of the site was assessed in relation to nesting birds. This was supplemented with field records of birds seen or heard within the site, or nests observed.

3.3.5

Badger

The application site and adjacent habitats were surveyed for evidence of badger activity including setts, day beds, latrines, diggings/snuffle holes, paths/runs, scratching posts, hair, and footprints. Any potential sett found was then assessed for evidence of recent use by badger and classified as per current guidance (Scottish Badgers, 2018).

3.3.6

S.41 list habitats and species

The site was surveyed to determine the presence of any S. 41 habitats such as native species-rich hedgerows. The site's suitability for S. 41 list species such as hedgehog was assessed based on their habitat preferences.

3.3.7

Non-native invasive plant species

The site was inspected for Schedule 9 species such as Japanese knotweed and giant hogweed.

3.4

SURVEY CONSTRAINTS

Given the nature of the site and the surveys carried out, the timing of the surveys was considered appropriate for this report.

3.5

SURVEYORS

The site survey and building inspection were undertaken by Christian Whiting BSc (Hons) MSc MCIEEM who has over 20 years' experience working as an ecologist. He holds Natural England (NE) survey licences for bats (2015-14745-CLS-CLS - Bat Survey Level 2), barn owl (CL29) and great crested newts (Class A licence 2015-17633-CLS-CLS).

He is a Registered Consultant (Registration RC089) on NE's Bat Low Impact Class Licence and is an agent under the Environment Agency's and IDB water vole (*Arvicola amphibius*) organisational and class licences respectively. His main areas of expertise are bats, vascular plants, amphibians and reptiles, otter (*Lutra lutra*) and water vole.

Christian was assisted by ecologist Alex Gregory, BSc (Hons) who has two years' experience surveying for amphibians, bats, reptiles, and water vole.

The bat emergence surveys were undertaken by Alex Gregory (both surveys), Larissa Cooper (1st survey), and Hannah Evans (2nd survey).

3.6

ASSESSMENT

Impacts and effects upon habitats and species are assessed with reference to the CIEEM Guidelines for Ecological Impact Assessment (2018) and are reported in Section 5, based on the baseline conditions reported in Section 4.

The assessment includes potential impacts upon habitats and species during the construction and operational phases of the scheme. It considers positive and negative impacts, their extent, magnitude and duration, frequency and timing and reversibility.

4 Results

4.1 INTRODUCTION

This chapter summarises the results of the desk and field surveys.

4.2 BASELINE ECOLOGICAL CONDITIONS - DESK STUDY

4.2.1 *Designated sites*

Any locally designated sites (e.g., Local Nature Reserves) within 2km and nationally designated sites within 5km of the application site are listed below in Table 4.1. There are no internationally designated sites within 13km of the site.

Table 4.1 Relevant designated sites

Site name	Site designation
Bridge Farm Wood*	CWS
Drinkstone Meadow	CWS
Hessett Nature Reserve	CWS
Pumping Station Meadow	CWS
Tostock Pond & The Leys	CWS
Bradfield Woods*	NNR, SSSI
Norton Wood*	SSSI

*Listed on the Ancient Woodland Inventory for England.

Locally designated sites

No Local Nature Reserves are located within 2km. Five County Wildlife Sites (CWS) are listed below:

Bridge Farm Wood CWS is an ancient woodland situated on a sandy south-facing slope to the northwest of Woolpit. The woodland margins contain mature oak (*Quercus robur*) and ash (*Fraxinus excelsior*) standards with sycamore (*Acer pseudoplatanus*), sweet chestnut (*Castanea sativa*), and scattered field maple (*A. campestre*) coppice present in the interior. Large scale felling of diseased elm (*Ulmus sp.*) has occurred in the centre of the wood and extensive replanting has been undertaken. However, some standing deadwood remains, offering valuable habitat for hole-nesting birds.

Drinkstone Meadow CWS is located to the north of The Street, Drinkstone and contains a mosaic of habitats, including areas of semi-improved and marshy grassland, woodland and scrub. The Black Bourn watercourse, which marks the site's northern boundary, and a network of hedgerows offer connectivity to other similar semi-natural habitats in the wider locality.

Hessett Nature Reserve CWS is located to the east of Hessett village and contains a mosaic of habitats, including waterbodies, woodland, grassland, and scrub. The waterbodies, which have been created from disused gravel pits, support a good range of water birds, whilst grassed areas support bee orchids (*Ophrys apifera*), grass vetchling (*Lathyrus nissolia*), and common broomrape (*Orobanche minor*).

Pumping Station Meadow CWS is a small meadow enclosed by dense native hedgerows situated to the north of the village of Drinkstone. A large portion of the meadow is dominated by meadowsweet (*Filipendula ulmaria*) although it is becoming increasingly overgrown by a dense growth of thistles. Several wetland plants still exist

amongst the flora including rare species such as ragged-robin (*Silene flos-cuculi*) and hairy sedge (*Carex hirta*). Of particular botanical value is a thriving population of the once common (but now scarce in Suffolk) betony (*stachys officinalis*).

Tostock Pond & The Leys CWS is a pond situated on Tostock Village Green, at the southern edge of the village. The pond supports breeding GCNs and contains a shallow, marshy shelf, which provides a valuable habitat for a range of aquatic macrophytes and animals. 'The Leys' is an area of species-rich grassland (Priority habitat) and contains a plant community typical of grassland on neutral but lighter soils.

Given the limited nature of the proposal, no significant impacts upon the locally designated sites are anticipated.

Nationally designated sites

Bradfield Woods NNR and SSSI comprises a series of ancient woodlands which have been traditionally coppiced since the mid-13th Century. The combination of coppice management and great complexity of soil types and drainage present throughout the site has produced diverse and unusual communities of plants; over 370 species of plants have been recorded, a total only surpassed in 2-3 other locations. Notable species present include oxlip (*Primula elatior*), herb-paris (*Paris quadrifolia*), ramsons (*Allium ursinum*), water avens (*Geum rivale*), wood spurge (*Euphorbia amygdaloides*) and several species of orchid.

The woods support hazel dormouse (*Muscardinus avellanarius*) and other small mammals, which favour coppiced stools, a range of woodland birds, including a large breeding population of nightingale (*Luscinia megarhynchos*), and numerous species of invertebrate. A large pond adds extra ecological value, and several small streams and ephemeral pools support plants which require high humidity such as bryophytes and ferns.

Norton Wood SSSI is an ancient coppice-with-standards woodland with small, more recent additions of secondary woodland. The wood is situated on a gently sloping plateau on weakly acidic soils of sand and loess over boulder clays. Much of the wood is of the acid pedunculate oak (*Quercus robur*) – hazel – ash woodland type with abundant birch (*Betula sp.*). There are also areas of wet ash – maple (*Acer sp.*) and pedunculate oak – hornbeam (*Carpinus betulus*) woodland. The ground flora includes several uncommon plants, and a characteristic flora has developed on a series of wide rides. The wood is bisected by a railway line.

The application site lies within a SSSI Impact Risk Zone but does not meet any of the criteria for consideration (e.g., aviation proposals). No significant impacts or effects are anticipated in relation to any of the features of the designated site.

4.2.2

Priority habitats

The Magic Map database identifies land within the grounds at the Old Rectory, to the east and south of the main building, as Wood-pasture and Parkland habitat. However, there is low confidence that this habitat has been correctly classified due to a reliance on historic aerial photography. No other priority habitats are shown within the 250m zone of influence.

4.2.3

Species

No protected or notable species records exist for within the property site boundary. Table 4.2 identifies, where data resolution allows, species records within 250m (**in bold**) or 2km of the application site boundary.

Table 4.2 Protected/notable species, relevant to the scheme, within 2km of site

Latin Name	Common Name	Designation
Amphibians and reptiles		
<i>Bufo bufo</i>	Common toad	WCA5; S. 41
<i>Natrix helvetica</i>	Grass snake	WCA5; S. 41
<i>Rana temporaria</i>	Common frog	WCA5
<i>Triturus cristatus</i>	Great crested newt	EPS; WCA5; S. 41
Bats		
<i>Barbastella barbastellus</i>	Barbastelle	EPS; WCA5; S. 41
<i>Eptesicus serotinus</i>	Serotine	EPS; WCA5
<i>Nyctalus leisleri</i>	Leisler's	EPS; WCA5
<i>N. noctula</i>	Noctule	EPS; WCA5; S. 41
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	WCA5; EPS
<i>P. pygmaeus</i>	Soprano pipistrelle	EPS; WCA5; S. 41
<i>Plecotus auritus</i>	Brown long-eared	EPS; WCA5; S. 41
Birds		
<i>Accipiter nisus</i>	Sparrowhawk	Amber Status
<i>Apus apus</i>	Swift	Red Status
<i>Chloris chloris</i>	Greenfinch	Red Status
<i>Delichon urbicum</i>	House martin	Red Status
<i>Emberiza citrinella</i>	Yellowhammer	Red Status; S. 41
<i>Falco tinnunculus</i>	Kestrel	Amber Status
<i>Linaria cannabina</i>	Linnet	Red Status; S. 41
<i>Muscicapa striata</i>	Spotted flycatcher	Red Status; S. 41
<i>Passer domesticus</i>	House sparrow	Red Status; S. 41
<i>Prunella modularis</i>	Dunnock	Amber Status; S. 41
<i>Pyrrhula pyrrhula</i>	Bullfinch	Amber Status
<i>Streptopelia turtur</i>	Turtle dove	Red Status; S. 41
<i>Sturnus vulgaris</i>	Starling	Red Status; S. 41
<i>Turdus philomelos</i>	Song thrush	Amber Status; S. 41
<i>T. viscivorus</i>	Mistle thrush	Red Status; S. 41
<i>Troglodytes troglodytes</i>	Wren	Amber Status
<i>Tyto alba</i>	Barn owl	WCA1i
Invertebrates		
<i>Lucanus cervus</i>	Stag beetle	WCA5; S. 41
<i>Satyrrium w-album</i>	White-letter hairstreak	S. 41
N/A	Several species of moth	S. 41
Other mammals		
<i>Arvicola amphibius</i>	Water vole	WCA5; S. 41
<i>Erinaceus europaeus</i>	Hedgehog	S. 41
<i>Lepus europaeus</i>	Brown hare	S. 41
<i>Lutra lutra</i>	Otter	EPS; WCA5; S. 41
<i>Meles meles</i>	Badger	PBA 1992
Plants		

<i>Filago vulgaris</i>	Common cudweed	RLGB/ENG.Lr(NT)
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4.2.4

NE open source GCN records

Assessment of Natural England's GCN class licence returns data and eDNA pond survey records show the closest positive record (license return) to be located c. 495m northeast of the application site (dated 2017), which within the normal dispersal range of the species.

4.3

BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY

4.3.1

Habitats and vascular plants

Descriptions of the habitats (Appendix A1) and the characteristic plants species present are provided below.

The building (**u1b5**) proposed for conversion is a large barn of brick and flint construction with a hipped, clay pantile roof. There is horizontal timber weatherboarding on the midstreys section of the building, on the west elevation (Photos 1 to 4).

The barn is set within a gravelled driveway and yard, with a stone path to the immediate east (Photos 5 and 6). A larger area of short, species-poor grassland (**g4, 11, 64**) with several mature and veteran broadleaved trees exists with further passage north and east (Photo 7).

4.3.2

Amphibians and reptiles

a) Ponds

Several waterbodies are located within 250m of the application site boundary (Figure 2). The three nearest and within the applicants land ownership were assessed for their suitability to support breeding GCNs, and other common amphibians, using the GCN HSI. The assessment results are summarised in Table 4.3 below.

Table 4.3 Pond survey HSI results for the Old Rectory, Drinkstone, Suffolk.

Reference	NGR	HSI Score	Suitability
P1	TL 96066 61908	0.52	Below Average
P2	TL 96080 61997	0.77	Good
P3	TL 95876 61926	0.71	Good

The fishing lake P1 is located c. 150m to the northeast of the application site boundary (Photo 11) and was constructed over the winter 2020/21. It has been lined.

The lake has a shallow ledge fringed with aquatic marginal vegetation including abundant bull rush (*Typha latifolia*), branched bur-reed (*Sparganium erectum*), and tufts of hard (*Juncus inflexus*) and soft (*Juncus effusus*) rush. The lake supports macrophytes such as water mint (*Mentha aquatica*) and broad-leaved pondweed (*Potamogeton natans*) whilst adjacent terrestrial habitats offer both potential foraging and refuge opportunities. As it has been stocked with rainbow trout (*Oncorhynchus mykiss*) its suitability for GCNs is assessed as *Below Average* (HSI score = 0.52).

The wetland P2 (Photo 12) is situated within grassland c. 210m northeast of the application site boundary. It is lined, holds water all year round, and contains a fringe of aquatic marginal vegetation and rough grassland, with no evidence of fish and limited evidence of waterfowl. The wetland was assessed as supporting *good habitat suitability* for GCNs (HSI score = 0.77) but as it has only been created for c. 2 years

amphibians may not be using it yet. A GCN eDNA sample taken from pond P2 in May 2023 (Appendix A4) returned a positive result (2 out of 12 replicates).

Pond P3 (Photo 13) is situated within a walled garden c. 100m to the north of the application site boundary. The pond holds water all year round, with no evidence of fish or waterfowl, limited macrophyte coverage, and a good amount of suitable terrestrial habitat within 250m. It was assessed as supporting good habitat suitability (HSI score = 0.71). A negative eDNA result was returned for pond P3 (GCNs absent).

b) Terrestrial habitat

i) *Amphibians*

Land immediately adjacent to the barn is considered suboptimal terrestrial habitat for common amphibians. Although suitable habitats exist within the wider grounds beyond the application site boundary.

ii) *Reptiles*

The short grassland, stone, and gravel areas surrounding the barn are considered suboptimal terrestrial habitats for most common reptiles, including species such slow-worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*). These species typically prefer a mosaic of tall, tussocky grassland (containing anthills - indicating an absence of recent management) and scattered scrub, which provide cover from predators and open areas for basking. As such, the overall value of the site for reptiles and was assessed as negligible.

4.3.3

Bats

a) Building Assessment

The barn has flint and brick walls with a hipped clay pantile roof, which has a modern breathable membrane. The frame is largely of machined timber, with tight fitting joints, although there are several gaps in the walls (e.g., air bricks) and under the eaves (e.g., between walls/roof and timber frame) that could allow access into the building or as roosting niches. A light scattering of pipistrelle (*Pipistrellus* sp.) droppings was found in the building (Photo 8).

Externally, there are also opportunities for bats to roost beneath lifted clay pantiles on the roof and under the eaves. Overall, the building was assessed as supporting moderate bat roosting potential (Collins, 2016).

b) Tree Roost Assessment

No trees will be directly impacted by the proposed conversion works.

c) Foraging/commuting habitat

The wider gardens at the Old Rectory support High value bat foraging habitats (e.g., grassland mature trees and shrubs, hedgerows, and waterbodies etc.). These habitats retain some connectivity to other suitable habitats and likely roosting sites (e.g., churchyard and residential properties with mature gardens) in the wider landscape via a network of mature hedgerows and were assessed as being of High value to commuting bats (Collins, 2016).

Bats were observed commuting along the eastern edge of the building during the emergence surveys (see below); this is likely to be a locally important commuting route from roost to foraging sites.

d) Bat emergence surveys

i) Dusk emergence survey (17/05/23) - Figure 3

The survey was undertaken with no precipitation, <10% cloud cover; wind speeds (BS1) and temperatures of 12°C at the survey start, dropping to 11°C at the end. Sunset was at 20:47. The survey commenced at 20:30 and ended at 22:15, when bat activity ceased.

A single bat emerged (likely a pipistrelle) from the roof on the far southeast corner of the building at 20:54. A common pipistrelle (*Pipistrellus pipistrellus*) then flew over the barn from east to west at 20:56.

Four common pipistrelles were observed flying around the horse chestnut tree at the edge of the grassland to the northeast of the barn at 20:59. A common pipistrelle then emerged from beneath a ridge tile on the northwest corner of the midstrey section (west elevation) at 21:05.

No other bats were recorded emerging from the building during the survey, although several flight passes and registrations were recorded for both common and soprano pipistrelles (*P. pygmaeus*), brown long-eared (BLE) (*Plecotus auritus*), and barbastelle (*Barbastella barbastellus*) species.

ii) Dusk emergence survey (07/06/23) – Figure 4

The survey was undertaken with no precipitation, <10% cloud cover; wind speeds (BS1) and temperatures of 15°C at the survey start, dropping to 11°C at the end. Sunset was at 21:15. The survey commenced at 21:00 and ended at 22:35, when bat activity ceased.

The first bat registration of the survey was a soprano pipistrelle, which flew over the barn from east to west at 21:27. A common pipistrelle emerged from under the eaves midway along the east elevation and then proceeded to fly westwards over the buildings at 21:29. Another common pipistrelle then emerged from a gap beneath the guttering on the midstrey (west elevation) at 21:30. Another common pipistrelle was observed exiting from beneath the guttering on the midstrey (west elevation) in the same location as the previous bat at 21:33, followed by another immediately afterwards.

Between 21:30 and 21:32 several common and soprano pipistrelles were observed flying along the eastern edge of the barn from the southeast and then flying in a northwesterly direction. At the same time several pipistrelles were also observed foraging at the far southeast end of the barn. These may have exited from the southern elevation of the barn, which is not part of the proposed development, or they may have come from other local roost sites (e.g., the nearby church).

There were no other confirmed emergences from the barn during the remainder of the survey although several flight passes were recorded for both common and soprano pipistrelles, particularly along the eastern elevation, as well as occasional passes made by noctule (*Nyctalus noctula*), Leisler's (*N. leisleri*), serotine (*Eptesicus serotinus*), BLE, and barbastelle.

4.3.4

Nesting birds

No evidence of nesting birds was found in barn although it has the potential to support nesting small passerines such as house sparrow (*Passer domesticus*) (Red Status, S.

41) and wren (*Troglodytes troglodytes*) (Amber Status). Adjacent habitats (beyond the application site boundary) will provide a range of nesting opportunities for various species.

4.3.5

S. 41 habitats and species

a) Habitats

No priority habitats exist within or immediately adjacent to the works footprint area, although priority habitats do exist within the wider grounds to the east of the barn.

b) Species

There is potential for hedgehogs and brown hare (*Lepus europaeus*) to forage across the wider site. Nearby mature trees, shrubs, and hedgerows could support some S. 41 list invertebrates, such as Lepidoptera, and waterbodies may support aquatic invertebrates including Odonata larvae.

4.3.6

Non-native invasive plants

No non-native invasive species were recorded within the application site boundary.

4.4

GEOGRAPHIC CONTEXT

The geographic context of a feature is a useful consideration within an assessment of impacts. For this report, the geographic frames of reference for the habitats and species present on site are provided in Table 4.3; values are based upon the criteria in Table A2.1 and expert best judgements.

Table 4.4 Feature value based on geographic context

Feature	Value
Grassland, trees/shrubs, and waterbodies	Local
Amphibians and reptiles	Local
Bats	Local
Nesting and foraging birds	Local
S. 41 habitats and species	Local

5 Assessment and recommendations

5.1 INTRODUCTION

The following section provides a summary description of the proposed development, with an assessment of associated impacts and likely significant effects upon biodiversity.

The assessment and recommendations are based on use of the mitigation hierarchy, which in the first instance aims to avoid impacts. Where impacts cannot be avoided, they should be minimised (through mitigation). Only where impacts cannot be avoided or minimised should there be compensation for biodiversity harm.

Ecological enhancements are suggested, and consideration is given to individual as well as overall net gains or losses of biodiversity.

5.2 DESCRIPTION OF PROPOSED DEVELOPMENT

Planning permission is being sought to convert part of an existing barn to form a studio and office which has the potential to impact roosting, commuting, and foraging bats, nesting birds and hedgehogs.

The assessment and recommendations below provide preliminary recommendations for mitigation and enhancements for the proposed development. They are based on drawings provided by Soup Architects, and information available at the time of writing and should be updated accordingly as the scheme is subsequently amended.

5.3 NEED FOR FURTHER SURVEYS

It is generally advised that subject to no significant change in site management regimes, and dependent on the species present, baseline survey results remain valid for approximately 12 – 18 months (CIEEM, 2019). Exceptions include where mobile species are/may be present, where site management practices cease or change, or where existing guidance indicates otherwise.

5.4 ASSESSMENT OF IMPACTS

The EclA assessment process (CIEEM, 2018) involves:

- Identifying and characterising impacts and their effects;
- Incorporating measures to avoid and mitigate negative impacts and effects;
- Assessing the significance of any residual effects after mitigation;
- Identifying appropriate compensation measures to offset significant residual effects; and
- Identifying opportunities for ecological enhancement.

The emphasis in EclA is on the assessment of 'significant effects' i.e., an effect that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general. In broad terms significant effects encompass impacts on structure and function of defined sites, habitats or ecosystems and the conservation status of habitats and species including extent, abundance, and distribution.

The ecological features to be subject to detailed assessment in this report are those judged to be important and potentially affected by the project; protected species are included where the development will result in a potential breach of legislation.

5.5

HABITATS AND VASCULAR PLANTS

a) *Potential impacts*

The proposed works will not directly impact any of the adjacent grassland or trees. Accidental damage to these habitats during the construction phase is unlikely but could occur if a builder's compound was positioned on the lawn area or any heavy machinery was used to dig service runs (e.g., if required for sewerage) through the lawn and near the trees. Any damage to mature trees would be a significant negative effect at the Local level.

a) *Mitigation*

i) *Terrestrial habitats*

Vegetation clearance should be undertaken only within the application site boundary.

As good practice, the building contractors site compound should be located off grassed areas and away from retained trees on existing hard standing. Retained trees and grassed areas should also be protected from damage with Heras (or similar) fencing and Root Protection Areas (RPAs) should be used to inform the detailed design.

c) *Residual effects*

No significant residual effect.

5.6

AMPHIBIANS AND REPTILES

a) *Potential impacts*

The works will be restricted to the existing building with a builder's compound having the potential to disturb lawn habitat if it was positioned on the lawn. However, the existing hard standing can be used for the compound such that no impacts on potential foraging habitat (restricted to warm wet nights).

Any service runs such as connecting to the existing foul sewer could result in animals falling into any open trenches. If the trench was through lawn habitat the risk would be greater compared to a trench cut into the existing hard standing area to the west of the barn.

Storage of building materials and any demolition waste stored temporarily on site could be used by amphibians as refuge habitat if located close to suitable natural refuge habitat such as shrubs, hedgerows and/or dense ruderal or grassy habitat. The moving of any materials could then injure any animals present.

Such impacts would be considered a significant negative effect at the Local level.

b) *Mitigation*

As per 5.5.

Given the minimal works likely external to the barn, a Precautionary Working Method Statement would identify measures to avoid impacts on amphibians or reptiles as follows:

1. All lawn/grassed areas within and near the works footprint should be kept short prior to and during construction.
2. The builder's compound should be located on existing hard standing.

3. Clearance of any taller vegetation should be undertaken sensitively during the months of April to September inclusive. Hand tools (e.g., strimmers and hedge trimmers) should be used to take taller vegetation down to ground level using a 2- stage cut as follows:
 - A first cut to be taken to 150mm above ground level with brash raked prior to being removed from site;
 - After at least 1 hour (preferably overnight), a second cut to ground level; and
 - Maintained near to ground level until works commence.
4. Excavations should be filled on the same day they are dug or covered overnight with ply boarding and any gaps filled with damp sharp sand;
5. If this is not feasible access ramps should be created to allow animals to escape and the excavations should be inspected daily and immediately prior to infilling.
6. Any animals (except for GCN) present should be moved to retained habitats, e.g. rough grassland around the wetland and/or base of shrubs providing adequate cover;
7. Footings and concrete slabs should be poured during the morning where possible to ensure it has solidified prior to dusk to reduce the risk of animals coming into contact with wet concrete;
8. Any hand mixing of mortar or concrete should be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day to prevent animals coming into contact;
9. Any excess concrete should be poured into a concrete skip, so it can then set to prevent animals coming into contact.
10. All building materials and waste materials should be stored on hardstanding or stored off the ground on pallets to reduce risk of animals seeking refuge;
11. The GCN poster in Appendix A5 should be erected in the welfare facilities provided for construction staff on site (**not required under a DLL**).
12. Should any GCNs (Appendix A5) be encountered, works should stop immediately and advice be sought from a suitably experienced ecologist. Any other animals should be allowed to move out of the works area or be safely relocated.
13. **Gully pots should be avoided and permeable paving used if amphibians cannot become trapped in silt traps or attenuation crates; and**
14. **Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen⁷ to prevent amphibians entering drains.**

c) Residual effects

With mitigation measures proposed, no significant effects are anticipated during either the construction or operational phases.

5.7

BATS

a) Potential impacts

i) Roosting bats

The proposed conversion of the barn into a studio and office with the installation of some roof lights and other alterations to existing window and door openings will result in the destruction of bat roosts with the potential to harm or kill bats. Such impacts would be considered a significant negative effect at the Local level.

ii) Foraging and commuting habitats

No impacts are predicted.

⁷ <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

iii) Light disturbance

Lighting (construction and operational phases) can impact bat commuting and foraging behaviour and increase the risk of predation, which could affect foraging success and population recruitment and is considered a potential significant effect at the Local level.

Lighting impacts relate to security lighting external to the barn and light spillage from windows and doors when the studio and office are in use. In this instance, impacts on retained mature trees adjacent to the barn are considered most relevant.

iv) Roofing membranes

Research has shown bats can become entangled in modern breathable roofing membranes if used under clay pantiles or peg/plain tiles (Waring *et al.*, 2013) or behind weatherboarding. Without mitigation, the impacts above could result in significant effects at a Local level.

b) Mitigation

i) Bat roosts

The removal of any roof tiles and alterations to window and doors opening must be supervised by a Registered Consultant (RC) and/or Accredited Agent (AA). Any internal roosting areas would need to be inspected and checked with an endoscope prior to filling with a temporary rock wall or if bats cannot be confirmed as being absent then exclusion bags would be fitted for a minimum of 7 days when temperatures are above 8 degrees centigrade. Any bats encountered would be moved to a bat box erected on a tree prior to works commencing.

ii) Foraging and commuting habitat

As per 5.5, protective fencing will be used to protect retained trees and grassland areas.

iii) Light disturbance

Exterior lighting (as well as temporary security lighting during the construction phase) design must minimise lighting impacts upon retained natural habitats including the moat and mature trees and shrubs in the gardens, particularly to the north and east of the new buildings/extension and should follow current guidance as necessary^{8,9}:

- *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. Lighting should have a maximum of 7.5 to 10 lux and LED lights should be used using the warm white (or amber) spectrum, with peak wavelengths >550nm (2700°K) and no UV component; and
- *Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats including mature broadleaved trees (e.g., ash tree to the north of the main house), shrubs, grassland areas and waterbodies. This can be achieved by restricting the height of the lighting columns/fixtures and the design of the luminaire, including the following measure:
 - ❖ Light columns/fixtures in general should be as short as possible as light at a low level reduces the ecological impact.
 - ❖ Luminaires with an upward light ratio of 0% should be mounted on the horizontal i.e., with no upward tilt.
 - ❖ If taller lights are required, and as a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill; and

⁸ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

⁹ www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

❖ PIR movement sensors and timers should be used to minimise the 'lit time'.

iv) Roof membrane

Bat friendly roofing felt (e.g., Type 1F or a breathable sarking board e.g., Hunton Sarket or Pavatex Isolair) should be used if the barn roof requires re-roofing. Until recently non-bitumen coated roofing membranes (NBCRM) would not be licensed by Natural England. However, a NBCRM which has passed a *snagging propensity test* as defined by Natural England and the Bat Conservation Trust¹⁰ may be approved as part of an EPS Mitigation licence application.

c) *Residual effects*

With mitigation measures implemented, impacts upon roosting bats will likely be negligible.

5.8

NESTING BIRDS

a) *Potential impacts*

Any building works including removal of roof tiles if undertaken during the breeding season. Increased noise levels (during construction) could also affect the ability of birds to hold territories during the breeding season whilst accidental damage to retained trees and shrubs could also affect breeding success and/or result in the destruction of active nests.

The destruction of active nests would be considered a significant negative effect (as an offence under wildlife legislation) at the Local level.

b) *Mitigation*

As per 5.5.

Habitat avoidance and mitigation as per sections 5.5 and 5.6.

Commencement of building works should take place outside of the nesting bird season (March to August inclusive). If this is not feasible, a check for nesting birds should be undertaken prior to work starting. If any active nests are present, works within 5m must wait until the young have fledged.

c) *Residual effects*

Effects upon active nests will be avoided.

5.9

OTHER S. 41 LIST HABITATS AND SPECIES

a) *Potential impacts*

During construction, hedgehogs could potentially fall into open trenches (e.g., if any service runs are required) resulting in entrapment and possible injury and mortality of individuals due to falling in or becoming in contact with caustic substances such as fresh concrete when making good.

b) *Mitigation*

Habitat avoidance and mitigation as per section 5.5 and 5.6.

During construction, any concrete should be poured early in the day or covered with ply boarding or membrane overnight to prevent animals coming into contact. Trenches should be covered overnight, or mammal ladders should be installed to

¹⁰ <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes>

allow animals escape. Uncovered trenches must be checked daily and any animals encountered be relocated out of the works area.

c) Residual effects

Direct impacts upon hedgehogs will be avoided with no significant residual impacts anticipated.

5.10 COMPENSATION

No habitat compensation is required. The loss of the bat roosts will require compensation through the provision of bat boxes erected minimum of 6m high on mature tree as part of Bat Mitigation Class Licence.

To be consistent with planning policy, biodiversity gains could be delivered through suggested enhancement measures (see section 5.12 below).

5.11 CUMULATIVE EFFECTS

The Mid Suffolk Council website was searched on 28 September 2023 for significant planning applications within 1km of the application site dating back two years. Refused and withdrawn applications were not considered in relation to cumulative ecological effects.

The search returned a low number of householder applications for extensions and/or alterations to existing dwellings, several applications for the discharge and/or variation of conditions for previously granted schemes (beyond the 2-year search period), an application to erect a detached dwelling and cart lodge, and another to construct a substation building.

There is no indication from the above applications that there will be any significant cumulative impact with the current application.

5.12 ENHANCEMENT OPPORTUNITIES

It should be noted that prior to a recent announcement by the government it was anticipated that all planning permissions granted in England (with a few exemptions) will be formally required to deliver at least 10% biodiversity net gain (see Section 2.3.1) from November 2023. The new formal start date is yet to be confirmed but is likely to be in the new year. Quantitative assessments of habitat losses and gains using the Defra Metric will therefore be necessary.

Mitigation and compensation measures proposed will ensure negative ecological effects are minimised. However, to be consistent with planning policy, biodiversity gains could be delivered through suggested enhancement measures. To maximise biodiversity enhancements a minimum of 3 of the 5 options listed in Table 5.1 should be implemented.

Table 5.1 Biodiversity enhancements

Feature	Enhancement suggestion
Nectar rich climbers	<p>Any ornamental planting should utilise nectar rich plants to benefit pollinators and associated predators (e.g., foraging bats and hedgehogs).</p> <p>Planting should include nectar rich climbers such as traveller's joy (<i>Clematis vitalba</i>) and honeysuckle</p>

Feature	Enhancement suggestion
	(<i>Lonicera periclymenum</i>), which could be planted at 5ft intervals along existing hedgerows and/or trained up walls, fences, posts, and trellises.
Raptor box	A kestrel box ¹¹ could be erected on a suitable mature tree overlooking the grassland area to the northeast of the buildings.
Small passerine nest boxes	A minimum of 2 of each of the boxes in Appendix A6) to be mounted on the barn (e.g., sparrow terraces) and existing mature trees in the gardens and/or buildings, with exact locations agreed with a suitably experienced ecologist.
Bats	Three bat boxes (comprising 1x each of the boxes in Appendix A7), could be erected on suitable mature trees in the gardens. Exact locations to be agreed with a suitably experienced ecologist.
Log/brush piles	Some log/brush piles (Appendix A8) could be created and sited within rough grassland near the wetland using logs/brush from any trees/shrubs (broadleaved species only – not conifers) requiring felling during construction works. Log/brush piles provide important refuge habitats for amphibians/reptiles and are likely to support a range of fungi, dead wood invertebrates and solitary bees, which in turn will attract foraging small mammals and birds etc.

Peat-based compost must not be used in any planting scheme to avoid impacts upon habitats and carbon storage.

5.13

CONCLUSIONS

Ecological impacts resulting from the proposed design have where possible been avoided or minimised through design, mitigation, and compensation measures.

To maximise potential biodiversity benefits the measures proposed should be secured through detailed design and appropriate planning conditions, scheme specific and/or as per the British Standard (BS 42020:2013). Relevant planning conditions could include:

- BS 42020:2013 D.2.1 to provide a Biodiversity Method Statement to detail mitigation, habitat compensation and biodiversity enhancements to be delivered; and a Biodiversity Enhancement Strategy to ensure ecological gains are secured;
- BS 40202: 2013 D.3.2 conditions specific to protect breeding birds.
- Conditions specific to bats (D.6.2 Submission of a copy of the NE Mitigation Licence and BS 42020:2013 D.3.5 to limit lighting design impacts); and
- BS 42020:2013 D.3.7 and D.3.8 to ensure mitigation and enhancement measures are successfully implemented.

¹¹ <https://shopping.rspb.org.uk/bird-feeders-boxes-tables/bird-houses-nest-boxes/bird-prey-nest-boxes/kestrel-nest-box.html>

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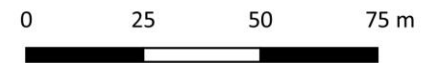
Waring, S., Essah, E., Gunnell, K. and Bonser, R. (2013) Double jeopardy: the potential for problems when bats interact with breathable roofing membranes in the United Kingdom. Architecture & Environment, 1 (1). pp. 1-13.

Figures



Legend

 Application site



Client: Mr N. Hill

Project: The Barn, Old Rectory, The Street,
Drinkstone, Suffolk

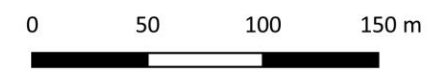
Drawn:	Date:	Drawing Ref:
AG	22/09/23	OLDRECDRINKSTONE/23/001

Figure 1 Site location plan



Legend

- Pond
- 250m buffer
- Application site

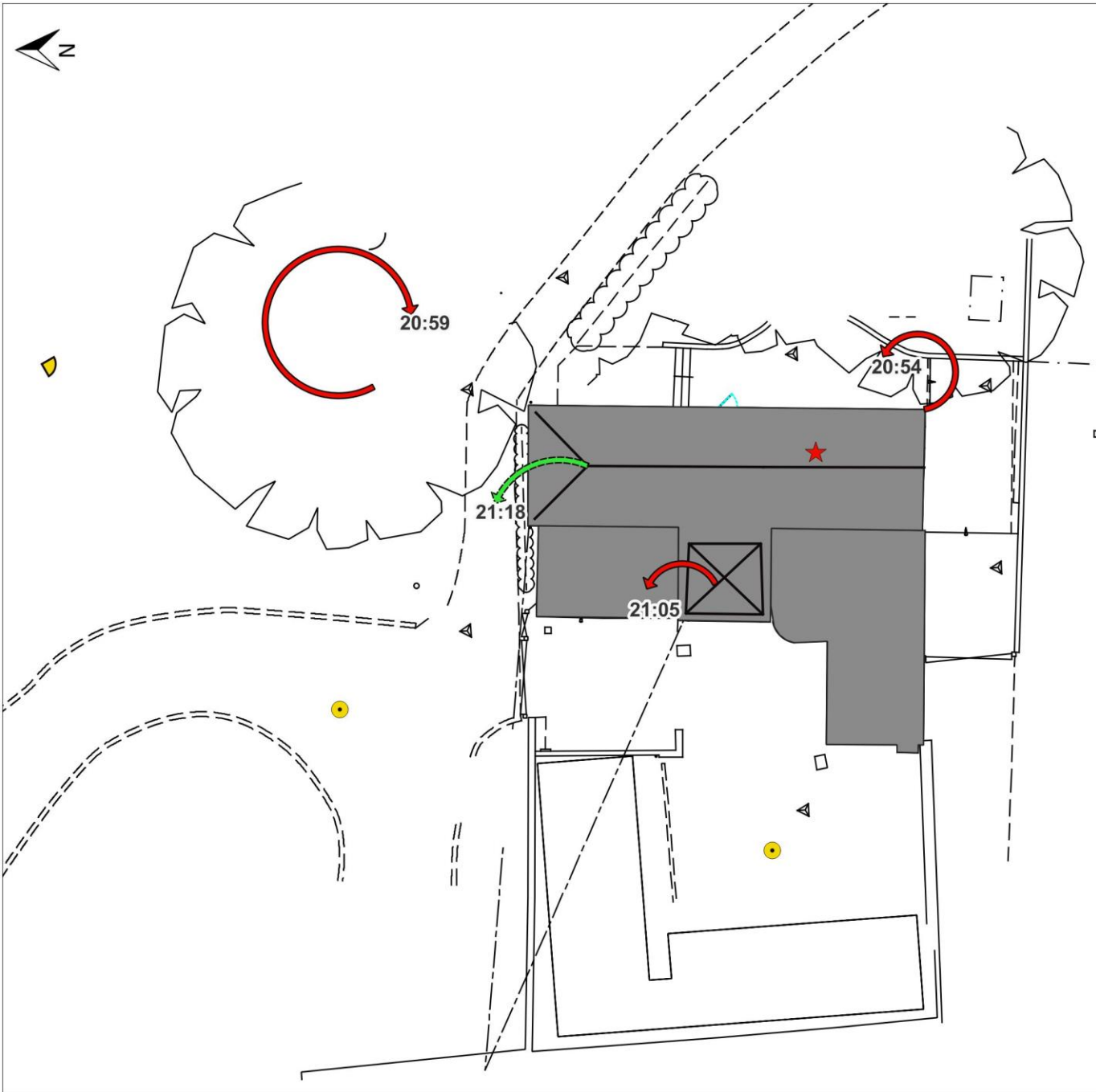


Client: Mr N. Hill

Project: The Barn, Old Rectory, The Street, Drinkstone, Suffolk

Drawn:	Date:	Drawing Ref:
AG	22/09/23	OLDRECDRINKSTONE/23/002

Figure 2 Ponds location plan



Legend

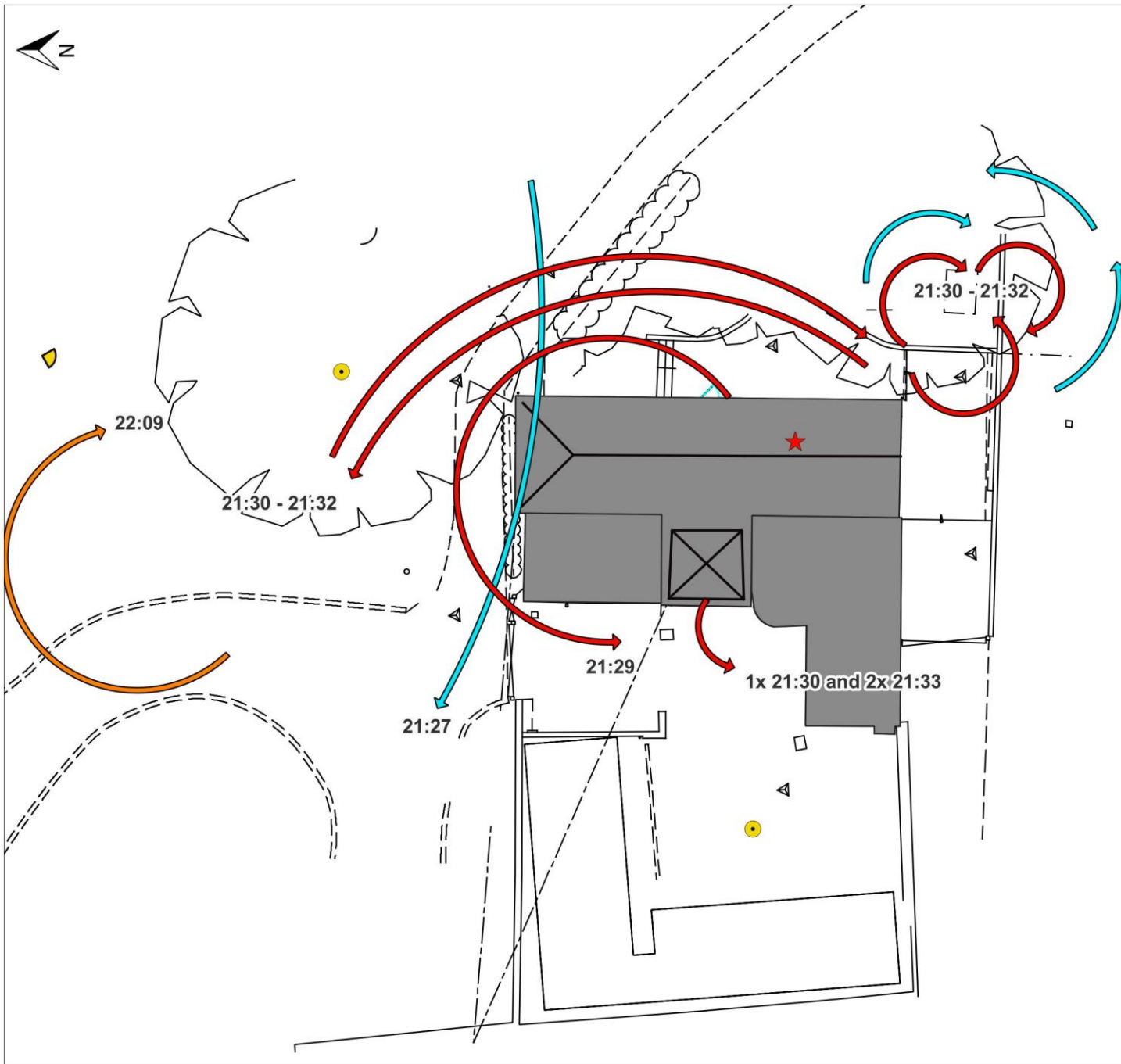
- Common pipistrelle emergence and/or flight
- Unidentified bat emergence
- Surveyor location
- ◆ Lynx Pro thermal scope
- ★ Song Meter Mini static detector

Client: Mr N. Hill

Project: Old Rectory, The Street, Drinkstone, Suffolk

Drawn:	Date:	Drawing Ref:
AG	19/06/23	OLDRECDRINKSTONE/23/003

**Figure 3 Bat emergence survey results
17.05.2023**



Legend

- Surveyor location
- ◆ Lynx Pro thermal scope
- ★ Song Meter Mini static detector
- ➔ Common pipistrelle emergence and/or flight
- ➔ Soprano pipistrelle flight
- ➔ Serotine flight

Client: Mr N. Hill

Project: Old Rectory, The Street, Drinkstone, Suffolk

Drawn:	Date:	Drawing Ref:
AG	19/06/23	OLDRECDRINKSTONE/23/004

**Figure 4 Bat emergence survey results
07.06.2023**

Appendices

Appendix A1 Photos



Photo 1 Northeast elevation of the barn



Photo 2 Northwest elevation of the barn with attached lean-to



Photo 3 West elevation of the barn



Photo 4 Internal view of the barn



Photo 5 Gravel driveway immediately north of the building



Photo 6 Stone pathway immediately east of the building

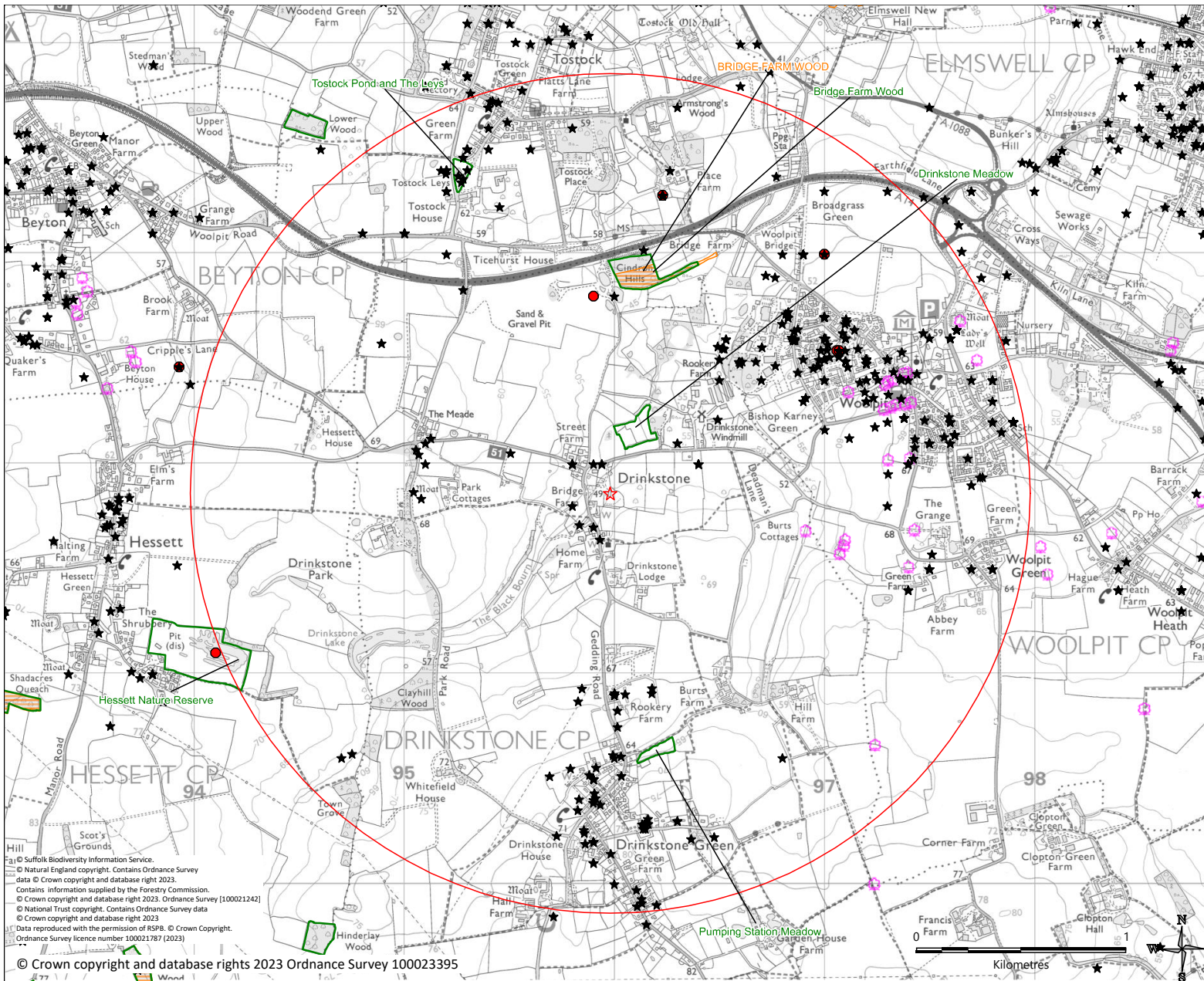


Photo 7 Driveway and trees at the edge of the grassland to the east of the building



Photo 8 Bat dropping on stairs of stables

Appendix A2 SBIS data search map



- Data Enquiry**
- ☆ Search Point
 - Search Area
- Protected, Locally Scarce and Rare Species**
- ★ Record Locations (for grids of 6 fig. or greater)
- Schedule 9 Species**
- Record Locations (for grids of 6 fig. or greater)
- Ancient/Veteran/Notable Trees**
- 🌳
- Roadside Nature Reserve**
- 🟠
- County Wildlife Sites**
- 🟢
- County GeoSites**
- 🟡
- SSSI**
- 🟦
- LNR**
- 🟩
- SPA**
- 🟨
- SAC**
- 🟪
- RAMSAR**
- 🟫
- NNR**
- 🟬
- SWT Reserve**
- 🟭
- Ancient Woodland Inventory**
- 🟮
- Other Public or Conservation Ownership/Management**
- 🟯
 - 🟰
- National Park**
- 🟱
- The Broads**
- 🟲
- AONB**
- 🟳
- Suffolk Coast and Heaths or Dedham Vale

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MHE Consulting (The Old Rectory, Drinkstone TL9598061860) 2km Data Enquiry

Date: 13/02/2023 | Drawn by: Jane Mason

Appendix A3 EclA criteria

A3.1 General criteria for geographic context/value

Designation	Example
International	<ul style="list-style-type: none"> • SPA, SAC and Ramsar sites and the features that they have been designated for. • A sustainable area of habitat listed in Annex I of the Habitats Directive or smaller areas of such habitat which are essential to maintain the viability of a larger whole. • A sustainable population of an internationally important species e.g. UK Red Data Book (RDB) species or European Protected Species (EPS) of unfavourable conservation status in Europe (e.g. Annex II species: bats, GCNs etc.), of uncertain conservation status or of global conservation concern in the UK BAP.
National	<ul style="list-style-type: none"> • SSSI or a discrete area that meets the selection criteria for designation. • A sustainable area of priority habitat identified included on the S. 41 NERC Act list or smaller areas of such habitat that are essential to maintain the viability of a larger whole. • A sustainable population of priority species (listed under S. 41 of the NERC Act 2006). • A sustainable population of a nationally important species i.e. RDB species not included in above category but which is listed on Schedules 5 or 8 of the WCA 1981 (as amended). Also, sites supporting a breeding population of such species or supplying a critical element of their habitat requirements. • A sustainable population of uncommon or threatened Annex IV EPS species at a UK level. • A nationally scarce species (occurs in 30-100 10km squares in the UK) that has its main UK population within the district.
County	<ul style="list-style-type: none"> • A viable area of habitat identified in the county BAP. • A County Wildlife Site. • A sustainable population of common or non-threatened Annex IV EPS species at a UK level. • A Nationally Scarce species that does not have its main population within the county. • Any BAP species not included in the 'national' category above for which a county Action Plan exists.
Local	<ul style="list-style-type: none"> • Individual members of local populations of priority or other nationally/internationally important species which are not in themselves key for maintaining a sustainable population (e.g. individual dog otter passing through area with no holts or resting sites). • Other habitats and species not in the above categories but are considered to have some value at the district/borough level.

Appendix A4 GCN eDNA analysis results

Folio No: E16526
Report No: 1
Purchase Order: OLDRECTORY P2
Client: MHE CONSULTING LTD.
Contact: Christian Whiting

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (*TRITURUS CRISTATUS*)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 19/04/2023
Date Reported: 27/04/2023
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
1294	Oldrectory P2 (wetland lake)	-	Pass	Pass	Pass	Positive	2

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chris Troth

Approved by: Jennifer Higginbottom



Folio No: E16527
Report No: 1
Purchase Order: OldRectory P3
Client: MHE CONSULTING LTD.
Contact: Christian Whiting

TECHNICAL REPORT

ANALYSIS OF ENVIRONMENTAL DNA IN POND WATER FOR THE DETECTION OF GREAT CRESTED NEWTS (*TRITURUS CRISTATUS*)

SUMMARY

When great crested newts (GCN), *Triturus cristatus*, inhabit a pond, they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm GCN habitation or establish GCN absence.

RESULTS

Date sample received at Laboratory: 19/04/2023
Date Reported: 27/04/2023
Matters Affecting Results: None

Lab Sample No.	Site Name	O/S Reference	SIC	DC	IC	Result	Positive Replicates
1292	Old Rectory P3	-	Pass	Pass	Pass	Negative	0

If you have any questions regarding results, please contact us: ForensicEcology@surescreen.com

Reported by: Chris Troth

Approved by: Jennifer Higginbottom



Appendix A5 GCN poster

Great Crested Newt

If seen by any employee, works must cease immediately and an ecologist be contacted for advice

It is an offence to intentionally or recklessly disturb, injure or kill great crested newts

Further information can be found at www.arguk.org



Appendix A6 Bird boxes



RSPB Robin and wren diamond nestbox

Product ID: R401640

£ 15.00

★★★★☆ [Read all reviews](#)

Best-selling, diamond shaped, open-fronted nest box attractive to robins, wrens, pied wagtails and spotted flycatcher.

[Read full information](#)

SAVE £2 WHEN YOU BUY TWO PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 4 January 2023 and is subject to availability
- Loyalty points can be collected/redeemed as usual
- Not available in conjunction with any other offer

Qty

Visit the RSPB website

Shop login



Search for a product



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[Home](#) > [Bird care](#) > [Bird houses & nest boxes](#) > [Garden bird nest boxes](#) > [RSPB Sparrow terrace nest box](#)

 Print



RSPB Sparrow terrace nest box

Product ID: R407816

£ 35.00

★★★★☆ [Read all reviews](#)

Provides three separate nest boxes in one FSC® certified timber terrace, each with its own 32mm entrance hole. Beautifully made in the UK.

RSPB nest boxes provide a safe and snug place for birds to roost and nest. Unlike cheaper alternatives, our [bird houses](#) are made from sustainable FSC® certified timber and have excellent insulation properties. This makes them warm in winter and cool in summer. RSPB nest boxes are carefully designed with correct dimensions and ventilation, without perches for intruders to grip onto and threaten the occupants.

[Read full information](#)

SAVE £2 WHEN YOU BUY TWO PROMOTIONAL NEST BOXES!

- Add two promotional nest boxes to your basket to save £2
- Offer ends 4 January 2023 and is subject to availability



Open Fronted Nest Box

£25.00

For birds such as robin and pied wagtail. Open fronted but with a generous canopy to screen from aerial predators. Place in good cover not in the open.

43 in stock

- 1 + [Add to basket](#)

Category: bird and bat boxes

Description	Additional information	Reviews (0)
<i>Description</i>		
Height tbc		
Width		
Depth		



Willow Tit/Tree Creeper

£35.00

A new improved box designed for fitting to smaller willow/birch trees, low to the ground, to encourage willow tit. Filled internally with damp sawdust/shavings/rotting wood as this species likes to excavate their own holes. The narrowing top crevice is designed to be suitable for roosting bats. Also suitable for tree creeper without the sawdust infill.

12 in stock

- 1 + [Add to basket](#)

Category: bird and bat boxes

Description
<i>Description</i>
Additional information
Reviews (0)
<i>Description</i>
Height 430mm
Width 60mm
Depth 70mm
Typical Weight 4.3kg

Appendix A7 Bat boxes



Woodstone multi-chamber box

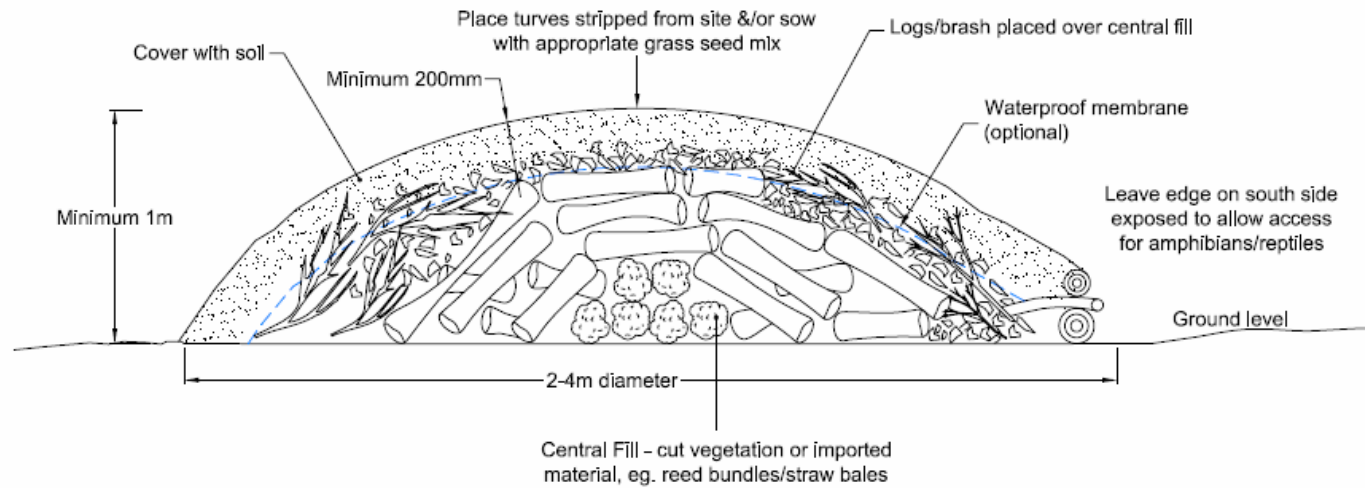


Eco Kent bat box



Vincent Pro bat box

Appendix A8 Log/brash piles



Brush/log pile recently created



Brush/log pile (c. 2 years old) with vegetation growing through and over