MHECONSULTING
environmental consultants

Ecology Report

PROPOSED WORKS
The Old Rectory, Church Lane, Great Wenham, Suffolk

November 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, Church Lane, Great Wenham, Suffolk (TM 07123 38081; Figure 1). A planning application is to be submitted to Babergh District Council for works including the extension and minor alterations to the main house, the extension and conversion of an outbuilding (including the demolition of an attached garage), construction of a new swimming pool, pool house and garage with formal and informal landscaping also proposed.

The proposed development site is located off Church Lane, Great Wenham and comprises a Grade II-listed, period property (Old Rectory) with outbuildings. The buildings are set within gardens containing areas of managed lawn and gravel with flowerbeds scattered broadleaved trees and shrubs (including some fruit trees) and hedgerows.

A Preliminary Roost Assessment found a light scattering of brown long-eared (BLE) (*Plecotus auritus*) and pipistrelle (*Pipistrellus* sp.) droppings inside the outbuilding (B2), which is proposed for conversion as well as evidence of a BLE feeding perch (e.g. moth wings). Subsequent bat activity surveys of B2 were undertaken which recorded two common (*P. pipistrellus*), a BLE bat and one soprano pipistrelle (*P. pygmaeus*) roosting in the building. Combined the evidence was indicative of day/transitional roosts likely used by low numbers/individual bats of these species and an EPSML will therefore be required to mitigate impacts on roosting bats the proposed conversion works.

No evidence of roosting bats was observed in the attached garage (B3) proposed for demolition or on parts of the main house (B1) proposed for extension.

The habitats present on site and immediately adjacent also provide suitable nesting, refuge, and foraging opportunities for common amphibians, a range of bird species and hedgehogs (*Erinaceus europaeus*), and moderate value foraging and commuting habitats for bats. These habitats may also support some S.41 list invertebrates, including Lepidoptera.

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 the submission of an EPSML, timing of works and good working practices, with necessary compensation detailed. Biodiversity enhancements are proposed, ensuring gains are delivered.
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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, Church Lane, Great Wenham, Suffolk (TM 07123 38081; Figure 1).

A planning application is to be submitted to Babergh District Council for works including the extension and minor alterations to the main house, the extension and conversion of an outbuilding (including the demolition of an attached garage), construction of a new swimming pool, pool house and garage with formal and informal landscaping also proposed.

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 proposed development site is located off Church Lane, Great Wenham (Figure 1) and comprises a Grade II-listed, period property (Old Rectory) with outbuildings. The buildings are set within gardens containing areas of managed lawn and gravel with flowerbeds scattered broadleaved trees and shrubs (including some fruit trees) and hedgerows.

Photos referred to within this report are provided within 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 (NPFF)

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 (SPA) and possible Special Areas of Conservation (SAC);
b) listed or proposed Ramsar sites; and
c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential SPAs, possible SAC, 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 Babergh 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, which contains a policy that requires at least 10% biodiversity net gain. Part 1 of the Joint Local Plan will be considered for adoption at Full Council meetings in November 2023. In the meantime, the Pre-Submission (Regulation 19) Document states:

Identify and pursue opportunities for securing measurable net gains, equivalent of a minimum 10% increase, for biodiversity. Where biodiversity assets cannot be retained or enhanced on site, the Councils will support 'biodiversity offsetting' to deliver a net gain in biodiversity off-site.

2.2.3 *Biodiversity Net Gain Interim Planning Guidance Note for Suffolk*

A recently published Interim Biodiversity Net Gain Planning Guidance Note for Suffolk[1] provides detailed guidance for applicants and decision makers in local authorities across Suffolk during the interim period before Spring 2024 (previously November 2023) when a measurable biodiversity net gain of at least 10% will be a mandatory requirement for all major developments (and minor developments from April 2024), with some exceptions (see Section 2.3.1 - Environment Act (2021) below).

Paragraph 3.2 of the Interim Guidance Note states that:

For the purposes of this interim guidance authorities (in Suffolk) *will be requesting at least 10% biodiversity net gain on all major developments.*

Major developments include:

i) Where the number of dwellings to be provided is ten or more;
ii) Where the number of dwellings to be provided is not known, a site area of more than 0.5 hectares;
iii) Provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more; or
iv) Development carried out on a site having an area of one hectare or more.

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. S*pecies 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 mantegazzanium*) are listed on Schedule 9 of the WCA 1981. It

[1] https://democracy.ipswich.gov.uk/documents/s36985/PD-22-14%20Appendix%201%20-%20Suffolk%20Wide%20BNG%20Guidance%20Document.pdf

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, posses, 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 42020:2013[2]);
- 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 (EcIA) 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 including great crested newt (GCN) (*Triturus cristatus*)[3] and reptiles such as grass snake (*Natrix helvetica*)[4];
- Mammals including badgers (*Meles meles*)[5] and bats[2];
- Breeding birds[6] including Red and Amber status[7] species; and
- S. 41[8] list habitats such as hedgerows, and species such as hedgehog (*Erinaceus europaeus*).

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 25 August 2022 to 1) record habitats present; and 2) assess the value of the habitats present for protected and notable

[2] BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.
[3] GCNs and all species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.
[4] Widespread reptiles and amphibians receive partial protection under the WCA 1981.
[5] Badgers and their setts are afforded protection by the PBA 1992.
[6] All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.
[7] The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 4 (Eaton *et al*., 2015).
[8] S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

species. A list of vascular plants and a description of the vegetation was made, 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 Phase 1 Habitat Survey methodology (JNCC, 2010). Care was taken to record as many species as possible.

3.3.2 *Amphibians and reptiles*

a) Amphibians

No ponds are located within the bounds of the application site though three ponds are located within 250m of the site boundary. The nearest P1 is located c. 85m west of the application site boundary (Figure 2). However, no access was secured to assess any of these ponds for their suitability to support breeding GCNs and other amphibians.

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
Confirmed presence	Bat presence confirmed during the scoping survey
High	Buildings that have many areas suitable for roosting which are obviously suitable for use by a larger number of bats including maternity colonies.
Moderate	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.
Low	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.
Negligible	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 Assessment

Existing trees were visually checked to assess their Bat Roosting Potential (BRP) using the following criteria:

1. All potential roosting cavities (e.g., natural cavities, rot holes, woodpecker holes, splits, peeling bark) were inspected from the ground, using binoculars where necessary;
2. All potential niches would be assigned a category according to Bat Conservation Trust (BCT) protocols (Collins, 2016). These categories are listed in Table 3.1, below:

Table 3.1 Categories used to assess the BRP of trees.

Bat Roost Suitability	Description
Confirmed presence	Bat presence confirmed during the scoping survey
High	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.
Moderate	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.
Low	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.
Negligible	Trees with negligible bat roost potential.

3. Where potential niches existed, niches below 5m high were physically inspected, using ladders where appropriate. Any cavities with the potential to support roosting bats were inspected with a SeeSnake endoscope and/or a small LED torch as necessary; and
4. 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.

c) 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 3.2 Commuting and foraging habitats

Suitability	Description
High	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. 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. Site is close to and connected to known roosts.

Moderate	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.
Low	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.
Negligible	Negligible habitat features on site likely to be used by commuting and foraging bats.

c) Dusk emergence survey

Dusk emergence surveys of the outbuilding and garage were undertaken (25/08/22 and 21/09/22) as per the following methodology:

- The emergence survey 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.

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 survey carried out, the timing of the survey visit was considered appropriate for this report.

3.5 SURVEYORS

The initial site walkover and pond assessments were undertaken by Christian Whiting BSc (Hons) MSc MCIEEM who has over 19 years' experience working as an ecologist and holds NE survey licences for bats (2015-14745-CLS-CLS - Bat Survey Level 2, barn owl (CL29/00213), and great crested newts (Class A licence 2015-17633-CLS-CLS).

He is a Registered Consultant (Registration RC089) on NE's Bat Mitigation Class Licence. He is registered on the Environment Agency's and Water Management Alliance IDB water vole 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 on the bat surveys by experienced unlicensed surveyors Jake Brendish and Carrie Riddleston.

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, nationally designated sites within 5km and internationally designated sites within 13km of the application site are listed below in Table 4.1.

Table 4.1 Relevant designated sites

Site name	Site designation
Springhill Meadows	CWS
Hintlesham Woods *	SSSI
Stour and Orwell Estuaries	SPA/Ramsar

*Listed in the Ancient Woodland Inventory for England

Locally designated sites

No Local Nature Reserves are located within 2km of the application site boundary though a single County Wildlife Site (CWS) which does exist within 2km of the site is listed below.

- Springhill Meadows CWS consists of two floristically rich meadows bordered by dense woodland and a small stream. The meadows support three different plant communities including a large population (over 300 spikes) of the scarce common spotted-orchid (*Dactylorhiza fuchsia*) and smaller population of early marsh orchid (*Dactylorhiza incarnata*). The latter is rare in Suffolk and is now extinct in many of its former habitats.

Given the nature and relatively small scale of the proposed development no significant ecological effects on the locally designated site are anticipated.

Nationally designated sites

Hintlesham Woods SSSI comprises three woodlands, Hintlesham Great Wood, Ramsey Wood and Wolves Wood, which together form one of the largest remaining areas of ancient coppice-with-standards woodland in Suffolk. Historical and archaeological evidence show the woods to have been in existence at least since the 12th century. Wolves Wood is managed by the RSPB.

The woods contain a variety of tree communities and a diverse ground flora, with notable species found in the woods including the uncommon wild service tree (*Sorbus torminalis*), and plants such as bird's-nest orchid (*Neottia nidus-avis*), wood spurge (*Euphorbia amygdaloides*) and violet helleborine (*Epipactis purpurata*). The woods also support breeding populations of woodcock (*Scolopax rusticola*), nightingale (*Luscinia megarhynchos*), tawny owl (*Strix aluco*), nuthatch (*Sitta europaea*) and whitethroat (*Curruca communis*).

The application site lies within a SSSI Impacts Risk Zone for Hintlesham Woods SSSI but does not meet any of the criteria for consideration. Given the nature and

scale of the development, no significant impacts or effects are anticipated in relation to any of the features of the designated site.

Internationally designated sites

Stour and Orwell Estuaries Special Protection Area (SPA) and Ramsar site comprises a large Internationally important network of estuaries and coastal habitats which qualify for important populations of overwintering birds including hen harrier (*Circus cyaneus*), redshank (*Tringa totanus*) and black-tailed godwit (*Limosa limosa islandica*) amongst other species. The number of overwintering waterfowl present has been estimated to number over 65,000 birds

Habitats Regulations Assessment

Where a development or project may, alone or in combination, have a 'likely significant effect' upon the features of the Natura 2000 or Ramsar site, the Habitats Regulations 2017 require a Habitats Regulations Assessment (HRA) to be undertaken. Advice from NE states that increased housing located within 1km by foot and 13km by car of Natura 2000 sites may potentially cause disturbance to the interest features due to walkers (and dogs). Disturbance to bird species that breed and/or overwinter within the sites is considered to cause the greatest impact.

HRAs are undertaken by a "competent authority" (CA), which in the case of Local Plans and most planning applications is the Local Planning Authority (LPA). Within Suffolk, Ipswich Borough Council in partnership with the neighbouring authorities Babergh District Council and East Suffolk Council have developed a 'Recreational disturbance Avoidance and Mitigation Strategy' (RAMS) to address likely significant effects upon Natura 2000 sites resulting from development within the area. The strategy provides the practical basis and evidence to identify projects to mitigate the impact of new development on the protected sites.

HRAs are undertaken by a "competent authority" (CA), which in the case of Local Plans and most planning applications is the LPA.

As the proposed development will create more living space for the homeowners and no new dwellings are proposed no impact on the coastal Natura 2000 sites is predicted and no further consideration of impacts upon the Natura 2000 or Ramsar sites will be made in this document.

4.2.2 *Priority habitats*

Assessment of the Magic Map database returned an area of deciduous woodland located c.40m south of the building proposed for conversion.

4.2.3 *Species*

No protected or notable species records exist from within the application site boundary. Species of relevance are shown in Table 4.2 with species within 250m shown **in bold** (where data accuracy allows).

Table 4.2 Protected/notable species within 2km of the application site

Latin Name	Common Name	Designation
Amphibians and reptiles		
Anguis fragilis	Slow worm	Sch. 5; S. 41
Lissotriton vulgaris	Smooth newt	Sch. 5
Natrix helvetica	Grass snake	Sch. 5; S. 41

Bats		
Barbastella barbastellus	Barbastelle	Sch. 5; S. 41
Nyctalus leisleri	Leisler's bat	Sch. 5
Nyctalus noctula	Noctule	Sch. 5; S. 41
Pipistrellus nathusii	Nathusius' pipistrelle	Sch. 5
Pipistrellus pipistrellus	Common pipistrelle	Sch. 5
Pipistrellus pygmaeus	Soprano pipistrelle	Sch. 5; S. 41
Plecotus auritus	Brown long-eared bat	Sch. 5; S. 41
Birds		
Alauda arvensis	Skylark	Red Status; S. 41
Apus apus	Swift	Amber Status
Chloris chloris	Greenfinch	Red Status
Delichon urbicum	House martin	Red Status
Emberiza citrinella	Yellowhammer	Red Status, S. 41
Falco tinnunuclus	Kestrel	Amber Status
Passer domesticus	House sparrow	Red Status, S. 41
Prunella modularis	Dunnock	Amber Status
Pyrrhula pyrrhula	Bullfinch	Amber Status
Streptopelia turtur	Turtle dove	Red Status, S. 41
Sturnus vulgaris	Starling	Red Status, S. 41
Troglodytes troglodytes	Wren	Amber Status
Turdus philomelos	Song thrush	Red Status, S. 41
Turdus viscivorus	Mistle thrush	Red Status
Tyto alba	**Barn owl**	**WCA1i**
Invertebrates		
Limenitis camilla	White admiral	RLGB.VU; S. 41
Lucanus cervus	**Stag beetle**	**Sch. 5; S. 41**
Other mammals		
Erinaceus europaeus	Hedgehog	S. 41
Lepus europaeus	**Brown hare**	**S. 41**
Meles meles	Badger	PBA 1992
Mustela putorius	Polecat	S. 41
Plants		
Filago vulgaris	Common cudweed	RLGB.Lr(NT)

4.2.4 NE open source GCN records

Assessment of Natural England's GCN class licence return data and eDNA pond survey records show the closest positive record (eDNA) to be located c. 2.4km north of the application site (dated 2019), which is outside the typical 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.

a) Built environment

The buildings on site include a large period property B1 (Old Rectory), which has a timber frame with render infill panels, painted render and painted brickwork. The roof has aspects covered with both clay plain tiles and natural slate tiles.

An outbuilding and attached garage are situated in the garden to the northwest of the main house. The outbuilding B2 is of red brick construction, and is partly timber clad, with a pitched slate roof. Attached to the east aspect of the barn is a garage B3 (to be demolished) which is also of red brick construction with a slate roof.

There is a large gravel area to the north of the house with smaller surfaced areas around the edge of the buildings (e.g., paving and gravel).

b) Lawn

The gardens surrounding the building contain large areas of managed lawn, which support low numbers of common forbs, with no notable or rare plants present.

c) flowerbeds

There are several flowerbeds within the gardens containing various garden ornamental plants and shrubs, including one which runs along the edge of the southern wall of the outbuilding and garage.

d) Scattered trees

Numerous broadleaved trees and conifers exist in the gardens surrounding the buildings, including several fruit trees, with species such as cherry (*Prunus avium*), cherry plum (*P. cerasifera*), apple (*Malus domestica*), walnut (*Juglans regia*), yew, magnolia (*Magnolia* sp.), oak (*Quercus robur*) and ash (*Fraxinus excelsior*).

e) Hedgerows

Lengths of ornamental hedge exist in the garden, including short sections of yew (*Taxus baccata*) hedging.

4.3.2 Amphibians and reptiles

a) Ponds

No ponds are located within the bounds of the application site though three ponds are located within 250m of the site boundary. The nearest P1 is located c. 85m west of the application site boundary (Figure 2).

No access was secured to assess any of these ponds for their suitability to support breeding GCNs and other amphibians.

b) Terrestrial habitat

i) Amphibians

The gardens surrounding the buildings support areas of suitable terrestrial foraging (e.g., lawn) and refuge (e.g., shrubs and hedgerows) habitat for common amphibians although cover within the proposed works footprint is discrete and limited to flowerbeds/shrubs in the garden adjacent to the buildings.

ii) Reptiles

The short lawn and gravel/paved areas covering much of the land on site are considered to support negligible habitat suitability for 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. Common lizards are also less likely to be found is residential gardens as they are preyed upon by domestic cats. As such, the overall value of the site for reptiles and was assessed as low.

4.3.3 *Bats*

a) Building inspection

The areas of the main house B1 which will be impacted by the proposed works (e.g., extension) were found to be well sealed and support no obvious potential roosting features, such that no impacts on roosting bats are anticipated.

An internal inspection of the outbuilding B2 found a scattering of pipistrelle (*Pipistrellus* sp.) and brown long-eared (BLE) (*Plecotus auritus*) droppings throughout, with some feeding remains (moth wings) present indicating a BLE feeding perch. The number of droppings present indicates that the barn likely supports a small number of non-breeding roosts (e.g. day/transitional) used by low numbers of both pipistrelles and BLEs as well as a BLE feeding perch (Figure 3).

Overall, the building was assessed as supporting Moderate bat roosting potential (BRP).

No evidence of roosting bats was observed within the garage B3, which is proposed to be demolished.

b) Tree roost

No trees with the potential to support roosting bats will be impacted by the proposed development.

c) Bat emergence survey results

i) *Emergence survey 25/08/22*

The survey was undertaken during suitable weather conditions with no precipitation, 65% cloud cover; wind speeds (BS2) and temperatures of 22°C at the survey start, dropping to 18°C at the end. Sunset was at 19:59. The survey commenced at 19:44 and ended at 21:15, when bat activity ceased.

The first bat registration of the survey was of a soprano pipistrelle (*Pipistrellus pygmaeus*) which emerged from beneath the cladding on the west elevation of B2 at 20:16. A common pipistrelle (*P. pipistrellus*) was then recorded flying from west to east through the survey area (south of the barn) at 20:19, with several further registrations of common pipistrelles between 20:21 and 20:40. A couple of BLE flight passes/ registrations were observed towards the end of the survey (from 20:45 onwards) but no other bats were seen exiting the building (Figure 3).

ii) Emergence survey 21/09/22

The survey was undertaken during suitable weather conditions with no precipitation, 80% cloud cover; wind speeds (BS1) and temperatures of 17°C at the survey start, dropping to 16°C at the end. Sunset was at 18:54. The survey commenced at 18:40 and ended at 20:20, when bat activity ceased.

A common pipistrelle was observed emerging from beneath the eaves on the far southeast corner of B2 at 19:10. At 19:12 another common pipistrelle exited from under the eaves on the north elevation, between the doorway and water butts (Figure 4). A probable BLE emerged at 19:22 from the ridge.

A noctule (*Nyctalus noctula*) made a flight pass through and high above the survey area at 19:31, after which low numbers of common pipistrelles and a single soprano

pipistrelle were sporadically recorded either commuting through, and/or foraging within, the garden adjacent to the barn.

d) Foraging and commuting habitat
Habitats within the garden(s) surrounding the barn (e.g. hedgerows and trees/shrubs) offer *Moderate* value to foraging and commuting bats (Collins, 2016).

4.3.4 *Nesting birds*

No evidence of historical/present roosting nesting birds was found in the outbuilding or garage (to be demolished). Trees and shrubs in the garden provide suitable nesting opportunities for small passerines such as dunnock (*Prunella modularis*) (Amber Status), house sparrow (*Passer domesticus*) (Red Status, S. 41) and wren (*Troglodytes troglodytes*) (Amber Status). Potential for larger species like stock dove (*Columba oenas*) (Amber Status), song thrush (*Turdus philomelos*) (Amber Status) and woodpeckers exists in taller, mature specimens.

4.3.5 *Badger*

No evidence of badger (e.g. snuffle holes, runs, latrines, setts) was observed.

4.3.6 *S. 41 habitats and species*

a) Habitats
None present.

b) Species
The lawn/grassed area in the gardens surrounding the barn provide some foraging habitat for hedgehogs (*Erinaceous europaeus*) whilst hedgerows offer opportunities for refuge. Broadleaved trees (including fruit trees) in the garden could support some S.41 list invertebrates, including butterflies and moths.

4.3.7 *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 4.3 Feature value based on geographic context

Feature	Value
Species-poor lawn, trees/shrubs and hedgerows	Local
Amphibians	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 for works including the extension and minor alterations to the Old Rectory and extension and conversion of an outbuilding (including the demolition of an attached garage) with a new swimming pool, pool house and garage and landscaping also proposed. Combined, this has the potential to impact common amphibians, foraging and commuting bats, nesting/roosting birds, and hedgehogs. The conversion of the outbuilding will also result in the permanent loss of or disturbance to a small number of non-breeding roosts used by up to three species of bat, including common pipistrelle, soprano pipistrelles and BLE (including a feeding perch).

The assessment and recommendations below provide preliminary recommendations for mitigation and enhancements for the proposed development. They are based on drawings provided by Roger Balmer Design Architects, including Existing and Proposed Site Block Layouts (Drawing Nos. 2622 – 02 and 05), 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 EcIA 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 EcIA 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

Vegetation clearance and construction activities will result in the permanent loss of areas of lawn and removal of some trees/shrubs and ornamental hedgerow (both non-native and native species), including some fruit trees in the footprint of the new extensions, swimming pool, pool house, and garage, which is considered a significant negative effect at the site level.

Any accidental damage to retained lawn areas and trees/shrubs in the gardens would result in a significant negative effect at the site level.

b) Mitigation

The works footprint and associated disturbance should be minimised in extent as much as possible, with the builder's compound (if required) located away from retained boundary habitats. Retained habitats, e.g. lawns and trees, should also be protected with temporary fencing (e.g., Heras or similar) to prevent above ground damage and Root Protection Areas (RPAs) should be used to inform the detailed design.

c) Residual effects

With mitigation impacts will be minimised though the loss of fruit trees will require compensation (see section 5.10).

5.6 AMPHIBIANS AND REPTILES

a) Potential impacts

Vegetation clearance, ground-breaking and construction activities could result in the potential entrapment, injury and mortality of amphibians (including potentially GCNs) due to the presence of trenches (including caustic substances such as wet concrete) and building materials which animals can seek refuge within and then get harmed when the materials are moved. Such impacts could result in significant negative effects upon low numbers of individuals.

During the operational phase site drainage comprising the use of gully pots and down pipes connecting to closed surface water drainage or those with silt traps can result in animals becoming trapped (Muir *et al*., 2012) and impact upon amphibians. GCNs can also die when they enter swimming pools which contain chlorine and get sucked into filters. Such impacts could result in permanent negative effects upon low numbers of individuals.

b) Mitigation

As per 5.5.

A modern pool cover would prevent amphibians entering the proposed swimming pool, whilst non chlorine based pools are less harmful should any amphibians get into the pool.

To ensure no wildlife offence occurs, the site could be registered as part of the NE GCN District Level Licence (DLL). However, given the limited footprint of the extensions and new buildings, good working practices required to avoid direct impacts upon other amphibian species also present, would likely ensure offences are avoided. These should include:

1. All grassed areas within and adjacent to the works footprint should be kept short prior to and during construction.
2. Clearance of any taller vegetation (e.g., shrubs and hedgerows) should be undertaken sensitively either during November to February inclusive or otherwise using a two-stage cut during the period amphibians are most active (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.
3. Excavations should be undertaken during hot dry weather to reduce the risk of animals falling into open trenches;
4. Excavations at other times 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 spoil not required for construction purposes should be taken off site, so it is not used as a refugia when animals are active;
7. The GCN poster in Appendix A4 should be erected in the welfare facilities provided for construction staff on site;
8. Should any GCNs (Appendix A4) 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 safely relocated, e.g. to retained adjacent habitats (e.g., base of nearby hedgerows) providing adequate cover;
9. 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;
10. 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;
11. Any excess concrete should be poured into a concrete skip, so it can then set to prevent animals coming into contact
12. All building materials and waste materials should be stored on hard standing or stored off the ground on pallets to reduce risk of animals seeking refuge;
13. **Permeable paving should be used preferentially to avoid the need for gully pots. Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen[9] to prevent amphibians entering drains;**
14. **If gully pots are required, they should use small diameter (6mm) grates where possible; and**

[9] https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/

15. **Any installed gully pots should be situated ≥100mm from the roadside, OR a wildlife-kerb[10] must be installed adjacent to each gully pot AND a gully pot ladder[11] placed into each gully pot.**

c) Residual effects

With the proposed mitigation measure, significant residual effects on amphibians during construction activities will be avoided.

5.7 BATS

a) Potential impacts

i) Roosting bats

The conversion of the outbuilding will result in the permanent loss of a small number of non-breeding roosts used by up to three species of bat, including common and soprano pipistrelles and a BLE feeding perch, considered a significant negative effect at the local level.

ii) Foraging and commuting habitats

Vegetation clearance will result in the net loss of foraging habitat available on site, though not considered significant in terms of conservation status, such that effects are not considered significant at the site/local level.

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 considered a potential significant effect at the local level.

iv) Roof Membranes

Research has shown bats can become entangled in modern breathable roofing membranes if used under certain tiles, such as 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) Roosting bats

To mitigate the impact on roosting bats, the proposed conversion of the outbuilding B2 will need to be carried out under an EPSML from Natural England.

ii) Foraging and commuting habitat

As per 5.5, protective fencing will be used to protect retained trees/shrubs hedgerows and lawn 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 particularly to the east if the site, and should follow current guidance as necessary[12,13]:

- *Type of lamp (light source)*: Light levels should be as low as possible as required to fulfil the lighting need. Lamps should have a maximum of 7.5 to 10 lux and LED

[10] e.g. https://www.aco.co.uk/products/wildlife-kerb

[11] https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder

[12] https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting

[13] www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

lights should be used using the warm white (or amber) spectrum, with peak wavelengths >550nm (2700°K) and no UV component to ensure lux levels do not exceed 0.1 lux along hedgerows and retained trees which will be used by foraging bats; and

- *Lighting design*: Lighting should be directed to where it is needed, with minimal horizontal spillage towards retained habitats, including trees and hedgerows. 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
  - ❖ PIR movement sensors and timers should be used to minimise the 'lit time'.

iv) Roof membranes

The new buildings and extensions should use bat friendly roofing felt (e.g., Type 1F bitumen felt, wood fibre sarking board or a modern non-bitumen coated roofing membrane (NBCRM) breathable roofing membrane which has passed a snagging propensity test as defined by Natural England and the Bat Conservation Trust) where hand-made new or reclaimed tiles are to be used and behind weatherboarding.

Where natural slate and zinc roofing materials are proposed, then a NBCRM can be used if no gaps >4mm wide exist between the slates/zinc sheets or under the ridge tiles, or at the eaves. However, if gaps >4mm are likely to exist then a bat friendly roofing membrane must be used.

c) Residual effects

With mitigation (e.g. EPSML application), no significant residual effects are anticipated.

5.8 NESTING BIRDS

a) Potential impacts

Construction works on site may result in disturbance of active nests during demolition works and hedgerow/shrub removal. Increased noise levels (during construction and operational phase) could affect the ability of birds to hold territories during the breeding season. Accidental damage to retained trees 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

Habitat avoidance and mitigation as per sections 5.5 and 5.6.

Commencement of the building works should take place outside of the nesting bird season. If this is not feasible, a check for nesting birds should be undertaken and supervision must be undertaken by a suitably experienced ecologist immediately prior to and during the removal of hedgerow/shrub vegetation. If any active nests are present, works within 5m must wait until the young have fledged.

c) Residual impact

Impacts upon active nests during construction will be avoided, with no significant residual effects anticipated.

5.9 OTHER S. 41 LIST HABITATS AND SPECIES

a) Potential impacts

Vegetation clearance will result in the small net loss of foraging and refuge habitat for hedgehogs. Hedgehogs could potentially fall into open trenches resulting in entrapment and possible injury and mortality of individuals due to falling in or coming into contact with caustic substances such as fresh concrete. Such impacts would result in negative effects upon individuals.

b) Mitigation

Habitat avoidance and mitigation as per section 5.5 and 5.6.

Site clearance should always consider the potential presence of hedgehogs with vigilance, with no clearance of dense woody shrubs undertaken when temperatures are regularly below 6°C. Animals encountered at other times should be allowed to move or moved to suitable cover, e.g., base of hedgerows/shrubs.

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

The use of close board fencing is not proposed as part of the proposed landscaping. Native species-rich hedgerows preferable where boundary features are required. If close board fencing were to be installed, then at least one hedgehog highway[14] should be provided at either end of each fencing run with signage.[15]

c) Residual effects

None predicted.

5.10 COMPENSATION

Residual negative effects upon habitats and species related to the proposed development requiring compensation relate to the loss of trees/shrubs (including fruit trees) in the footprint of the new garage/pool house and swimming pool and loss of bat roosts in building B2 during conversion works.

The offset the loss of trees and shrubs a small orchard could be planted in the garden, using local heritage fruit cultivars[16] (e.g. in the location shown on the Proposed Site Block Plan). This would enhance the biodiversity value of the wider site in the long-term (e.g., pollinators and windfall fruit for birds, mammals, and invertebrates) and provide the homeowners with a small seasonal harvest.

Compensatory bat roosts will be required to offset the loss of roosts within B2 when it is converted. The Full details will be determined as part of the licence application.

[14] https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/
[15] https://ptes.org/shop/just-in/hedgehog-highway/
[16] https://www.applesandorchards.org.uk/buy-fruit-trees/suffolk/

5.11 CUMULATIVE EFFECTS

The Babergh District Council website was searched on 03 November 2023 for significant planning applications within 1km of the application site dating back by 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 alterations and/or extensions to existing dwellings as well as a single minor residential scheme comprising the erection of a single dwelling with a cart lodge and alterations to vehicular access (following demolition of existing property) (Ref: DC/21/04604). As such, there is no indication that there will be any significant cumulative impact because of the current application **if the recommended mitigation and enhancement measures are implemented.**

5.12 ENHANCEMENT OPPORTUNITIES

Subject to the recommended mitigation and compensation, the proposed scheme will not result in significant negative ecological effects.

The proposed development should include a minimum of 3 of the 5 proposed biodiversity enhancements (Table 5.1) to deliver ecological gains once habitats have established.

Table 5.1 Biodiversity enhancements

Feature	Enhancement suggestion
Flowering lawn	1. An area of retained lawn in the garden 9e.g. within the proposed orchard could be sown/overseeded or turfed with a flowering lawn seed mixture[17] or turf[18] following supplier guidance on creation and long-term management. The increased range of nectar rich species the lawns contain (compared to amenity seed mixtures) will benefit invertebrates, particularly pollinators, and therefore also foraging birds, hedgehogs, and bats.
Nectar rich climbers	2. Any ornamental planting should utilise nectar rich plants to benefit pollinators and associated predators (e.g., foraging bats and hedgehogs). Planting should include nectar rich climbers such as traveller's joy (*Clematis vitalba*) and honeysuckle (*Lonicera periclymenum*), which could be planted at 5ft intervals along existing/proposed hedgerows and/or trained up walls, fences, posts, and trellises.
Bats	3. Three bat boxes 9exclusive of those required for compensation) (comprising a mixture each of the boxes in Appendix A5), could be erected on suitable mature trees in the gardens. Exact locations to be agreed with a suitably experienced ecologist.

[17] https://www.bostonseeds.com/products/wildflowers-seed/wildflower-seed-mixtures-20/bs12m-low-growing-wildflower-meadow-seeds.html or https://wildseed.co.uk/product/mixtures/complete-mixtures/special-habitat-mixtures/flowering-lawn-mixture/

[18] https://www.wildflowerlawnsandmeadows.com/wild-flower-turf/extra-floristic-low-flowering-lawn-turf-with-wild-orchid-seed/ or https://www.turfonline.co.uk/product/species-rich-lawn-turf/

Feature	Enhancement suggestion
Small passerine nest boxes	4. A minimum of 4 small passerine nest boxes (Appendix A6) including could be mounted on existing mature trees in the gardens and/or buildings, with exact locations agreed with a suitably experienced ecologist.
Log/brash piles	5. Some log/brash piles (Appendix A7) could be created and sited within a partially shaded corner of the garden using logs/brash from any trees/shrubs (**broadleaved species only – not conifers)** requiring felling during construction works. Log/brash 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 sensitive habitats and carbon storage.

5.15 CONCLUSIONS

Ecological impacts resulting from the proposed design have where possible been avoided or minimised through avoidance, design and 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:

1. BS 42020:2013 D.2.1 to provide a Biodiversity Method Statement to detail mitigation, compensation and enhancement measures, to be reflected in the detailed landscaping proposals and site plans for the scheme;
2. BS 42020:2013 D.3.2.1. nesting bird check (by suitably experienced ecologist) prior to tree/shrub clearance if during the bird breeding season);
3. BS 42020:2013 D.3.5 to limit lighting design and D.6.2 Submission of a copy of the bat EPSML to the LPA to mitigate impacts upon bats; and
4. BS 42020:2013 D.3.7 to ensure mitigation, compensation and enhancement measures are successfully implemented.

6 References

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Figures

Legend

Application site boundary

0 20 40 60 80 m

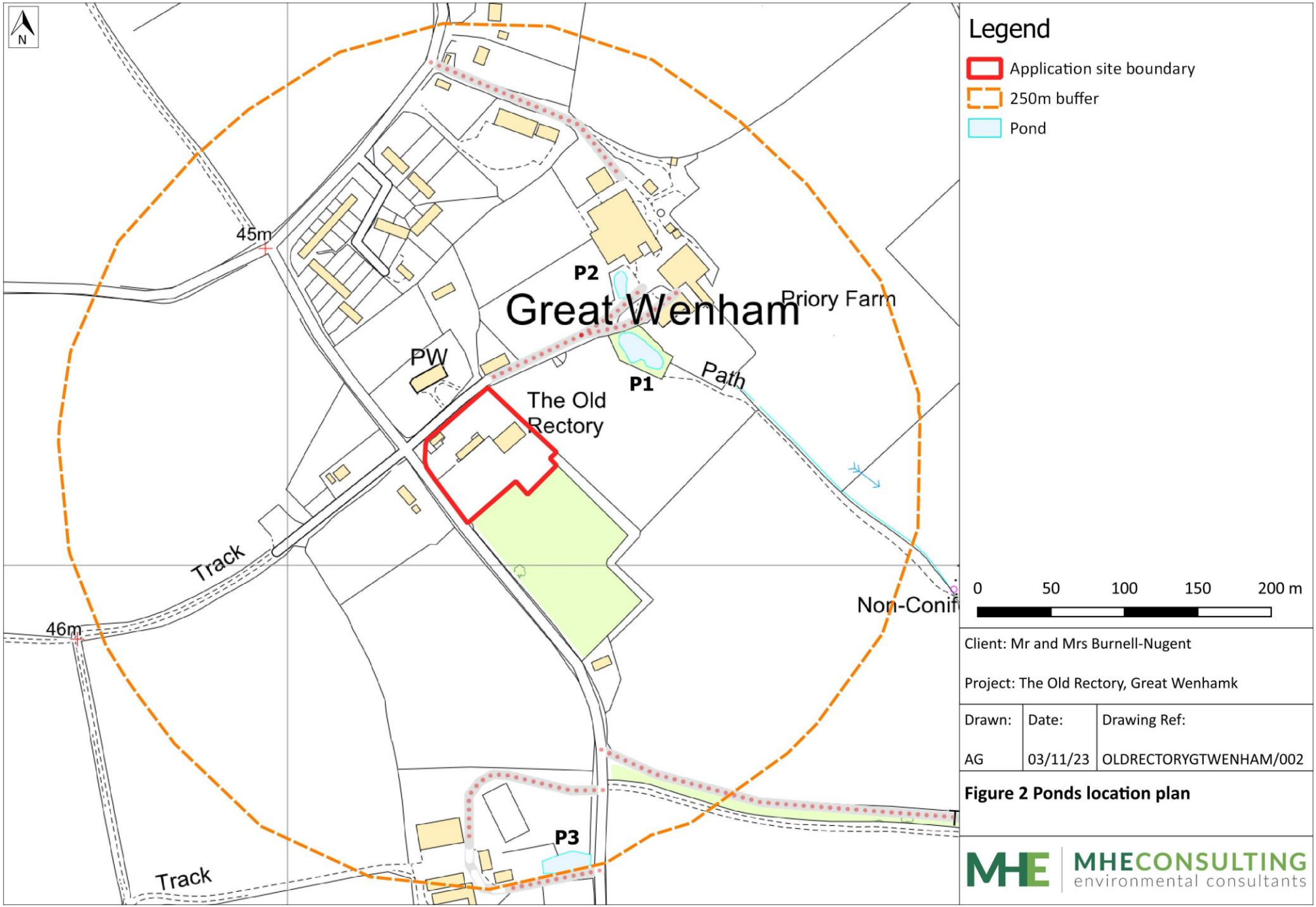
Client: Mr and Mrs Burnell-Nugent

Project: The Old Rectory, Great Wenhamk

Drawn:	Date:	Drawing Ref:
AG	03/11/23	OLDRECTORYGTWENHAM/001

Figure 1 Site location plan

MHECONSULTING
environmental consultants



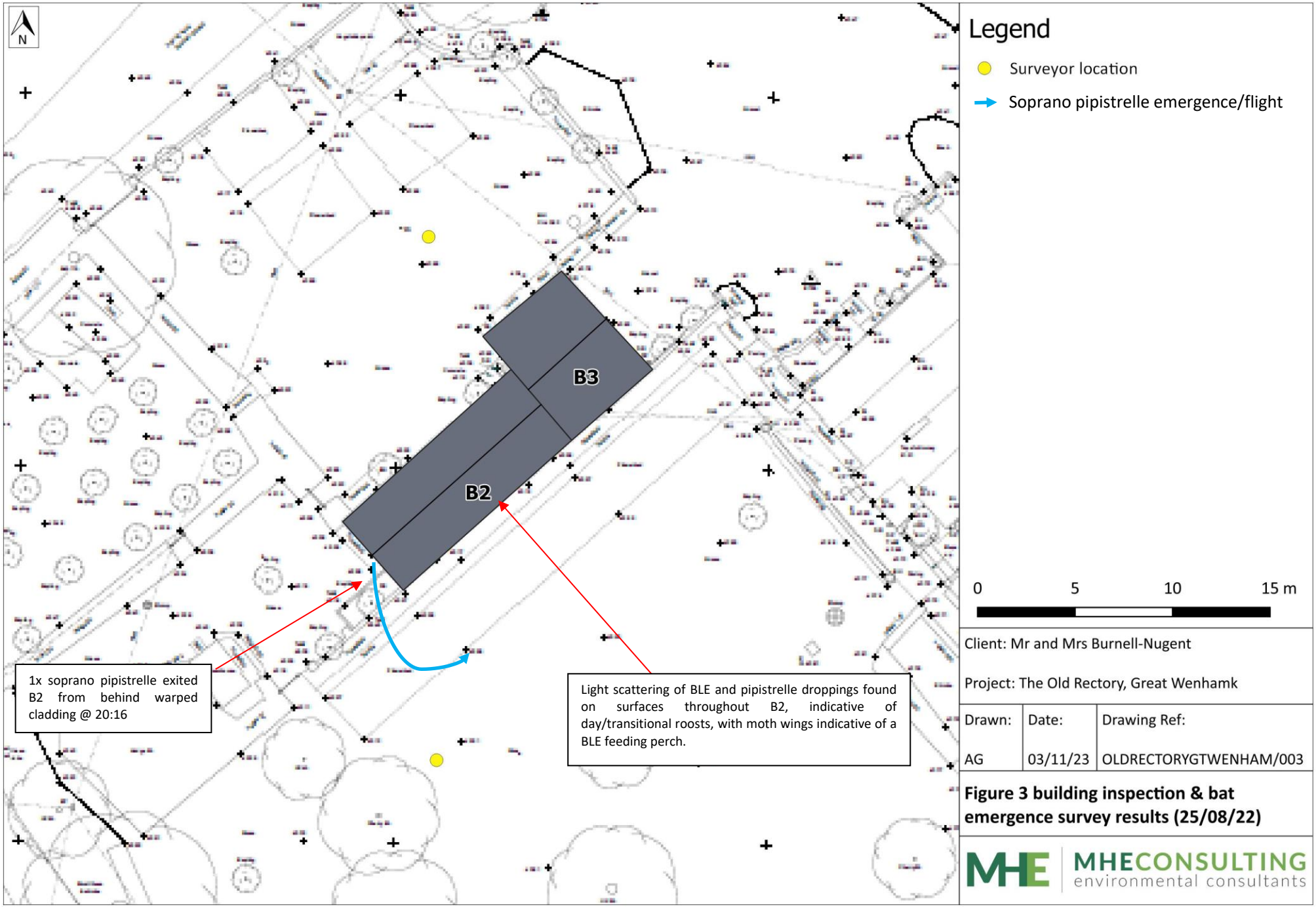
Client: Mr and Mrs Burnell-Nugent

Project: The Old Rectory, Great Wenhamk

Drawn:	Date:	Drawing Ref:
AG	03/11/23	OLDRECTORYGTWENHAM/002

Figure 2 Ponds location plan

MHECONSULTING
environmental consultants



Client: Mr and Mrs Burnell-Nugent

Project: The Old Rectory, Great Wenhamk

Drawn:	Date:	Drawing Ref:
AG	03/11/23	OLDRECTORYGTWENHAM/003

Figure 3 building inspection & bat emergence survey results (25/08/22)

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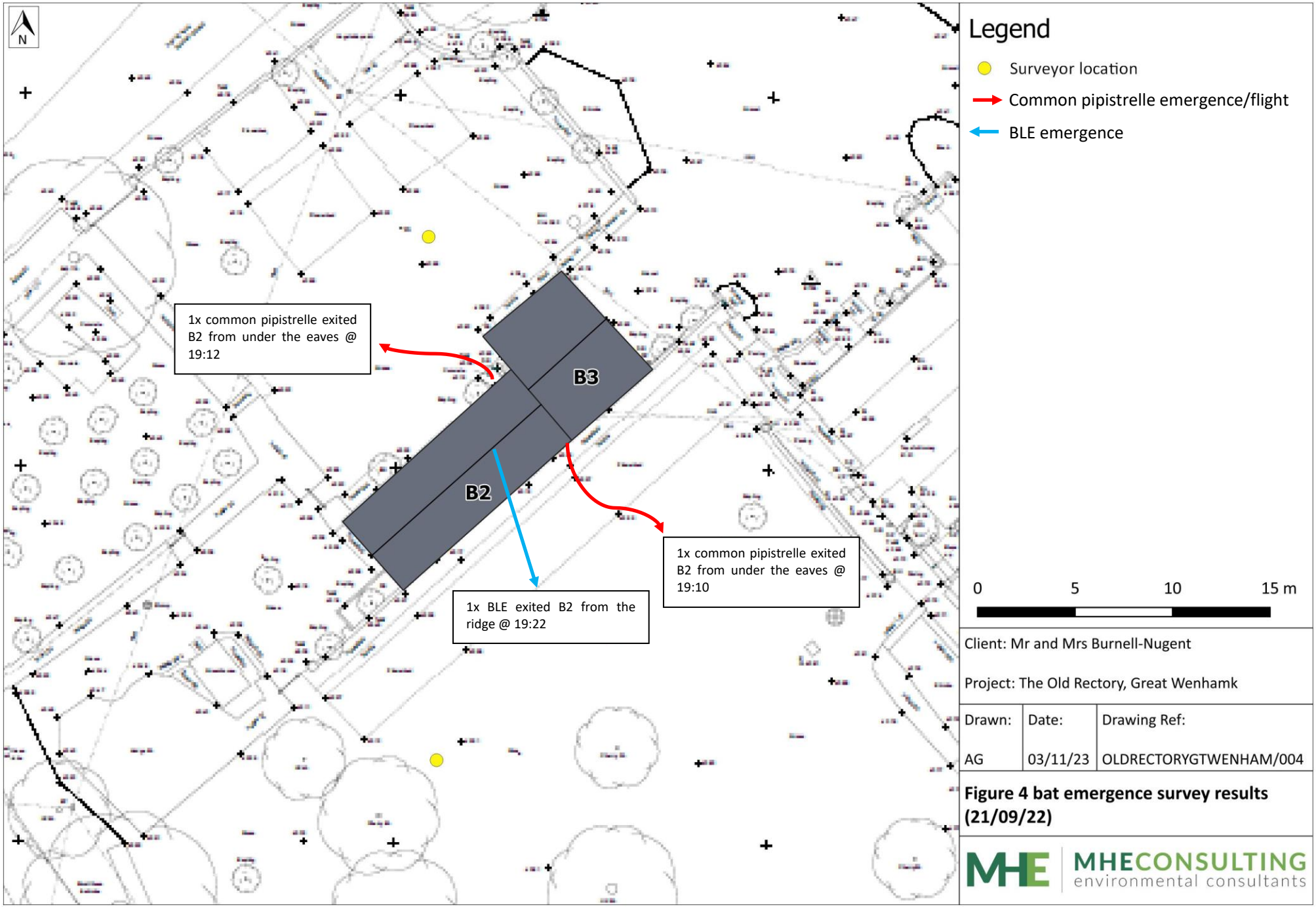

Client: Mr and Mrs Burnell-Nugent

Project: The Old Rectory, Great Wenhamk

Drawn:	Date:	Drawing Ref:
AG	03/11/23	OLDRECTORYGTWENHAM/004

Figure 4 bat emergence survey results (21/09/22)

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Appendices

Appendix A1 Photos

Photo 1 Main house B1

Photo 2 Northwest elevation of existing barn B2

Photo 3 Southwest elevation of existing barn B2

Photo 4 Northwest elevation of garage proposed for demolition B3

Photo 5 Southwest elevation of garage proposed for demolition B3

Photo 6 Garden to the rear (southeast) of B2 and B3

Photo 7 Garden to the front (northwest) of B2 and B3

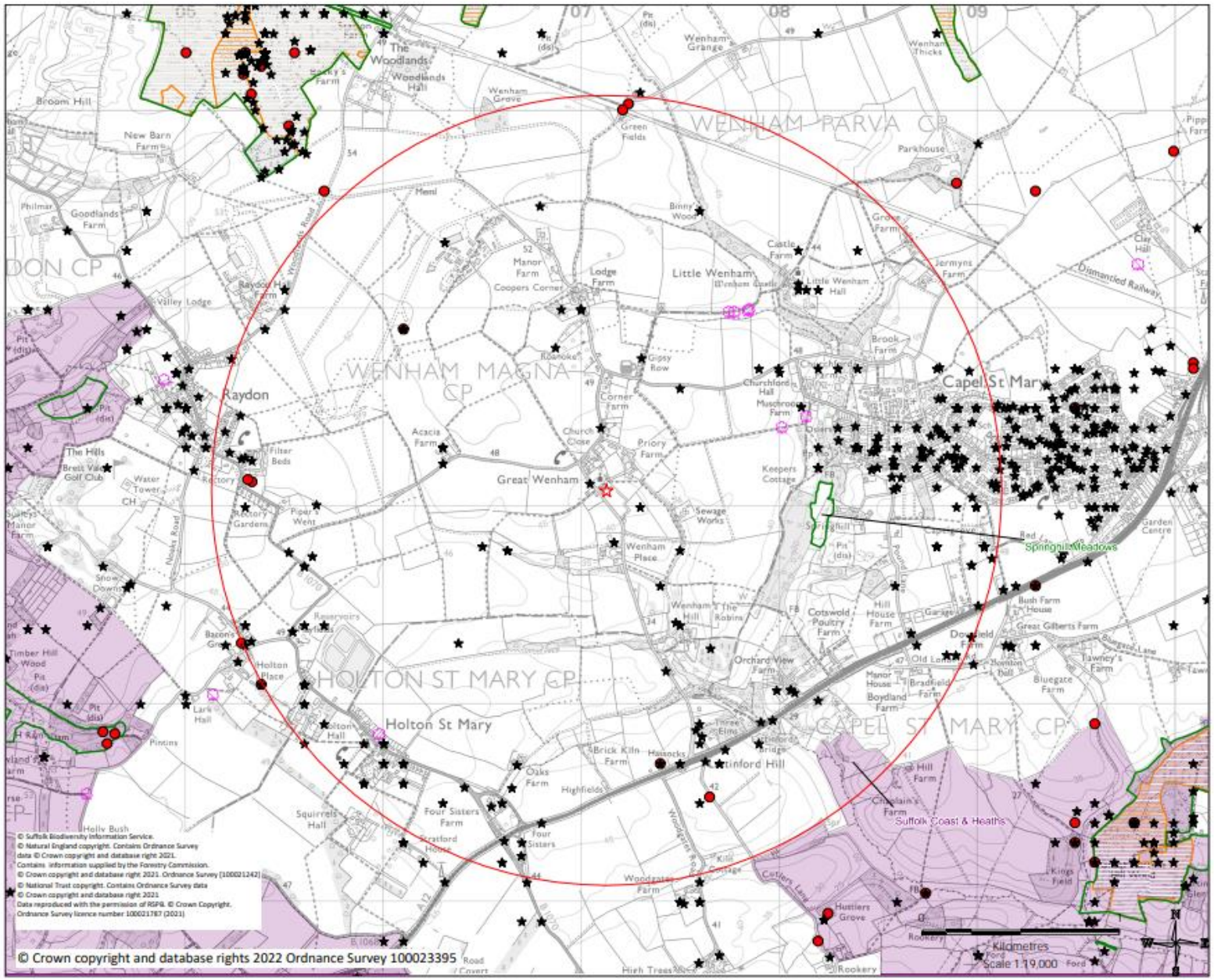
Photo 8 Warped weatherboarding on west gable end of barn with bat roosting potential

Appendix A2 EcIA criteria

A2.1 General criteria for geographic context/value

Designation	Example
International	• 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	• 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	• 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	• 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 A3 SBIS data search plan



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
- Forestry Commission, National Trust (public access), RSPB (public access)

National Park
- The Broads

AONB
- Suffolk Coast and Heaths or Dedham Vale

MHE Consulting (Old Rectory, Great Wenham TM 07129 38083) 2km Data Enquiry

SBIS
SUFFOLK BIODIVERSITY INFORMATION SERVICE

Date: 26/08/2022 I Drawn by: Jane Mason

Appendix A4 GCN poster

MHE | MHECONSULTING
environmental consultants

ADDRESS | Mill House, Homersfield, Harleston, Suffolk IP20 0ET
TELEPHONE | 01986 788791
EMAIL | millhouseecology@gmail.com

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 A5 Bat boxes

Kent bat box

Vincent Pro Box

Appendix A6 Bird boxes

Sparrow Terrace

£80.00

A sparrow terrace which blends in beautifully with the tree, with multiple entrances.

Out of stock

Category: bird and bat boxes

Description | Additional information | Reviews (0)

Description

Height 280mm
Width 130mm
Depth 130mm
Typical Weight 7-8kg

BARK BOXES
Conserve and Enhance

Home | About Us | Other Services | Gallery | Contact

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)

Description

Height tbc
Width
Depth

ECO ROBIN NEST BOX

SKU 10684

£20.00 EX. VAT

A suitable nest box for robins, which is also ideal for other birds that use open-fronted boxes.

Quantity 1

ADD TO BASKET OR ADD TO QUOTE

Visit the RSPB website Shop login

RSPB Shop

Search for a product

0 items

Bird food | Bird care | Wildlife & garden | Binoculars & scopes | Gifts, clothing & home | Books & stationery | Christmas | Sale | Donate

Wild bird care & accessories > Bird houses & nest boxes > Garden bird nest boxes > Apex starling nestbox

No-quibble free returns: Unhappy with your item? We offer no-quibble free returns

Nature-friendly products: Sourced through ethical and sustainable accreditations

Free delivery over £50: £3.95 standard UK shipping, or free shipping over £50

Supporting the RSPB: Every purchase you make supports wildlife

Apex starling nestbox

(1 Review)

Save £2 when you buy two promotional Nest boxes!

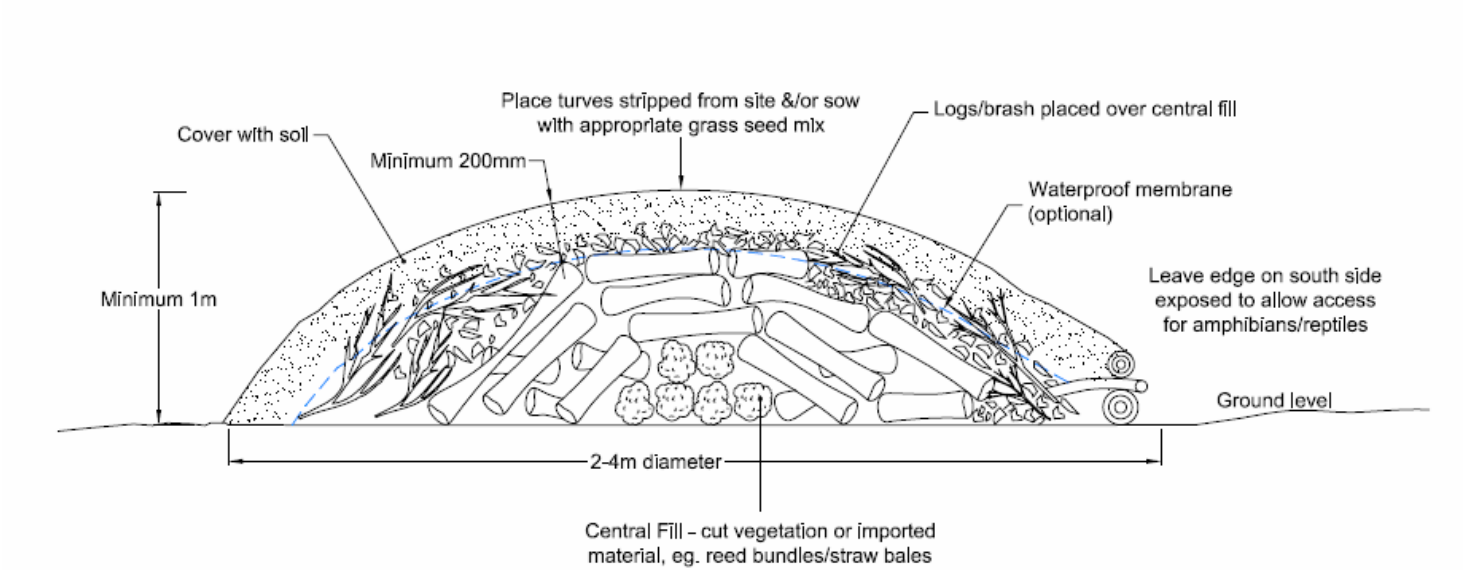
Details

Beautifully made FSC® certified timber nest box designed with starlings in mind. more

£30.00

Quantity: 1 In stock

Appendix A7 Log/brash piles



Brash/log pile recently created

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