
Ecology Report

PROPOSED RESIDENTIAL DEVELOPMENT
Land Adjacent to 2 School House, Straight Road,
Battisford, Suffolk

October 2023



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Executive Summary

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of land adjacent to 2 School House, Straight Road, Battisford, Suffolk IP14 2HR. An outline planning application is to be submitted to Mid Suffolk District Council to erect two semi-detached dwellings with garages, gardens and associated infrastructure. Full planning permission is also being sought to create a new double vehicular access and visibility splay off Straight Road with two parking spaces to serve the existing dwelling, 2 School House.

The application site comprises a residential garden to the west of an existing semi-detached property. The garden was previously well-kept but has become unkempt, and now contains an area of rank grassland dominated by tall forbs (previously lawn) with encroaching bramble (*Rubus fruticosus* agg.) scrub. There are several broadleaved trees and shrubs scattered throughout the garden and a short length of native hedgerow along the southern boundary.

The site supports areas of suitable terrestrial foraging habitat (e.g., grassland/lawn and tall forbs) for common amphibians with refuge opportunities present at the base of the boundary hedgerow and within scattered scrub and under artificial refugia (e.g., brash/waste piles) left on site. However, these habitats are considered unlikely to support populations of common reptiles.

The derelict shed proposed for demolition/dismantling was assessed as supporting negligible bat roosting potential. and none of the trees requiring felling support obvious potential roosting features. As such no impacts on roosting bats are anticipated during vegetation/site clearance works. However, the garden contains habitats (e.g., mature trees/shrubs and hedgerows) which are of moderate value to foraging and commuting bats.

Habitats present (e.g., mature trees and hedgerows) will also provide suitable nesting, foraging and song perch habitat for a range of common garden birds as well as turtle dove (*Streptopelia turtur*) (Red Status; S. 41) which have been recorded close to the site. The gardens also provide foraging and refuge habitat (e.g., lawn/grassland, hedgerow and scrub) for hedgehogs (*Erinaceus europaeus*), and may also support some S.41 list invertebrates, including butterflies and moths.

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 and good working practices, with necessary compensation detailed. Biodiversity enhancements are proposed, ensuring gains are delivered.

1 Introduction

1.1 BRIEF

MHE Consulting Ltd were instructed to undertake an ecological survey and assessment of land adjacent to 2 School House, Straight Road, Battisford, Suffolk (NGR TM 03939 54055; Figure 1).

An outline planning application is to be submitted to Mid Suffolk District Council to erect two semi-detached dwellings with garages, gardens and associated infrastructure. Full planning permission is also being sought to create a new double vehicular access and visibility splay off Straight Road with two parking spaces to serve the existing dwelling, 2 School House.

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 is located off Straight Road, Battisford (Figure 1) and comprises a residential garden to the west of an existing semi-detached property. The garden contains areas of lawn/grassland with encroaching scrub, several broadleaved trees/shrubs, a shed, brash/waste piles, and a length of roadside hedgerow (Figure 2).

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 (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 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, 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 Suffolk¹ 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) provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more; or*
- ii) 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. *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.

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

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 42020:2013²);
- 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;
- Supplementary documents submitted with previous planning applications for the site (MHE Consulting Ltd (2016) Proposed detached dwelling - School House, Straight Road, Battisford, Suffolk – Ecological Survey May 2016); and
- Historical biological records: species and locally designated site records within 2km of the site were provided by the Suffolk Biodiversity Information Service (SBIS).

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 badgers³ and bats⁴;
- Breeding birds⁵ including Red and Amber status⁶ species; and
- S. 41⁷ 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' (Zoi) of the scheme is considered restricted to habitats on the sites and species within 250m of the site boundaries.

3.3 FIELD SURVEY

A site walkover was originally undertaken in 2016 with an update in 2019 by MHE Consulting Ltd. A further site walkover was recently undertaken on the 15 August 2023

² BSI Standards publication BS 42020:2013 Biodiversity – Code of practice for planning and development.

³ Badgers and their setts are afforded protection by the PBA 1992.

⁴ All species of bats receive full protection under the WCA 1981 and Habitats Regulations 2017.

⁵ All wild birds, their nests and eggs are protected under the WCA 1981 (as amended), level of protection varies per species.

⁶ The conservation statuses of UK bird species are listed within the Birds of Conservation Concern 5 (Stanbury *et al.*, 2021).

⁷ S. 41 of the NERC Act 2006 lists 'habitats and species which are of principal importance for the conservation of biodiversity in England'.

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, 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 (UKHab Ltd., 2023). Care was taken to record habitat indicator species.

3.3.2 *Amphibians and reptiles*

a) Amphibians

Three waterbodies (Figure 3) are located within 250m of the application site boundary (all are situated >100m from the site). However, no access was secured to assess any of these for suitability to support breeding GCNs, and other common 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 derelict shed was assessed for its 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 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
<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.

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
<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.

3.3.5 *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.

3.3.6 *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).

3.3.7 *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.

3.3.8 *Non-native invasive plant species*

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

3.4 **SURVEY CONSTRAINTS**

All the site was accessible for inspection. Given the nature of the site and timing of the survey visit, no significant constraints were identified.

3.5 **SURVEYORS**

The has been surveyed several times by MHE Consulting Ltd over the past 10-years. The first two survey visits were undertaken by Christian Whiting BSc (Hons) MSc MCIEEM (2016 and 2019) with the most recent survey visit by Alex Gregory BSc (Hons).

Christian has over 24 years' experience working as an ecologist and holds Natural England (NE) survey licences for bats (2015-14745-CLS-CLS - Level 2), barn owl (CL29/0213) 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 organisational and class licences respectively. Alex has over two years' experience conducting habitat and Ecological Impact Assessments (EclA's), as well as undertaking surveys for amphibians, bats, reptiles, badger, and water vole.

Alex has over two years' experience conducting habitat and Ecological Impact Assessments (EclA's), as well as undertaking surveys for amphibians, bats, reptiles, badger, and water vole.

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 in Table 4.1. There are no internationally designated sites within 13km of the application site.

Table 4.1 Relevant designated sites

Site name	Designation
Muckinger Wood*	CWS
RAF Wattisham Woodlands*	CWS
St Johns Grove*	CWS
RNR 136	RNR
Barking Woods*	SSSI
Combs Wood*	SSSI
Hascot Hill Pit	SSSI
Middle Wood, Offton*	SSSI

*Listed in the Ancient Woodland Inventory for England

Locally designated sites

Four Locally designated sites are present within 2km of the application site are listed below:

- Muckinger Wood County Wildlife Site (CWS) is a large ancient woodland situated close to the Barking Woods. It supports a number of ancient woodland indicator plant species including oxlip (*Primula elatior*);
- RAF Wattisham Woodlands CWS consists of two areas of woodland, namely Park Wood situated to the south of the airfield and Ten Wood located immediately to the north of the main airfield buildings. Both woodlands are listed in English Nature's Inventory of Ancient Woodland and consist of a wet ash-field maple stand type;
- St Johns Grove CWS is a small ancient woodland with a ditch and woodbank, probably medieval in origin, which encloses it on all sides. It supports several ancient woodland indicator plant species including oxlip and wood millet (*Milium effusum*); and
- Roadside Nature Reserve 136: Designated because of the presence of man orchid (*Aceras anthropophorum*) and yellow vetchling (*Lathyrus aphaca*).

Nationally designated sites

Barking Woods SSSI comprises an interrelated group of ancient woodlands, whose history has been well documented since 1251. The majority of the medieval earth banks still remain and are marked by large pollards of oak and ash. The woodland structure is predominantly coppice-with-standards, composed of a variety of different stand-types. The diverse ground flora is typical of ancient woods and reflects a change in soils from the heavy boulder clay of Priestley and Swingen's Woods to the chalky sand of Titley Hill Wood.

Combs Wood SSSI is an ancient woodland with a well-developed coppice with standards structure on boulder clay, overlain with variable amounts of sand and loess. The variation in soil types within the bounds of Combs Wood has increased the variety of woodland types present. Pedunculate oak-hornbeam woodland is the predominant mix, with areas of ash-maple woodland, and where the soil is more acidic, pedunculate oak-hazel-ash woodland.

Coppice management of selected areas has increased the diversity of the ground flora, with species such as wood anemone (*Anemone nemorosa*), greater butterfly orchid (*Platanthera chlorantha*), and oxlip, which is at the northern limit of its range present. A small pond that exists within the woodland also provides valuable additional habitat for invertebrates.

Hascot Hill Pit SSSI is of geological interest for being the only site known to expose a beach facies of the Red Crag, comprising beach cobbles and a littoral fauna.

Middle Wood, Offton SSSI is a complete medieval wood with eastern and western extensions of ancient secondary woodland. These differ very little in structure and composition from the primary woodland and both are known to have occurred before 1840. The eastern extension was first recorded in 1628. The neighbouring Tollemache Hall Grove is also included in the site. The former supports a diverse ground flora typical of ancient woods whilst the latter is predominantly composed of coppiced small-leaved lime (*Tilia cordata*)

The application site lies within a SSSI Impact Risk Zone (IRZ) but does not meet the listed criteria (e.g., aviation proposals or large livestock units/slurry lagoons) to warrant further consultation between the Local Planning Authority and Natural England. As such, no significant impacts are anticipated.

Internationally designated sites

No Natura 2000 sites are located within 13km of the application site, as such no impacts are anticipated and no HRA considered necessary.

4.2.2

Species

a) Relevant biological records

No protected or notable species records exist for within the application site boundary. However, the SBIS data search identified the following species records of note for within 2km of the site:

- Amphibians: Records exist for common toad (*Bufo bufo*), common frog (*Rana temporaria*) and smooth newt (*Lissotriton vulgaris*);
- Reptiles: A single adder (*Vipera berus*) record exists for the search area;
- Badger: Records exist within 2km;
- Bats: Brown long-eared (*Plecotus auritus*) and pipistrelle (*Pipistrellus* sp.) records exist for the search area, but neither relate to the application site;
- Birds: Numerous bird species records exist for the search area including barn owl (*Tyto alba*) (Red Status; WCA1i) and turtle dove (*Streptopelia turtur*) (Red Status);
- Plants: Of note are the records for yellow vetchling (Red List - Vulnerable), shepherd's needle (*Scandix pectens-veneris*) (Red List - Critical), man orchid and sulphur clover (*Trifolium ochroleucon*); and
- Other mammals: Hedgehog and brown hare (*Lepus europaeus*) records exist for Battsford.

4.2.3 *Priority habitats*

Assessment of the magic map database identified no priority habitats within the application site boundary with a small area of Deciduous woodland shown c. 150m southwest of the application site boundary at the nearest point.

4.2.4 *Additional species data*

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. 3km northeast of the application site (dated 2019), which is outside the dispersal range of the species.

4.3 **BASELINE ECOLOGICAL CONDITIONS – FIELD SURVEY**

4.3.1 *Habitats and vascular plants*

Descriptions of the habitats (Figure 2) and the characteristic plants species present are provided below with photos provided in Appendix A1.

a) Suburban/mosaic of developed/natural surface (**vegetated garden - u1d, 32, 828, 847**)

At the time of the previous survey visits in 2016⁸ and 2019, the site comprised a well-kept residential garden containing a large area of mown lawn dominated by perennial rye grass (*Lolium perenne*), annual meadow grass (*Poa annua*), creeping red fescue (*Festuca rubra*) and common bent (*Agrostis capillaris*) along with sparse forb cover including creeping buttercup (*Ranunculus repens*), dandelion (*Taraxacum officinale* agg.), ribwort plantain (*Plantago lanceolata*), white clover (*Trifolium repens*), selfheal (*Prunella vulgaris*), a and large number of primula (*Primula vulgaris*) and daffodils (*Narcissus* spp.) (Photo 1).

As the associated dwelling, 2 School House, has become unoccupied, management of the garden has reduced and very little of the lawn remains (Photos 2 and 3). A grassland/tall forb community has established across much of the site (**other neutral grassland – tall forbs g3c, 10, 16, 32**) with abundant cock's foot (*Dactylis glomerata*) and Yorkshire fog (*Holcus lanatus*), frequent false oat grass (*Arrhenatherum elatius*) and infrequent false brome (*Brachypodium sylvaticum*). Stands of tall forbs and low growing bramble scrub (*Rubus fruticosus* agg.) dominates the ground flora in places, frequent species recorded were ragwort (*Jacobaea vulgaris*), smooth sow thistle (*Sonchus oleraceus*), prickly sow thistle (*S. asper*), creeping thistle (*Cirsium arvense*), spear thistle (*C. vulgare*), common nettle (*Urtica dioica*), white dead-nettle (*Lamium album*), willowherb (*Epilobium* sp.) and broadleaved dock (*Rumex obtusifolius*).

Within more sparsely vegetated areas were common knotgrass (*Polygonum aviculare*), herb-robert (*Geranium robertianum*), wood avens (*Geum urbanum*), ivy (*Hedera helix*) and primrose (Photo 4).

b) Dense scrub (**h3**)

Patches of dense bramble scrub (**h3d**) have started to encroach on the garden from the northern and southern boundaries (Photos 5 and 6).

c) Buildings (**u1b5**)

There is a timber-framed shed with a corrugated cement-asbestos roof in the northwest corner of the garden (Photo 7).

⁸ MHE Consulting Ltd (2016) Proposed detached dwelling School House, Straight Road, Battisford, Suffolk – Ecological Survey May 2016

d) Scattered trees and shrubs

There are several trees scattered throughout garden, mostly at the western end and along the boundaries. These include a walnut (*Juglans regia*) and several plums (*Prunus* sp.) adjacent to the shed with some multi-stem hazels (*Corylus avellana*) along the western garden boundary (Photo 8). There are several non-native/introduced shrubs around the garden boundaries, with species such as lilac (*Syringa vulgaris*), *Viburnum* sp., Japanese spindle (*Euonymus japonicus*) and *Lonicera ligustrina* recorded.

Another walnut tree and a fruit tree were present during the previous surveys but had been felled in the interim before the most recent survey.

e) Native hedgerow with trees (h2a, 11)

A roadside hedgerow of mostly hawthorn (*Crataegus monogyna*) with occasional elder (*Sambucus nigra* agg.) and bramble marks the southern boundary of the application site. Two mature pedunculate oak (*Quercus robur*) exist within the hedgerow - the easternmost oak is just outside the application site boundary (Photos 9 and 10). The ground flora along the roadside edge of the hedge comprises a narrow (<1m), species-poor grass verge.

The hedgerow is unlikely to be classified as 'Important' under the Hedgerow Regulations (1997) due to the lack of species diversity. However, it would just meet the criteria to be classified as a Hedgerow, Priority Habitat:

A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide.

4.3.2

Amphibians and reptiles

a) Amphibians

i) Ponds

No ponds exist on site - the nearest pond (P1) is located c. 100m to the south of the application site (Figure 3), with two further ponds located c. 210m (P2) and c. 230m (P3) southwest of the application site respectively. No access was secured to assess these ponds for their suitability to support breeding GCNs.

ii) Terrestrial habitat

The application site supports areas of suitable terrestrial foraging (e.g., grassed areas and tall forbs) and refuge (scrub and hedgerow etc.) habitat for common amphibians, including GCNs. The large brush/waste pile left on site will provide further opportunities for refuge and could potentially support overwintering animals.

iii) Natural England Rapid Risk Assessment Tool (RRAT)⁹

As no access was secured to undertake habitat suitability assessments of any waterbodies located within 250m of the application site boundary, the RRAT was used to assess potential impacts on amphibians (e.g., during site/vegetation clearance and the construction phase) to inform a mitigation strategy.

The combined area of the application site (678m² outline planning application and 210m² full planning application) covers an approximate area of 880m². Most of the existing habitats on site will require removal or will be significantly disturbed during the

⁹ <https://www.gov.uk/government/publications/great-crested-newts-apply-for-a-mitigation-licence>

construction phase. Therefore, the area of habitat included in the RRAT = 880m² (0.088ha) within 100-250m of all ponds (P1 to P3) within the Zol.

For impacts on terrestrial habitats of GCN populations that could potentially breed in all ponds within the Zol the RRAT states: "GREEN: OFFENCE HIGHLY UNLIKELY". This result reflects the fact research has shown that GCNs generally inhabit terrestrial habitat within 100m of their breeding pond (Cresswell and Whitworth, 2004).

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.01
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	No effect	0
	Maximum:	0.01
Rapid risk assessment result:	GREEN: OFFENCE HIGHLY UNLIKELY	

If minor disturbance of GCNs occurs when assessing ponds individually and all ponds in-combination, the RRAT states: "AMBER: OFFENCE LIKELY".

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.01
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	Minor disturbance of newts	0.5
	Maximum:	0.5
Rapid risk assessment result:	AMBER: OFFENCE LIKELY	

If significant disturbance of GCNs occurs, or animals are captured in excavations (without being able to climb out), animals are prevented from dispersal, or animals are injured or killed, the RRAT result = RED: OFFENCE HIGHLY LIKELY.

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.01 - 0.1 ha lost or damaged	0.01
Land >250m from any breeding pond(s)	No effect	0
Individual great crested newts	Capture of newts in excavations etc	0.8
	Maximum:	0.8
Rapid risk assessment result:	RED: OFFENCE HIGHLY LIKELY	

The RRAT refers to avoidance measures that can be employed to avoid offences – see Section 5.6 b) Mitigation.

b) Reptiles

Historical SBIS records exist for adder (*Vipera berus*) within 2km of the application site boundary. However, the site is not considered likely to support the species, nor species such as common lizard (*Zootoca vivipara*), which are unlikely to be found in residential gardens in urban areas as they are susceptible to predation by domestic cats.

The site does support some limited foraging/refuge habitats for species such as slow-worm (*Anguis fragilis*) and grass snake (*Natrix helvetica*) around its boundaries, (e.g.,

scattered scrub, tall forbs and the boundary hedgerow). However, the likelihood of animals colonising the site from adjacent habitats is relatively low due to their nature (e.g., occupied residential gardens, pasture and intensively managed agricultural land). As such, the overall habitat suitability of the site for reptiles was assessed as low.

4.3.3

Bats

a) Building inspection

No evidence of roosting bats was observed within the shed, which was assessed as supporting negligible bat roosting potential (Collins, 2016).

b) Tree Roost Assessment

No trees that require felling to facilitate the new buildings and access were assessed as having bat roosting potential (BRP) when assessed from ground level. Two mature oak trees which sit at either end of the hedgerow along the southern site boundary support moderate BRP. However, these will remain unaffected by the proposed development.

c) Foraging and Commuting Habitat

The garden supports Moderate value bat foraging habitats (e.g., mature trees/shrubs scrub, and hedgerow). These habitats retain some connectivity to other linear features in the wider locality (e.g., hedgerows and tree lined back gardens) and were assessed as being of Moderate value to commuting bats (Collins, 2016).

4.3.4

Nesting birds

No evidence of nesting birds was found in the shed to be demolished. Trees and shrubs within the garden and the roadside hedgerow provide suitable nesting opportunities for small passerines such as dunnock (*Prunella modularis*) (Amber Status), and house sparrow (*Passer domesticus*) (Red Status, S. 41), with potential for larger species like stock dove (*Columba oenas*) (Amber Status) and song thrush (*Turdus philomelos*) (Amber Status) in taller, mature specimens.

4.3.6

Badger

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

4.3.7

S. 41 list habitats and species

a) Habitats

The roadside hedgerow which extends along the southern boundary is relatively short in length but measures $\geq 20\text{m}$ and although relatively species-poor supports c. 80% native shrub species (e.g., hawthorn and elder) with gaps of $< 5\text{m}$. Thus, meeting the criteria to be considered a S.41 hedgerow habitat.

b) Species

The lawn areas, shrubs/hedgerows and brash piles will provide refuge/cover and foraging habitat for hedgehogs. Trees, shrubs and forbs in the garden provide habitat for a range of S. 41 list invertebrates, including Lepidoptera.

4.3.8

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 sites are provided in Table 4.3; values are based upon the criteria in Table A3.1 and expert best judgements.

Table 4.3 Feature value based on geographic context

Feature	Value
Grassland, scattered trees and shrubs, scrub and hedgerow	Local
Amphibians and reptiles	Local
Bats	Local
Nesting 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

Outline planning permission is being sought to erect two semi-detached dwellings with garages, gardens and associated infrastructure and full planning permission is being sought to create a new double vehicular access and visibility splay off Straight Road in addition to two parking spaces to serve the existing dwelling (2 School House).

This will result in the loss of a short length of native hedgerow with areas of dense and scattered scrub, some trees and shrubs and an area of lawn/grassland with fall forbs. Combined, this has the potential to impact common amphibians, foraging and commuting bats, nesting/roosting birds, and hedgehogs.

The assessment and recommendations below provide preliminary recommendations for mitigation and enhancements for the proposed development. They are based on an Existing Site Plan – Location Plan (drawing no. 2023317 – 01) and Proposed Site Plan (2023317 – 02) provided by Richard Dilley Architecture 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 development, including vegetation clearance, ground-breaking and construction activities, will result in the permanent loss of a section of existing roadside hedgerow with a narrow grass verge (for access and visibility requirements), together with an area of lawn, scattered scrub and several trees and shrubs (in the footprint of proposed new dwellings and garages). Losses are considered a significant negative effect at the local level.

Any accidental damage to retained lawn, trees/shrubs in the garden (and immediately adjacent) during the construction phase would also result in a significant negative effect at the local level.

a) Mitigation

The works footprint and associated disturbance should be minimised in extent as much as possible, with the builder's compound located away from retained boundary habitats. Retained/adjacent habitats in the garden should also be protected with temporary fencing (e.g., Heras) during construction and Root Protection Areas (RPAs) should be used to inform the detailed design.

c) Residual effects

The scheme will result in a net loss of habitats, which though relatively small in area is a significant effect at the local level. Compensation (see section 5.10) would be required to offset losses/provide biodiversity gains for the site (see section 5.12).

5.6 AMPHIBIANS AND REPTILES

a) Potential impacts

The removal of the roadside hedgerow, scrub vegetation and any artificial refugia present (e.g. brash/waste piles) could result in injury and/or death of animals using the site at the time. Ground-breaking and construction activities may also result in the potential entrapment, injury and mortality of amphibians due to the presence of trenches (including caustic substances such as wet concrete) and building materials which animals can seek refuge within and then suffer injury/death when the materials are moved. Loss of habitats on site will negatively affect availability of refuge habitat for animals and could cause significant negative effects upon low numbers of individual animals.

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. Such impacts could also result in permanent negative effects upon low numbers of individuals.

Combined, the above impacts could result in significant negative ecological effects on individual animals at the local level.

b) Mitigation

To ensure that no wildlife offence occurs, the site could be registered as part of the NE GCN District Level Licence (DLL) Scheme. However, given the relatively low risk to animals, a non-licensed Method Statement is considered appropriate to mitigate impacts upon amphibians (potentially including GCNs, though considered low risk) and should include the following:

1. A Toolbox Talk (TBT) will be provided by a suitably experienced ecologist (Ecological Clerk of Works; ECoW) to all operatives ahead of their commencing work on the scheme. Staff will be required to complete a declaration confirming they have received the briefing, which will be retained on site for the duration of works;
2. All lawn areas on site should be kept short prior to and during construction;
3. Clearance of any taller vegetation (e.g., hedgerow and scrub vegetation) 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.
4. Any refugia present that requires removal (e.g., brash/waste piles) should be cleared sensitively (i.e., by hand where possible and under close observation) as animals may be found underneath, particularly between October to March;
5. Where possible during the construction phase, and only after clearance as described above, open ground works should be undertaken during November to February inclusive, when GCNs are not active or during a hot, dry period when animals are less likely to move across grassland/open areas at night;
6. 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;
7. Open excavations will be inspected for the presence of amphibians, reptiles, and small mammals immediately prior to filling with any aggregates or concrete;
8. Concrete pours will be undertaken in the morning to allow them to harden prior to the evening when amphibians become active, or must be covered overnight;
9. Excess cement/concrete must be disposed of in such a way as to prevent contact with animals e.g., poured into a concrete skip and covered;
10. Any caustic materials (e.g., concrete) to be hand mixed must be on ply boarding over a tarpaulin which is folded over the boarding at the end of each day's use to prevent animals coming into contact;
11. All building materials will be stored on hard standing or raised off the ground on pallets and away from sensitive boundary habitats (e.g., hedgerows);
12. All building waste must be removed from site as promptly as possible to prevent animals seeking refuge;
13. The GCN poster in Appendix A3 should be erected in the welfare facilities provided for construction staff on site;

14. Should any GCNs 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;
15. **Downpipes taking water off the roofs should be sealed at ground level by using a leaf and debris screen¹⁰ or similar to prevent amphibians entering drains;**
16. **If gully pots are required, they should use small diameter (6mm) grates where possible.; and**
17. **Any installed gully pots should be situated $\geq 100\text{mm}$ from the roadside, OR a wildlife-kerb¹¹ must be installed adjacent to each gully pot AND a gully pot ladder¹² placed into each gully pot.**

c) Residual effects

With the proposed mitigation measure, significant residual effects on local amphibian and reptile populations during construction activities will be avoided.

5.7

BATS

a) Potential impacts

i) Roosting bats

No impacts anticipated.

ii) Foraging and commuting habitats

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

Lighting impacts relate to security lighting external to the buildings during construction, and potentially from spillage of internal lighting once the buildings are in use. In this instance, impacts on the retained hedgerows/trees (e.g., mature oak trees) extending around the site boundaries and in adjacent gardens are considered most relevant.

iv) Roofing 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.

Without mitigation, the impacts above could result in significant effects at a local level.

b) Mitigation

i) Foraging and commuting habitat

As per 5.5, protective fencing RPAs will be used to protect retained trees and shrubs etc. The loss of a small length of native hedgerow and trees in the garden will be compensated (see section 5.10).

¹⁰ <https://www.drainagepipe.co.uk/leaf-and-debris-gully-110mm-p-D94G/>

¹¹ e.g. <https://www.aco.co.uk/products/wildlife-kerb>

¹² <https://www.thebhs.org/the-bhs-amphibian-gully-pot-ladder>

ii) Light disturbance

Exterior lighting (as well as temporary security lighting during the construction phase) design must minimise lighting impacts upon retained natural habitats retained shrubs/trees and should follow current guidance as necessary^{13,14}:

- *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 hedgerows/shrubs and trees. 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'.

iii) Roofing membranes

The new buildings should use bat friendly roofing felt (e.g., Type 1F bitumen felt or a modern breathable roofing membrane which has passed a *snagging propensity test* as defined by Natural England and the Bat Conservation Trust¹⁵) if **handmade clay pantile or plain tiles** are to be used and **behind weatherboarding**.

c) Residual effects

With mitigation implemented, lighting impacts will be minimised.

5.8

NESTING BIRDS

a) Potential impacts

The removal of any trees/shrubs scrub and a short section of roadside hedgerow will result in the loss of potential nesting and foraging habitat. If undertaken during the bird nesting season (1st March to 31st August), this could result in the disturbance and destruction of active nests, and potentially injure or kill young birds, considered a significant negative effect (an offence under wildlife legislation) at the local level.

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 and shrubs could also affect breeding success and/or result in the destruction of active nests. Such impacts would all have a negative effect 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

¹³ <https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting>

¹⁴ www.eurobats.org/sites/default/files/documents/publications/publication_series/WEB_DIN_A4_EUROBATS_08_ENGL_NVK_28022019.pdf

¹⁵ <https://www.bats.org.uk/our-work/buildings-planning-and-development/non-bitumen-coated-roofing-membranes>

supervision must be undertaken by a suitably experienced ecologist immediately prior to and during the removal of the hedgerow trees/scrub. If any active nests are present, works within 5m must wait until the young have fledged.

c) Residual effects

With mitigation, effects upon active nests will be avoided although loss of nesting habitat in hedgerow/trees that require removal should be compensated (see section 5.10).

5.9

OTHER S. 41 LIST HABITATS AND SPECIES

a) Potential impacts

The removal of a small section of roadside hedgerow would result in the loss of a small length of Priority S. 41 Habitat, which is considered a significant negative effect at the local level.

Clearance of hedgerow vegetation and lawn/scrub will result in the loss of foraging, refuge (including potentially for overwintering), and nesting habitat for hedgehog.

During construction, hedgehogs could potentially fall into open trenches 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. Erection of ecological barriers (e.g., timber panel fencing as proposed along eastern site boundary) would affect foraging access for animals.

In combination such impacts would be considered to result in a negative ecological effect at the local level.

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. Where clearance of dense vegetation is required, this should not be undertaken when temperatures are regularly below 6°C. Animals encountered at other times should be moved to suitable cover, e.g., base of hedgerows or in the grassland area to the west of the application site.

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 (large rough planks placed at shallow angles) placed 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 should be avoided, in order to allow the free movement of hedgehog to forage in gardens. If close board fencing were to be installed, then at least one hedgehog highway¹⁶ should be provided at either end of the fencing run with signage.¹⁷

c) Residual effects

¹⁶ <https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/>

¹⁷ <https://ptes.org/shop/just-in/hedgehog-highway/>

Direct impacts upon hedgehog will be avoided with no significant residual impacts anticipated. The loss of the short section of hedgerow to accommodate the new access and visibility splay will require compensation.

5.10

COMPENSATION

Significant residual negative effects upon habitats and species are mainly restricted to a short length of native roadside hedgerow (S. 41 habitat) to accommodate the new site access and visibility splay requirements as well as lawn/grassland and several trees/shrubs and scattered scrub in in the footprint of new dwellings, garages and gardens which are of value to various species for foraging, refuge, and nesting habitats.

New native hedgerow

To compensate for the loss of the section of roadside hedgerow and scattered scrub, a length of species-rich native hedgerow should be planted along two of the site boundaries (e.g., eastern and northern site boundaries). Hedgerow planting should comprise c. 50% of native thorny species such as common hawthorn, Midland hawthorn (*C. laevigata*) and/or plum cherry (*Prunus cerasifera*). All three species provide food for birds and mammals and help reduce cat predation. Bird cherry is much less invasive compared to blackthorn which will readily sucker.

To further maximise the biodiversity value of new hedges a minimum of 5 of the following species should also be used:

- Common dogwood (*Cornus sanguinea*);
- Crab apple (*Malus sylvestris*);
- Field maple;
- Guelder rose (*Viburnum opulus*);
- Hazel;
- Holly;
- Hornbeam (*Carpinus betulus*);
- Dog rose (*Rosa canina*.) (**NOT** Japanese rose (*Rosa rugosa*);
- Spindle (*Euonymus europaeus*); and
- Wild privet (*Ligustrum vulgare*) (**NOT** garden privet *L. ovalifolium*).

Heritage fruit trees

To compensate for the loss of trees/shrubs requiring removal, x6 Suffolk heritage fruit trees¹⁸ should be planted on site, which would enhance the biodiversity value of the wider site (e.g., pollinators and windfall fruit for birds, mammals, and invertebrates) and provide the new homeowners with a small seasonal harvest.

Flowering lawns

To offset the loss of lawn/grassland on site proposed grassed areas should be seeded or turfed with a flowering lawn seed mixture¹⁹ or turf²⁰ 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.

¹⁸ [Suffolk | Apples & Orchards Project \(applesandorchards.org.uk\)](http://Suffolk|Apples&OrchardsProject(applesandorchards.org.uk))

¹⁹ <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/>

²⁰ <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/>

Nesting birds

The loss of bird nesting (e.g., shrubs and trees) habitat can be compensated through the erection of 4x artificial bird boxes (Appendix A5) erected on suitable mature trees and/or new buildings on site.

It should be noted that from Spring 2024 it is 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). Quantitative assessments of habitat losses and gains using the Defra Metric will therefore be necessary.

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 16 October 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 several householder applications for extensions and/or alterations to existing dwellings or the construction of garages, two applications relating to equestrian grazing and housing (DC/22/00368 & DC/23/01151), an application to erect agricultural buildings (DC/22/06152) and three separate applications to erect a single dwelling (DC/21/06243, DC/21/06247 and DC/23/03460 - self build dwelling).

No major applications have been submitted within the area in the last two years. As such, no significant cumulative impacts are anticipated in relation to the proposed development.

5.12 ENHANCEMENT OPPORTUNITIES

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 4 options listed in Table 5.1 should be implemented.

Table 5.1 Biodiversity enhancements

Feature	Enhancement suggestion
Nectar rich climbers	1. 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 (<i>Clematis vitalba</i>) and honeysuckle (<i>Lonicera periclymenum</i>), which could be planted at 5ft intervals along proposed hedgerows and/or trained up walls, fences, posts and trellises.
Swift bricks	2. Swift boxes ²¹ (e.g., Manthorpe Swift Brick) could be integrated into the north elevation as high as possible

²¹ <https://swift-conservation.org/Leaflet%20-%20Swift%20Nest%20Bricks%20-%20installation%20%26%20suppliers-small.pdf>

Feature	Enhancement suggestion
	up near the eaves. Homeowners should be supplied with material and guidance on how to attract an initial colony ²² with a speaker installed in one of the bricks on each gable.
Bats	3. Three bat boxes (comprising 1x each of the boxes in Appendix A5) could be erected on suitable mature trees and/or integrated into the walls on south elevation of the new buildings. Exact locations to be agreed with a suitably experienced ecologist.
Composting area	4. A composting area could be assembled in the rear garden of each new dwelling, supplying the homeowners with a sustainable organic source of fertiliser, and at the same time creating a vital refuge for a variety of invertebrates, amphibians (e.g., common frog and common toad) and possibly reptiles (e.g., slow-worm and grass snake) (Appendix A6). Composting areas are also likely to attract foraging birds (by day) and hedgehogs (at night).

Peat-based composts will 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 avoidance, design and mitigation 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: A Biodiversity Mitigation and Enhancement Strategy 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 and hedgerow removal;
3. BS 42020:2013 D.3.5 to limit lighting design impacts upon bats and other wildlife;
4. BS 42020:2013 D.3.7 Restrictions on occupation of development until specific biodiversity outcomes are achieved; and
5. BS 42020:2013 D.3.8 to ensure mitigation, compensation and enhancement measures are successfully implemented.

²² <https://swift-conservation.org/2014-06-21%20swiftcallsinstructions.pdf>

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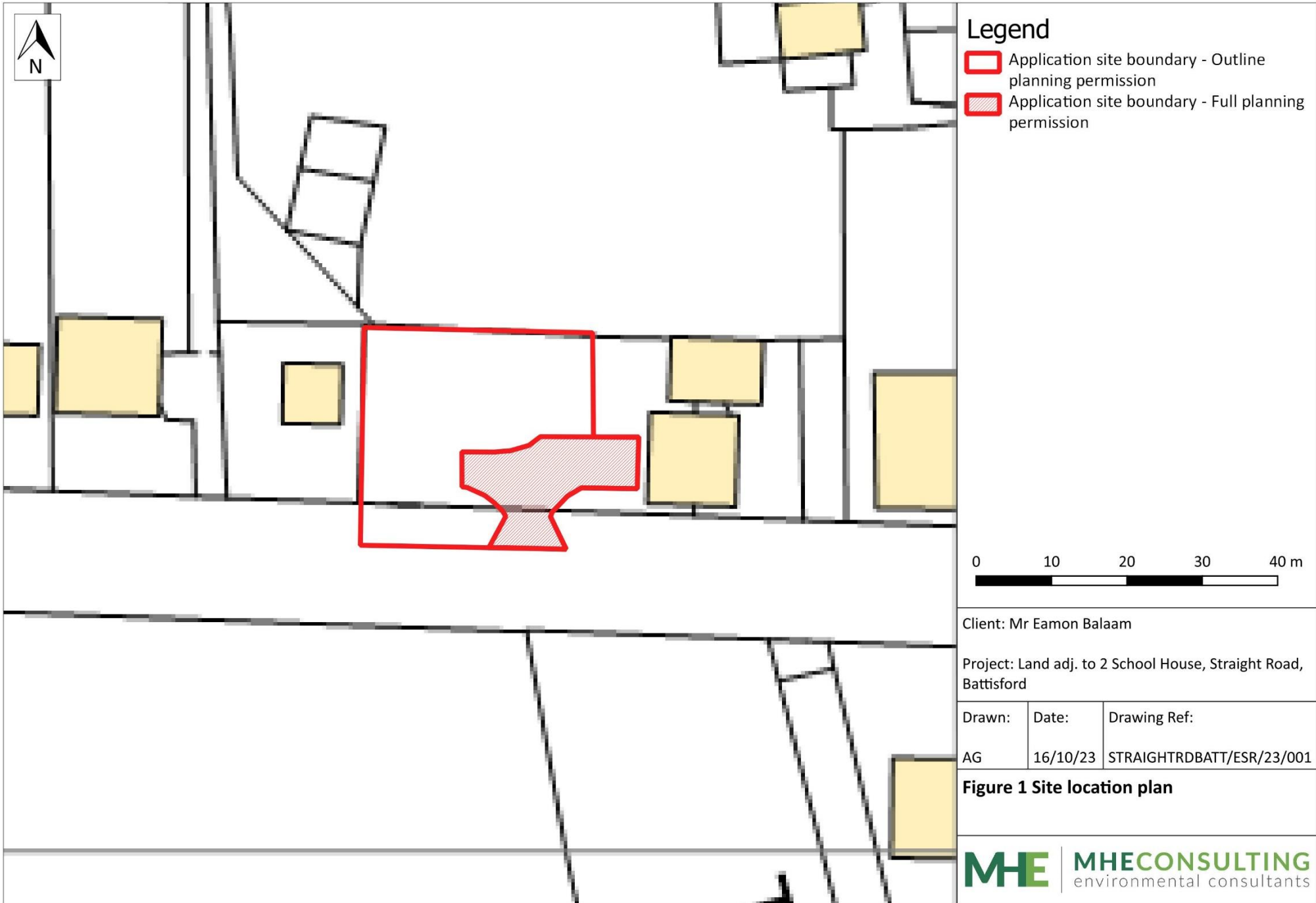
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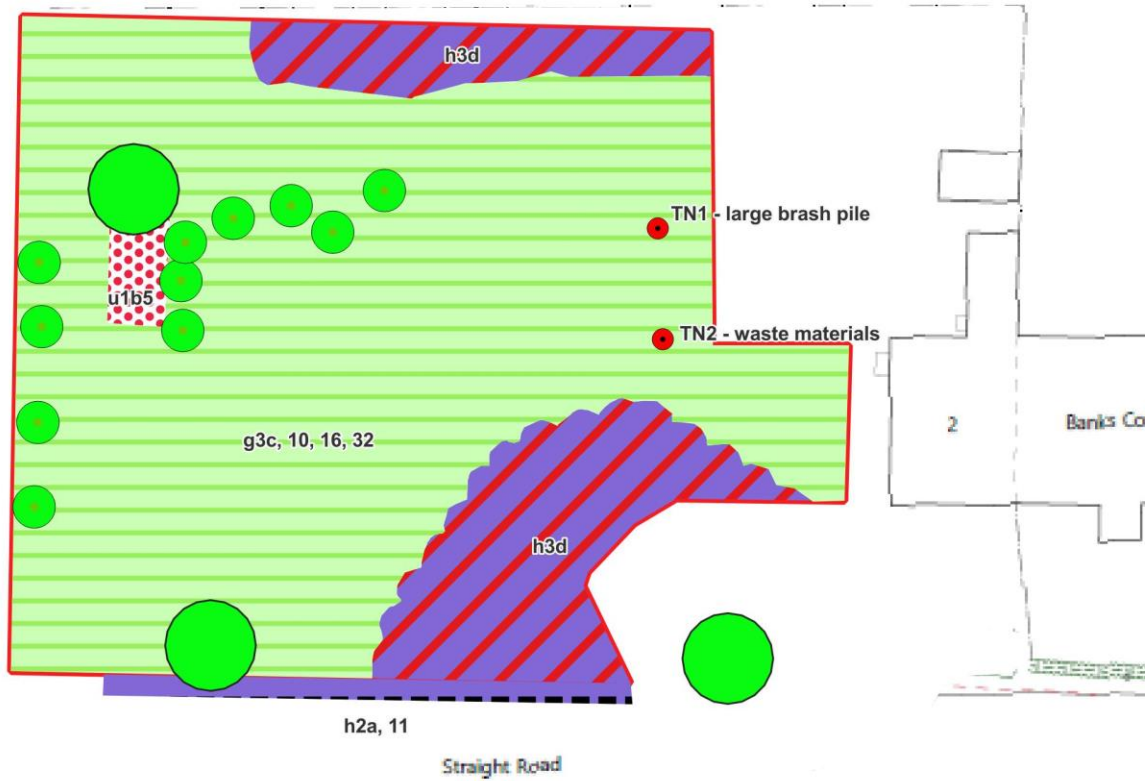
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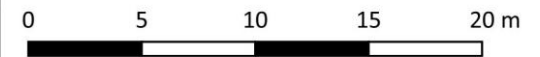


Legend

- Application site boundary
- g3c - other neutral grassland - tall forbs
- h2a - hedgerow (priority habitat)
- h3d - dense bramble scrub
- u1b5 - buildings
- Tree
- Target note

Secondary codes

- 10 – Scattered scrub
- 11 – Hedgerow with trees
- 16 – Tall forbs
- 32 – Scattered trees

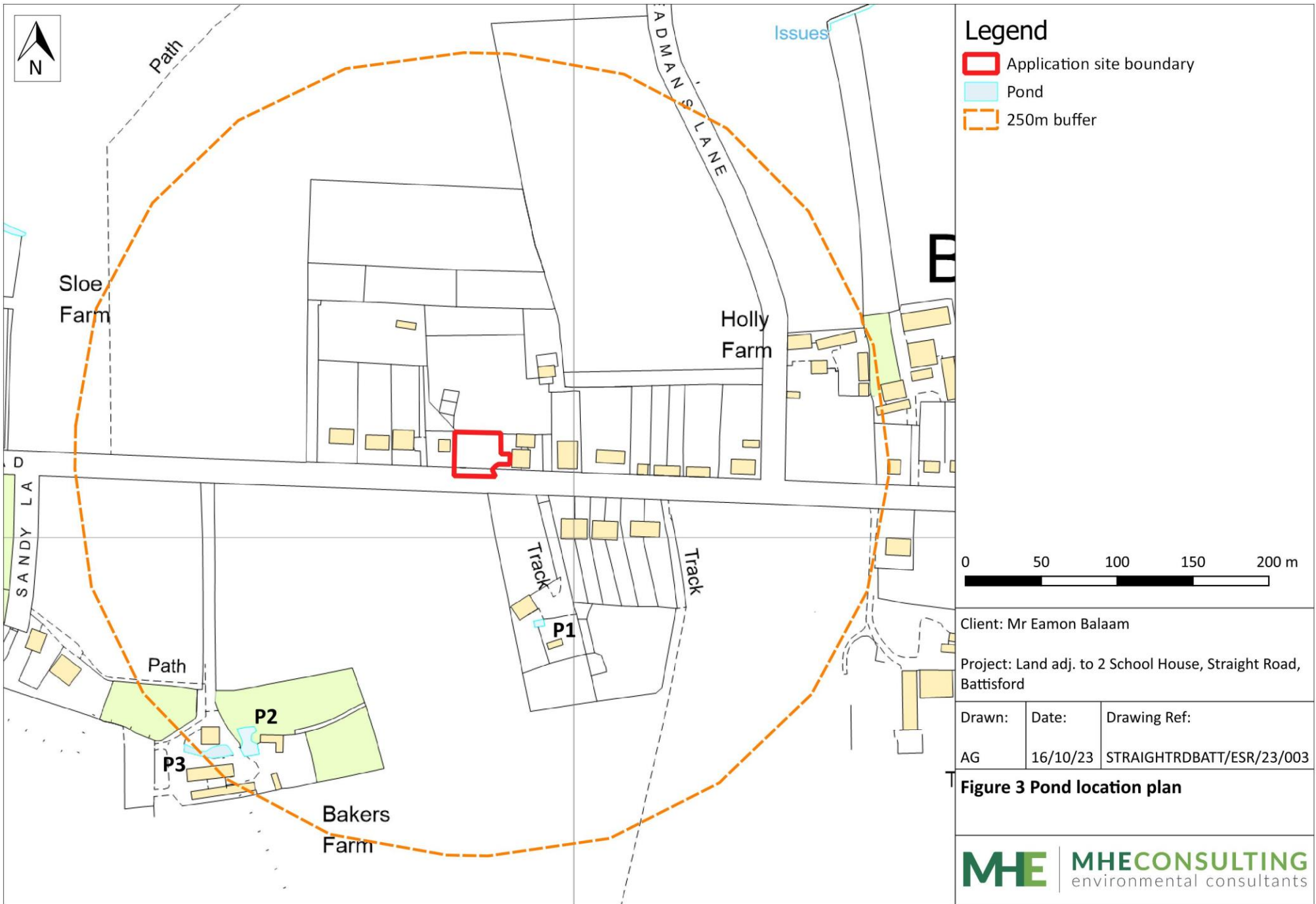


Client: Mr Eamon Balaam

Project: Land adj. to 2 School House, Straight Road, Battsford

Drawn:	Date:	Drawing Ref:
AG	18/10/23	STRAIGHTRDBATT/ESR/23/002

Figure 2 UKHab Classification and survey plan



Appendices

Appendix A1 Photos



Photo 1 View of the well-kept lawn area on a previous survey visit undertaken in 2016 – looking east



Photo 2 View of the garden with tall forbs and encroaching scrub in the garden in 2023 – looking west



Photo 3 Far eastern part of the application site – with adjacent buildings beyond the site boundary - 2023



Photo 4 Area of more sparsely vegetated ground towards the western end of the application site



Photo 5 Patch of dense bramble scrub in the southeast corner of the application site - 2023



Photo 6 Bramble scrub and tall forbs along the northern site boundary - 2023



Photo 7 Shed in the northwest corner of garden



Photo 8 Trees along the western site boundary



Photo 9 View of the hedgerow and oak trees along the southern site boundary – looking east



Photo 10 View of the hedgerow and oak trees along the southern site boundary – looking west



Photo 11 Large brush pile in the northeast corner of the application site (TN 2)



Photo 12 Waste pile near the eastern site boundary (TN 1)

Appendix A2 EclA criteria

A2.1 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 A3 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 A4 Bird boxes



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		



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

[ADD TO BASKET](#) OR [ADD TO QUOTE](#)



Search for a product

0 items

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

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

FREE delivery when you spend £20! Hurry, ends soon! Details >

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 £20: £3.95 standard UK shipping, or free shipping over £20

Supporting the RSPB: Every purchase you make supports wildlife

Buy 2 save £2



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



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)
<p><i>Description</i></p> <p>Height 280mm Width 130mm Depth 130mm Typical Weight 7-8kg</p>		

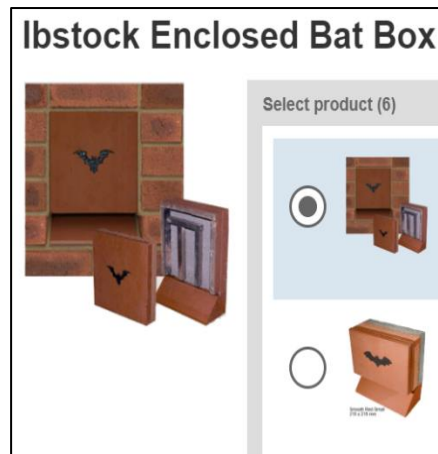
Appendix A5 Bat boxes



Kent bat box



Schwegler 1FE



Ibstock Enclosed Bat Box

Select product (6)



Vincent Pro Box



Appendix A6 Wildlife friendly composting area

How to build a wildlife friendly compost heap...

NB Commercially available alternatives could be installed e.g. <https://www.griggisagri.co.uk/ristoc-compost-box.html>

- Clear an area.
- Stand a pallet up so its long edge sits on the ground.
- At either end of the pallet, hammer a stake between the two layers of the pallet.
- Place two pallets at right-angles to the first and once again secure with stakes.
- Secure the remaining pallet to the front using wire or string - this will allow you to remove it when you need to turn or empty your compost.



Shaggy ink cap - fungi help breakdown the contents of your compost heap.



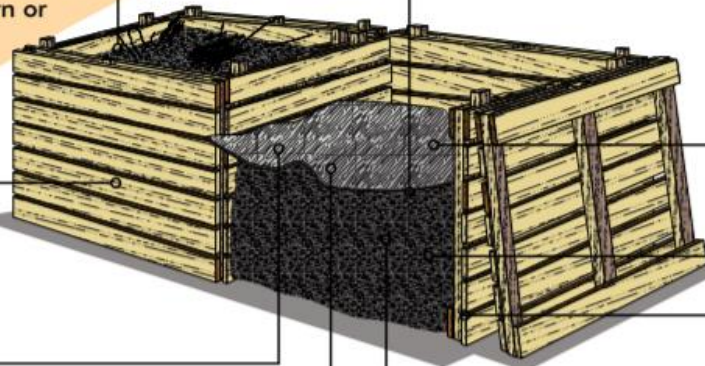
Snail - will feed on the compost and provide food for many different birds.



Grass snake - if you are lucky a female may lay eggs in your heap during June or July.



Woodlouse - minibeasts are vital to a compost heap.



Millipede - they munch their way through the ingredients, turning it into a rich compost.



Slow worm - may breed and have their young in the heap.



Common toad - will find shelter in the damper parts of the heap.



Worm - a healthy compost heap needs worms.



Hedgehog - may visit at night to feed on snails and other invertebrates.

The compost heap's ingredients

Balance is the key to a good compost heap. To make a good mix you need more or less equal amounts of 'greens' and 'browns' plus small amounts from the 'others' list.

The Greens

Nitrogen-rich ingredients

- Comfrey leaves, nettles, young green weeds - avoid weeds with seeds, coffee grounds, grass cuttings, urine - diluted using 20 parts water to 1 part urine, raw vegetable peelings, tea bags and leaves, soft green prunings.

The Browns

Carbon-rich ingredients

- Cardboard - cereal packets and egg boxes, waste paper - even shredded, old bedding plants, newspaper - although it is better to recycle them, hay and straw, wood shavings, fallen leaves.

Other Compostable Items

- Wood ash - in moderation, hair, crushed egg shells, natural fibres - such as wool or cotton.