Green
Environmental
Consultants

RIDGEWAY FARM
SEDGE WAY
WITCHFORD
CB6 2HZ

REPLACEMENT DWELLING

ECOLOGICAL IMPACT ASSESSMENT

May 2022

for:
Mr M Thompson

Report number: 1546/2

Green Environmental Consultants Ltd

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RIDGEWAY FARM, SEDGE WAY, WITCHFORD CB6 2HZ, REPLACEMENT DWELLING

ECOLOGICAL IMPACT ASSESSMENT

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LIMITATIONS AND EXCEPTIONS

Limitations of Surveys

This report records wildlife found during the survey and anecdotal evidence of some species. Access, seasonality and weather conditions may affect survey results. It does not record any animals or plants that may appear at other times of the year and were therefore not evident at the time(s) of the visit(s). Habitats outside the site boundary were only visited where considered appropriate and where access was available.

The behaviour of animals can be unpredictable and may not conform to standard patterns recorded in current scientific literature. Many species are highly mobile and can occupy a site which has previously held no potential for them and factors such as increasing habitat pressure can cause animals to occupy areas that were previously unoccupied, or which might be considered far from suitable. This report therefore cannot predict with absolute certainty that animal species will occur in apparently suitable locations or that they will not occur in locations or habitats which appear to be unsuitable.

Limitations of Report

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

The Executive Summary, Conclusions and Recommendations sections of the report provide an overview and guidance only and should not be specifically relied upon until considered in the context of the whole report. Interpretations and recommendations contained in the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based on current legislation in force at that time.

Where the data available from previous reports, or for other subject matter supplied by the Client, have been used, it has been assumed that the information is correct. No responsibility can be accepted by us for inaccuracies within the data supplied.

This report is prepared and written in the context of the proposals stated in the introduction to this report and should not be used in a differing context. Furthermore, new information, improved practices and legislation may necessitate an alteration to the report in whole or in part after its submission. Therefore, with any change in circumstances or after the expiry of two years from the date of the report, the report should be referred to us for re-assessment and, if necessary, reappraisal.

Scientific survey data will be shared with local biological records centre in accordance with the CIEEM professional code of conduct.

Please note that Green Environmental Consultants Ltd is an ecological consultancy. Any information relating to legal matters in this report is provided in good faith but does not purport in any way to give any advice on or interpretation of the law whatsoever. Professional legal advice should always be sought.

The data, advice and opinion which we have prepared and provided is true, and have been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. I confirm that the opinions expressed are my true and professional *bona fide* opinions.

This ecological information is supplied in accordance with BS 42020 2013.

Jacqui Green BSc(Hons), MSc, CEcol, FCIEEM

1 EXECUTIVE SUMMARY

This report has been prepared by Green Environmental Consultants Ltd and relates to the replacement of the existing dwelling at Ridgeway Farm, Sedge Way, Witchford, Ely CB6 2HZ. The report comprises the results of a Preliminary Ecological Appraisal (PEA) and a Preliminary Bat Roost Assessment (PBRA) to establish existing ecological value and ascertain potential impacts. As no further work is required, this document is presented as an Ecological Impact Assessment.

The Site comprised a small area of 0.15 hectares within the farmyard, and the area included an existing brick dwelling house and out-building with a garden and hardstanding linked to the nearby Sedge Way. The application proposals are to demolish the existing and build a replacement dwelling.

While the survey evaluated the whole of the farmyard to determine potential impacts on protected species, the report concentrates on the redline boundary shown in the Appendix.

Results

PEA: No evidence of protected and notable species was found, and the habitats were of negligible suitability to support these species.

PBRA: The dwelling and outbuilding were of negligible suitability for bat roosts, and no evidence of bat roost utilisation was found. Adjacent boundary vegetation constituted low suitability for foraging and commuting bats, although utilisation is anticipated to be at low levels.

Evaluation & Further Surveys

The site has no suitability for protected species, and there are no ecological constraints to redevelopment. The proposals will not impact other sites or habitats, and further ecological surveys are not required.

Mitigation & Enhancement

Impacts on wildlife are not anticipated. Mitigation is restricted to avoiding disturbance to nesting birds. The proposed redevelopment offers limited opportunities for enhancement, although the inclusion of bat and bird boxes has potential value.

Conclusions

The PEA/PBRA has determined that the site holds negligible value for protected and notable wildlife, and consequently, further ecological surveys are not required. Potential impacts arising from redevelopment can be readily mitigated.

2 INTRODUCTION AND OBJECTIVES

2.1 Introduction

This report has been prepared by Green Environmental Consultants Ltd and relates to a demolition of an existing dwelling and replacement, at Ridgeway Farm, Sedge Way, Witchford, Ely CB6 2HZ (the 'Site'). The Site is centred on Ordnance Survey national grid reference TL 4986 8014.

The report has been prepared on behalf of Mr M Thompson.

The Site comprised a small area of 0.15 hectares within the farmyard, and the area included an existing brick dwelling house and outbuilding with a garden and hardstanding linked to the nearby Sedge Way. The application proposals are to demolish the dwelling and build a replacement dwelling.

The report comprises the results of a Preliminary Ecological Appraisal (PEA) and a Preliminary Bat Roost Assessment (PBRA) to establish existing ecological value and ascertain potential impacts. The appraisal also assesses the constraints to development that may arise from ecological issues; the identification of protected species is vital if the proposed development is to comply with existing legislation. It also allows any work that may otherwise be detrimental to protected and biodiversity species to be appropriately scheduled.

While surveys evaluated the whole of the farmyard to determine potential impacts on protected species, the report concentrates on the redline boundary shown in the Appendix.

The surveys were conducted by Andrew Palmer BSc (Hons), DipLA, MCIEEM, an experienced and licensed ecological surveyor. The reporting process and evaluation have been overseen by Jacqui Green BSc(Hons), MSc, CEcol, FCIEEM.

2.2 Objectives

The objectives of the survey are:

- to undertake a Preliminary Ecological Appraisal (PEA);
- to undertake a scoping for protected or biodiversity species including bats in the form of a Preliminary Bat Roost Assessment (PBRA);
- to recommend follow-on species surveys if identified as being needed;
- to make recommendations to mitigate potential negative impacts arising from development proposals; and
- to make recommendations to enhance on-site habitats and wildlife opportunities resulting in an overall biodiversity net gain where possible at this stage.

3 EVALUATION CRITERIA

3.1 Baseline Ecological Conditions

The ecological baseline was established through a desk study and site survey as outlined in chapter 4. The results were evaluated against a hierarchy of protection ranging from the highest level (internationally protected) to no statutory protection but which receive consideration under planning legislation. These factors have been assessed against ecological evaluation criteria developed by the Chartered Institute of Ecology and Environmental Management.

3.2 Legislation

3.2.1 European Protected Species (EPS) (great crested newts, bats, otters, dormice and others)

The information below is intended only as guidance to the legislation relating to these species. The Acts themselves should be referred to for the correct legal wording:

European Protected Species are protected under the EC Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (the Habitats and Species Directive). This legislation is enacted under the Conservation of Habitats & Species Regulations 2017 (the 2017 Regulations). Works which involve impacts on EPS are likely to require a Natural England licence.

> In England, Scotland and Wales all bat species are also protected under the Wildlife and Countryside Act (WCA) 1981 (as amended) through inclusion in Schedule 5. The offences under this Act, which cover the obstruction of places used for shelter or protection, disturbance and sale still apply to European Protected Species.

> In England and Wales, the WCA is amended by the Countryside Rights of Way Act 2000 (CRoW), which adds an extra offence ('or recklessly') to S9(4)(a) and (b)), makes species offences arrestable, increases the time limits for some prosecutions and increases penalties.

Broadly it is an offence to:

< Intentionally or recklessly/deliberately injure, take or kill a bat or other EPS.

< To possess a bat (unless obtained legally) alive or dead.

< Intentionally or recklessly/deliberately damage, destroy or obstruct access to any place that bats or other EPS use for shelter or protection, whether bats are present or not.

< Intentionally or recklessly/deliberately disturb a bat (or other EPS) while it is occupying a structure or place that it uses for shelter or protection.

< Deliberately disturb bats or other EPS in such a way as to be likely to affect significantly:

(i) the ability of any significant group to survive, breed, or rear or nurture their young

(ii) the local distribution or abundance of that species.

Prosecution could result in imprisonment, fines of £5,000 per animal affected and confiscation of vehicles and equipment used.

A European Protected Species Licence is required before the commencement of any development that might impact on bats and their roosts, or other EPS.

Exemptions can be granted from the protection afforded to bats under the Habitat Regulations, by means of an EPS (European Protected Species) Habitats Regulations licence obtained from Natural England (NE). An EPS licence could be required for (relevant examples):

- Demolition of a building known to be used by bats prior to the development of a site.
- When removing trees in which bats roost, as well as tree pruning.
- When undertaking significant alterations to roof voids used by bats.

There are three tests which must be satisfied before a licence can be issued to permit otherwise prohibited acts, in this case only Regulation 53(2)(e) is relevant, namely, for the purpose of preserving public health or safety, or other imperative reasons of overriding public interest. This

includes those of a social or economic nature and with beneficial consequences of primary importance to the environment.

This is subject to Natural England's satisfaction that the application additionally meets:

- Regulation 53(9)(a) that there is no satisfactory alternative.
- Regulation 53(3)(b) that the action authorised will not be detrimental to the maintenance of the species concerned at favourable conservation status in their natural range.

As a result of a High Court ruling local authorities must consider all applications where European Protected Species are likely to be affected and a European Protected Species licence required, by considering the 3 tests applicable to the Habitats Directive.

3.2.2 Wildlife & Countryside Act Protected Species (water voles, barn owls, reptiles etc)

A number of species receive protection at a national level, usually against injury and killing, but may also include destruction of a resting place, collection and sale (the latter may also apply to selected named plants). The more common species of reptile have partial protection and are also Species of Principal Importance (SPI).

3.2.3 Other Species Legislation

Certain species are protected under other legislation eg the Protection of [redacted]

3.2.4 Biodiversity Species and Habitats

A number of species and habitats which do not merit national protection are nevertheless threatened or endangered at a more localised scale, usually at a county level, or have been discovered to have undergone a rapid decline. These are listed on the UK Species/Habitats of Principal Importance (S41) list (see under '*The England Biodiversity List*' in section 2.3), or county (Local) Biodiversity Action Plans (BAPs) and would be considered to be part of the National Planning Policy Framework lower tier.

3.2.5 Birds - General

All nesting birds are protected under Section 1(1)(b) of the Wildlife and Countryside Act (1981) (*ibid*). It is an offence to:

> *... intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; or take or destroy an egg of any wild bird.*

As a consequence no scrub or tree clearance or management should be undertaken during the nesting season, unless works to make the habitats unsuitable are first undertaken, or a detailed examination before clearance starts declares the area free. The nesting season is generally taken to be between mid-March and July, but warm seasons may extend this period.

3.3 Obligations Under Planning Legislation

3.3.1 General

The National Planning Policy Framework (NPPF) (OGL 2021) sets out the Government's planning policies for England and how these are expected to be applied. The NPPF Paragraph 180 says that:

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

- *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;*
- *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*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.'*

The Natural Environment and Rural Communities Act (OPSI 2006) (section 40(1)) states that:

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

3.3.2 Species/Habitats of Principal Importance and Biodiversity

To aid assessment and evaluation of impacts on biodiversity, a list of Species and Habitats of Principal Importance (SPI & HPI) has been produced. Natural England has produced standing advice (*Purpose and use of the England Biodiversity List*) regarding SPI as follows:

The England Biodiversity List has been developed to meet the requirements of Section 41 of the Natural Environment and Rural Communities Act (2006). This legislation requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. The S41 list will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006 "to have regard" to the conservation of biodiversity in England, when carrying out their normal functions.

3.4 Ecological Evaluation

It is important to put records and results into context using criteria such as designation, rarity, vulnerability, threat, location in a linkage of sites or features, importance at a given scale (eg national, local, parish) etc.

The Chartered Institute of Ecology and Environmental Management has developed evaluation guidelines. These guidelines acknowledge that ecological evaluation is a complex and subjective process but provides key considerations to take into account when applying professional judgement to assign values to ecological features and resources. These include consideration of geographic frame of reference; legal protection, site designations and features; biodiversity value; large populations or important assemblages of species; potential value, secondary or supporting value; social/community value and economic value. These evaluation criteria, based on those developed by the Chartered Institute of Ecology and Environmental Management, are given below:

Table 3.1 Ecological Valuation Levels

Level of Importance	Value	Comment
International	Very High	Sites, habitats or species protected under international legislation eg. The Habitats and Species Directive. These include, amongst others: Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, Biosphere Reserves, plus undesignated sites supporting populations of internationally important species.
National	Very High/ High	Sites, habitats or species protected under national legislation e.g. Wildlife & Countryside Act 1981 and amendments. Sites include Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNRs), Marine Reserves, plus areas supporting significant areas of UK Habitats of Principal Importance, or breeding populations of rare (Red Data Book) species.
Regional	Medium	Sites, habitats or species which may have regional importance, but which are not protected under legislation (although Local Plans may specifically identify them) e.g. viable areas or populations of Regional Biodiversity Action Plan habitats or species; regionally important invertebrate assemblages etc.
County	Medium	Sites, habitats or species meeting the criteria for Local (County, Metropolitan or Unitary Authority area) designation e.g. Local Wildlife Site. This category includes designated Local Nature Reserves, which have statutory protection. Sites containing viable areas or populations of Species of Principal Importance (SPIs) or County Biodiversity Action Plan habitats or species, local Red Data Book species etc.
Local or Parish	Low	Undesignated sites or features, which enhance or enrich the wildlife resource at a Parish or neighbourhood level.
Zone of influence	Very Low	Includes nil or low ecological value but which form a function within the site or immediate surroundings.

4 METHODS

4.1 Desk Study

A desk study was undertaken to gather existing ecological records in relation to the site and the surrounding area, in order to provide ecological context for the site and to inform an assessment of the potential ecological constraints to development.

A 2 km radius ecological records search was undertaken from the Cambridgeshire and Peterborough Environmental Records Centre (CPERC) in February 2022.

MAGIC (Multi-Agency Geographic Information for the Countryside) was also searched in December 2020. Current Ordnance Survey maps and aerial photographs were used to identify the presence of features up to 500 m from the site which might be used by protected or notable species.

4.2 Habitat Survey

4.2.1 Survey Date and Surveyor Details

The surveys were undertaken on 21 February 2022 by Andrew Palmer BSc (Hons), DipLA, MCIEEM, an experienced ecologist and landscape architect holding a Level 2 Bat, and Level 1 Great Crested Newt Survey Licences (Class Licence Registration Numbers: 2015-12285, and 2017-32763 respectively).

4.2.2 Methodology

A basic vegetation assessment was conducted, broadly following the 'Preliminary Ecological Appraisal' methodology set out in the 'Guidelines for Preliminary Ecological Appraisal' (Chartered Institute of Ecology and Environmental Management [CIEEM], 2012). A detailed characterisation of the habitats present in accordance with the UK Habitat Classification (UKHab - https://ukhab.org/) has been made. For the purposes of the PEA, summary descriptions of plant assemblages and habitats are provided that form the basis of the UKHab classification.

4.2.3 Survey Limitations

The survey adhered to good practice and did not encounter significant constraints or limitations.

4.3 Scoping for Protected & Biodiversity Species

The Site was inspected for evidence of and its potential to support protected or notable species, especially those listed under The Conservation of Habitats and Species Regulations 2017, the Wildlife & Countryside Act 1981 (as amended), including those given extra protection under the Natural Environment and Rural Communities (NERC) Act 2006 and Countryside & Rights of Way (CRoW) Act 2000, and those on the S41 list. The Site was also searched for evidence of Invasive Non-native Species (INNS) as listed on Schedule 9 of the Wildlife and Countryside Act.

4.4 Preliminary Bat Roost Assessment (PBRA)

4.4.1 General

Buildings and trees on Site were evaluated for their bat roost potential according to standard survey guidelines outlined in the BCT Good Practice Guidelines (Collins 2016), hereafter referred to as the BSG (Bat Survey Guidelines), as shown in Table 4.1. The purpose of thorough examinations is to provide a basis for recommendations for further bat surveys if required; evaluate the likely ecological impacts of potential works on roosts and habitat utilisation; and recommend mitigation or compensation measures that may be required, as well as habitat enhancements.

Table 4.1: Assessment of Bat Roosting Potential in Buildings and Trees (adapted Collins, 2016).

Suitability	Assessment of Features Present That Potentially Support Roosting Bats
Negligible	Negligible habitat features on site and unlikely to be used by roosting bats.
Low	A small number of potential roosting sites present, with features most likely to be used by a *low number* of bats on a *transient basis* (i.e. not regularly, nor for breeding or hibernation roosts).
Moderate	Several potential roosting sites present, with features that are *unlikely* to support maternity or hibernation roosts.
High	Potential roosting sites, with features conducive to the establishment of roosts of high conservation value, e.g. larger number of bats, regular roosting, occupancy for longer periods, maternity and or hibernation roosts.

4.4.2 Buildings Inspections

An inspection of the buildings was conducted both internally and externally. Features were examined through binoculars and with a high-powered spotlight. External crevices were examined to identify if internal connectivity was present.

Internal spaces were checked for:

< bats and evidence of bats, e.g., live or dead bats, audible squeaking, droppings on the floor, walls, furniture and in cobwebs, urine marks on hard surfaces, feeding signs, etc.); and

< suitability for roosting, including potential roost locations, access points, light levels, draughts, etc.

External inspections also searched for:

< bats and evidence of bats, e.g., live bats in crevices, droppings and urine marks on walls and windows, etc.; and

< suitability for roosting, including potential access into the fabric of the building, particularly at eaves, soffits, under flashing and roof and ridge tiles, etc.

4.4.3 Tree Roost Inspections

All trees on Site were inspection from ground level using binoculars and a powerful spot-light. Concerning potential for roosting bats, attention was paid to the nature of holes and other cavity and crevice features and broadly referred to features described in the 'Bat Tree Habitat Key (3rd Edn.)', (Andrews 2016).

The following potential roost features (PRFs) may indicate the presence of a bat roost in a tree: Woodpecker and rot holes; knot holes arising from naturally shed branches, or branches previously pruned back to the branch collar or cavities created by branches tearing out from parent stems; splits and cracks such as hazard beams and frost-cracks in stems or branches; partially detached platey bark; partially detached ivy with stem diameters above 50mm; and bat, bird or dormouse boxes.

4.4.4 Habitat Evaluation Criteria

A broad assessment of surrounding habitats for suitability in supporting bat foraging and commuting activity was undertaken regarding the BCT Guidelines (summarised in Table 4.2).

Table 4.2: Assessment of Bat Activity Suitability (Commuting and Foraging) in Surrounding Habitat - adapted from Collins (2016).

Suitability	Assessment of Features Present That Potentially Support Roosting Bats
Negligible	Negligible habitat features on site are likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of bats such as a 'gappy' hedgerow, small patch of scrub, or isolated tree.
Moderate	Continuous habitat connected to the broader countryside such as tree-lines or linked back gardens, scrub, and grassland.
High	Continuous, high-quality habitat well connected to the broader landscape such as woodland, tree-lined watercourses, grazed parkland, river valleys, woodland edge.

4.4.5 Survey Limitations

There were no significant limitations experienced during the surveys and no departure from standard survey guidelines.

4.4.6 Survey Date and Surveyor Details

The surveys were undertaken on 21 February 2022 by Andrew Palmer BSc (Hons), DipLA, MCIEEM, an experienced ecologist and landscape architect holding a Level 2 Bat, and Level 1 Great Crested Newt Survey Licences (Class Licence Registration Numbers: 2015-12285, and 2017-32763 respectively).

5 RESULTS

5.1 Desk Study

5.1.1 Sites

There were no statutory or non-statutory sites within 2 km. The Site lies within 5km of an internationally designated site, the Ouse Washes Ramsar/Special Protection Area and within impact zones surrounding the SPA. However, the development is below the threshold to trigger a further assessment.

There were no anticipated impacts on protected sites, and no further consideration is required.

5.1.2 Protected Species Records

5.1.2.1 *European Protected Species*

Records of protected species can be confidential for a number of reasons. To safeguard this information the list is not included in full in this report; information which might be relevant to this Site is itemised below.

Amphibians: There were no records of great crested newt Triturus cristatus. There had been no Class Survey Licence Returns within 2 km.

Bats: There were 17 records of three species of regularly occurring Cambridgeshire bat species that were returned, including common pipistrelle *Pipistrellus pipistrellus* (9 records), noctule *Nyctalus noctula* (3), and brown long-eared *Plecotus auritus* (3). The remaining two records were not specific.

There were no European Protected Species applications for bats that were granted within 2 km.

Other mammals – None of significance to the Site.

5.1.2.2 *UK Protected Species*

Mammals - [redacted]

Reptiles – Data includes nine grass snake *Natrix helvetica* and two slow-worm *Anguis fragilis* records, all of which occurred in Witchford.

Birds – Over 100 records were returned, although few were relevant to the site (i.e., species requiring different habitats or winter visitors only).

Invertebrates – Small number of records, but none were relevant.

5.1.4 Species/Habitats of Principal Importance and other Biodiversity Issues

None of these was specifically relevant to the site or development proposals.

5.1.5 Invasive Non-native Species (INNS) listed on Schedule 9 of the WCA

No records of INNS species of plant and animal records were provided.

The absence of records does not mean that a particular species or habitat is not present, but may reflect a lack of recording effort in a given location.

5.2 Habitat Survey

5.2.1 The Site

No notable or rare habitats or species were recorded.

There were no vegetated habitats within the redline boundary (appendix) as it was entirely comprised of hard standings, bare earth or built structures.

5.2.2 Adjacent Habitats

The entrance to the Site corresponds to an existing entrance but is bounded on both sides by short hedgerows comprising a mix of native and non-native shrubs including Cherry Laurel *Prunus laurocerasus*, Firethorn *Pyracantha* sp., Blackthorn *Prunus spinosa*, Bramble *Rubus fruticosus* agg., and a semi-mature Silver Birch *Betula pendula*.

5.3 Scoping for Protected and Biodiversity Species

- The presence of buildings and trees indicated the potential for bats, and a roost assessment survey was conducted where practical.
- Great crested newts - This species was excluded from the assessment on account of the lack of suitable terrestrial habitat. Nevertheless, potentially suitable breeding ponds lie just beyond a 250 m radius of the Site. Consequently, Reasonable Avoidance Measures have been included within the recommendations to ensure any potential impacts on great crested newts are avoided.
- Reptiles – Grass snake and slow-worm were excluded from the assessment on account of lack of suitable habitats.
- [redacted]
- Birds - Common nesting bird species were present in the surrounding area. While further surveys are not required, mitigation to reduce impacts on nesting birds has been recommended.
- Invasive species - Habitats were suitable, although none were seen.

Other species - No other Section 41 Priority or rare species are expected to be impacted by the proposed development.

5.4 Preliminary Bat Roost Assessment

5.4.1 Building Inspections

Details of Buildings Surveyed and roost evidence/suitability are provided in Table 5.1. A Plan and Photographs of the building surveyed are shown in the Appendix.

Table 5.1: Results from Preliminary Bat Survey of Buildings

Barn no. Type/Description	Bat Evidence and Roost Suitability	Further Survey?
Dwelling: Cavity brick walls, slate roof with timber soffits. Single loft with bitumen underfelt and floor insulation.	No evidence of bat roost activity. Negligible suitability as internal or external features not capable of supporting bats. No evidence of birds nesting.	None
Outbuilding: Solid brick walls with unlined slate roof in poor condition. Partially open, partially panels, partially glazed lean-to between dwelling and outbuildings.	No evidence of bat roost activity. Negligible suitability as internal or external features not capable of supporting bats. No evidence of birds nesting.	None

5.4.2 Tree Roost Potential

None of the trees adjacent to the Site held any discernible bat roost potential, and no further surveys would be required.

5.4.3 Habitat Assessment

As only isolated vegetation remained, the habitats were assessed as holding low suitability for bat activity. No further surveys would be required to quantify activity levels as these are unlikely to be significant.

5.4.4 Birds and Other Species

While no evidence of nesting was recorded, it is assumed that a small number of nests may be present in vegetation adjacent to the Site entrance. Consequently, avoidance of disturbance to nesting birds will be a requirement with respect to mitigation and programming.

No direct evidence of other protected or notable species were recorded, [redacted] and Hedgehog.

No evidence of invasive non-native species (INNS) was found.

6 DISCUSSION & ANALYSIS OF RESULTS

6.1 Discussion

6.1.1 Desk Study

No sites of ecological value will be impacted by the proposed redevelopment. The desk study did not identify any protected or notable species that will be adversely impacted. With adequate mitigation, potential impacts from redevelopment such as those arising from lighting will have negligible impact on the surrounding landscape.

6.1.2 Bats

No evidence of bat roosting activity was recorded, and the building and nearby structures and trees were categorised as negligible holding suitability. Bat roosts are not at risk. The boundary habitats were considered to offer only low suitability for foraging and commuting. Redevelopment offers the capacity for modest enhancements to roost opportunities but limited opportunities to improve foraging resources.

6.1.3 Birds and Other Species

Common bird species are likely to nest within the Site. Consequently, risk avoidance measures will be required to ensure nesting birds are not disturbed. There was no evidence of utilisation by other protected or notable species.

6.2 Evaluation

Table 6.1 Ecological Valuation for this Site

Level of Value	Value	Comment
International	Very High	None
National	Very High/ High	None.
County	Medium	None.
Regional	Medium	None.
Local	Low	None.
Zone of Influence	Very Low	Common bird species will utilise the site for foraging and nesting.

The Site was evaluated within the Zone of Influence level i.e., it includes nil or very low ecological value, although the immediate surrounding areas and habitats may be affected by the proposed project and associated activities. Influence may arise from additional unmitigated or extraneous lighting and disturbance to vegetation during construction. However, in the context of the setting, potential unique or cumulative impacts on adjacent habitats are likely to be negligible once mitigated.

7 RECOMMENDATIONS

7.1 Further Surveys

No further ecological surveys are required on account of an absence of protected and notable species and habitats, and negligible suitability to sustain significant species.

7.2 Mitigation

7.2.1 General

Mitigation will include construction and clearance risk avoidance measures, wildlife-friendly construction phase working practices and control of nocturnal illumination.

7.2.2 Precautionary Working Methodology (Construction Phase Operations)

A copy of this report should be retained on Site during the course of the clearance, demolition and construction work. All Site operatives should be made aware of its contents where it is relevant to the tasks they are undertaking.

All species of bird are offered protection under the Wildlife and Countryside Act 1981 (as amended) when nesting or preparing nests (typically, but not exclusively between March and August inclusive). As such, removal of vegetation should be carried out outside of the breeding bird season (so, between September and February inclusive) to avoid disturbing or destroying active nests. Should this time frame be unfeasible, it is recommended that prior to the commencement of works, a nesting bird check is carried out by a suitably qualified ecologist (SQE), although checks at all times of year are recommended. If active nests are observed, vegetation will need to be left alone until the ecologist is satisfied that the young have successfully fledged.

Should protected species be found during site clearance, demolition or construction, work will stop, and an appropriately licensed ecologist will be contacted immediately for advice. Protected species should not be handled unless they are an immediate and unavoidable danger*. If this arises, then the ecologist should be contacted immediately, and the animal secured in a secure ventilated container and stored in a shady location prior to release by the ecologist. [*Bats should only ever be handled with gloves, taking care not to injure the animal but also avoid being bitten –seek emergency medical attention if bitten by a bat no matter how trivial the wound].

The following recommendations should be followed in specific situations where a risk to wildlife is likely to arise:

Prior to the commencement of work each day, a brief site walkover will be undertaken by construction personnel to ensure no protected species have entered the construction site overnight, particularly any excavations.

During the clearance of debris and timber and rubble piles, care should be taken by checking these before moving to ensure that wildlife is not seeking refuge. It is advisable that only building products to be used on the day are brought and stored on the site. If building products need to be stored on-site (e.g., overnight or for a few days), these products will be stored on palettes or retained in bags on palettes to ensure that refuges are not created that will attract wildlife. Where possible, building products should be placed on hard standings.

All excavations created during construction (e.g., for foundations or services) should be filled in and finished on the same day so as not to leave any traps into which animals might fall. If this is unavoidable, then an escape route is provided overnight from the hole, which can be in the form of a wooden plank cut into the bank to provide a ramp; or the hole is entirely covered by a heavy sheet or slab flush to the surrounding ground and without holes at the sides so to exclude amphibians from crawling beneath. If in doubt, the soil should be piled over the side of the slab to seal the edges.

Any spoil resulting from any excavations should be removed from the construction area on the same day and will be taken off-site or placed on hard standing or on palettes to be removed later. This will deter small animals from hiding within materials.

Security and work floodlighting should only be used where necessary to avoid any potential detrimental impacts during construction on commuting bats. These lights should not continually illuminate boundary vegetation during hours of darkness. The principles outlined above and set out in the Institute of Lighting Professional's Guidance Note should also be applied to construction phase lighting.

7.2.3 New Lighting

To ensure detrimental lighting impacts on bats using the Site are avoided, there should be limited increased light spillage on to the surrounding boundary habitats and any roost spaces provided. Lighting should be restricted to the lowest level of illumination required for safety and security and only where needed. The following measures should be implemented within the lighting scheme:

- New column-mounted luminaires, lighting bollards and wall-mounted luminaires should be selected, sited and angled such that they do not spill unnecessary light on to areas where illumination is not required so that there is no significant increased light trespass on to existing nocturnally dark habitats where bats forage and commute.
- Ensure new LED luminaires have dimming capability, a warm white spectrum (ideally less than 2700, but below 3500 Kelvin) with peak wavelengths higher than 550 nm and with no UV output.
- Where security lamps are used these should use a trigger to illuminate them (e.g. passive infra-red detector) and switch off after a short period (ideally 1 minute), rather than remaining on all night and generally lights should be switched off when not required;

Further guidance is available in Bats and artificial lighting in the UK (ILP 2018). Wherever possible guidance should be provided to new residents to ensure that they understand the reasons for protecting on-site ecology and carefully consider post-completion lighting additions.

7.3 Enhancements

Ecological enhancements should include a new bat roosting feature integrated into the brick wall. A suitable location for a roost box is shown in Figure 1546/2/1, on the southern elevation. The box should be fixed next to the chimney stack. Security lights should not be installed such that they shine on this elevation. Potentially suitable boxes can be viewed, for example, at NHBS.com (https://bit.ly/2QpWrDU)

or Wildcare at https://www.wildcare.co.uk/wildlife-nest-boxes/bat-boxes.html.

A House Martin nest cup should be fitted beneath the gable apex on the northern elevation, as shown in Figure 1546/2/1. A suitable nest cup can be viewed, for example, (https://bit.ly/3abHHpq).

Figure 1546/2/1 over page.

Figure 1546/2/1: Bat Roost Box and House Martin Cup Recommended locations.

8 CONCLUSIONS

The Site held no evidence of and negligible suitability for protected and notable species. No further ecological surveys will be required prior to planning consent determination.

Redevelopment offers scope for modest biodiversity enhancement.

9 BIBLIOGRAPHY

Andrews, H (2018). Bat Roosts in Trees (Bat Tree Habitat Key). Pelagic Publishing, Exeter.

Anon, (1981). *Wildlife and Countryside Act.* HMSO London.

Anon (1992). *Protection of Badgers Act.* HMSO London.

BSI 2013. *BS42020:2013 Code of Practice for Planning and Development*.

Butcher B, Carey P, Edmonds R, Norton L, and Treweek J 2020. *The UK Habitat Classification User Manual version 1.1.* www.ukhab.org.

Butcher *et al* 2020. UK Habitat Classification - Habitat Definitions version 1.1 and UK Habitat Notes and Key. www.ukhab.org.

CIEEM (2017). Guidelines on Preliminary Ecological Appraisals. Technical Document. www.cieem.net

Collins, R. (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines (3rd Edition)*. Bat Conservation Trust, London.

DEFRA (2017). *The Conservation of Habitats and Species Regulations 2017*. Statutory Instrument no. 1012. (SI 2017/1012) Department for Environment, Food & Rural Affairs, TSO, London.

Gunnell K, Murphy B. & Williams C. (2013). *Designing for Biodiversity: A Technical Guide for New and Existing Buildings (2nd edition)*. RIBA, London.

Institution of Lighting Professionals (2018). *Bats and artificial lighting in the UK*. Guidance Note 08/18.

OGL (2021). National Planning Policy Framework (NPPF) 2021.

OPSI 2006. *Natural Environment and Rural Communities Act 2006*. TSO, London.

Stace, C. (2019). *New Flora of the British Isles*. 4th Edition. C&M Floristics.

APPENDIX

Figure 1546/2/1 Survey Plan

Photographs

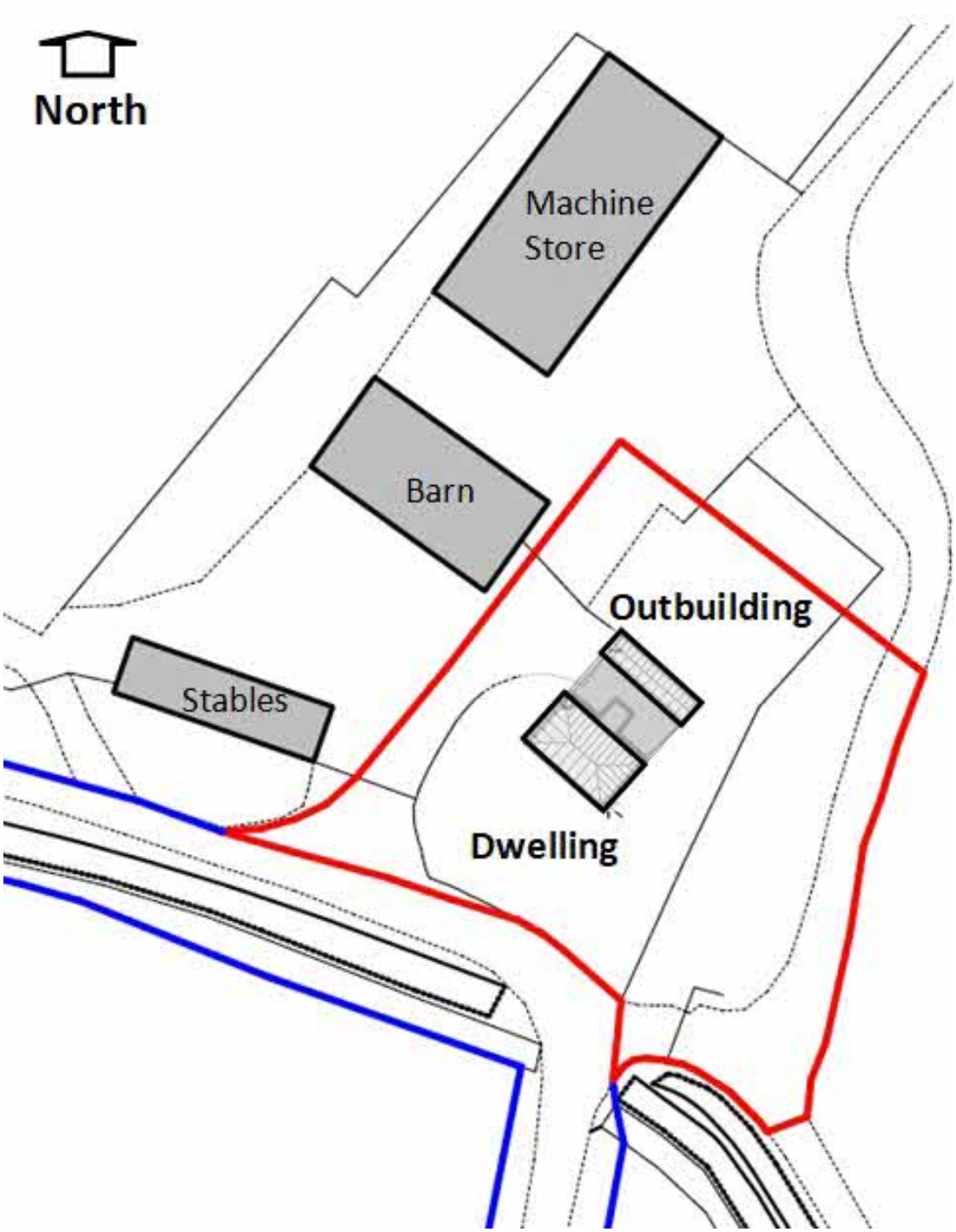

Figure 1546/2/2 Survey Plan

The proposal boundary is shown as a red line - Not to scale.

Photograph Group 1: (top left) External view of dwelling south-west elevation; (top right) south-west and north-west elevations; (lower left) Dwelling and outbuilding viewed from the north; (lower right) view from the south looking at eastern flank.

Photograph Group 2: (top left) Dwelling loft; (top right) Out-building from the north-east; (lower left) The outbuilding from dwelling; (lower right) Roof space of the outbuilding.