URBAN EDGE ENVIRONMENTAL CONSULTING

NATURAL PROGRESSION

Land at An Teachin, Hawley Road, Sutton at Hone, Dartford, Kent

Preliminary Roost Assessment

August 2021

URBAN EDGE ENVIRONMENTAL CONSULTING

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CIEEM REGISTERED PRACTICE 2020-2021

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Abbreviations

BCT	Bat Conservation Trust
CHS	Conservation of Habitats and Species Regulations 2017 (as amended)
EPS	European Protected Species
KMBRC	Kent and Medway Biological Records Centre
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographic Information for the Countryside
NE	Natural England
NERC	Natural Environment and Rural Communities (Act 2006)
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
PRA	Preliminary Roost Assessment
PRF	Potential roost feature
SAC	Special Area of Conservation
SSSI	Site of Special Scientific Interest
TN	Target Note
WCA	Wildlife and Countryside Act 1981 (as amended)

0 Executive Summary

0.1.1 A Preliminary Roost Assessment (PRA) was carried out in July 2021 for the site of a proposed residential renovation at An Teachin, Hawley Road, Sutton at Hone, Dartford (Grid Reference: 555282, 171658). The assessment was undertaken to determine the suitability of the building for, and record any evidence of use by, roosting bats.

0.1.2 A data search returned 307 records of 11 species of bat from within 5km of the survey area, during a date range of 1983 to 2020. Most of these records were of bats in flight but three roost sites within 1km of the site were returned, the closest to the survey area being a maternity roost located c.450m north-east. A search of the MAGIC database for granted EPS mitigation licenses for bats within a 2km radius found two licenced sites. There are 27 SSSI and no SAC within 10km of the survey area. Bat populations do not feature among the notified features of any of these sites and these sites will not be affected by the proposals.

0.1.3 The site is located within an area of good quality habitat for foraging bats sited near to open countryside comprising mixed farmland. There is a low density of residential development within the nearby wider area and therefore low levels of artificial lighting. The area supports a number of dark tree corridors, woodlands and a network of mature hedgerows.

0.1.4 The building on site was a single storey brick and flint-built farm building. The roof was clad with clay tiles, some of which had broken but most were intact and tightly fitting. There were some gaps in the exterior brickwork that lead into cavities. The north face of the building was covered with mature ivy *Hedera helix*. The interior walls were clad with plasterboard which had been broken by the horses, forming access into cavities. There was an old chimney that lead into a dark cavity. The roof was lined with bitumen felt which was in good condition and had minimal gaps, providing a dark cavity between the tiles and liner. No bats or evidence of bats was found.

0.1.5 Overall the building is considered to offer a low suitability for roosting bats, with a range of external and internal features that could provide the preferred roosting conditions for pipistrelle species. The proposed renovation of B1 could result in killing, injury or disturbance to bats, or damage, destruction or obstruction of a bat roost.

0.1.6 As building B1 offers low potential for roosting bats; presence absence surveys are required. Presence / likely absence surveys should follow current guidelines (Collins, 2016), comprising dusk emergence and/or dawn re-entry surveys, and can be carried out between May and August. Surveys should begin at least quarter of an hour before dusk and continue for up to 2 hours after sunset, or begin 1.5 to 2 hours before dawn and continue until at least 15mins after sunrise. The level of survey effort required for low potential buildings is one survey visit in total, consisting of one dusk emergence or one dawn re-entry survey

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1 Introduction

1.1 Background

1.1.1 A Preliminary Roost Assessment (PRA) was carried out in July 2021 for the site of a proposed residential renovation and extension at An Teachin, Hawley Road, Sutton at Hone, Dartford (Grid Reference: 555282, 171658). The assessment was undertaken to determine the suitability of the building for, and record any evidence of use by, roosting bats.

1.2 Objectives and Approach of the Study

1.2.1 The study was commissioned to fulfil the following objectives:

- Record the presence of actual or potential bat roosts which may be affected by works on the site, their access points and position in the structure;
- Establish the baseline assemblage and relative abundance of bat species using the site, to the extent possible from the evidence available at the time of survey;
- Identify and evaluate the types of roost present and assess the potential impacts of the proposal on bats; and,
- Make recommendations for additional surveys, if required.

1.2.2 To meet these objectives the survey approach involved:

- A desk study involving a review of bat records from the local area (5km radius from the centre of the proposed development site) and designated site citations;
- A Preliminary Roost Assessment of structures and trees, including internal/external inspection to assess their suitability for roosting bats;

1.3 Survey Area

1.3.1 The site lies to the south of the town of Dartford in the Borough of Dartford in Kent. The site is c.370m^2 of previously developed land comprising grassland, scattered trees and buildings. The survey area is bounded to the north and east by semi-improved grassland pasture, to the south by further residential development and the M25, and to the west by further pasture and the village of Hawley. The extent of the survey area is outlined in red on Figure 1.1.

1.3.2 The wider landscape is characterised by a patchwork of arable and pasture farmland with tributaries of the River Darent, sparse residential development, hedgerows and lines of mature trees. The sprawling urban development of Dartford lies to the north.

1.4 Proposed Construction Activities

1.4.1 Planning consent is being sought for renovation of the existing buildings and the construction an extension. Figure 1.2 illustrates the proposed site layout.

An Teachin
Hawley road
Dartford

Survey area

Figure 1.1: Survey area

0 140 280

Meters

N

Scale: 1:5,000 **Created by:** AD

Date: Jul 2021 **Reviewed by:** NP

Drawing number:
UE0462ECO-Site_210720

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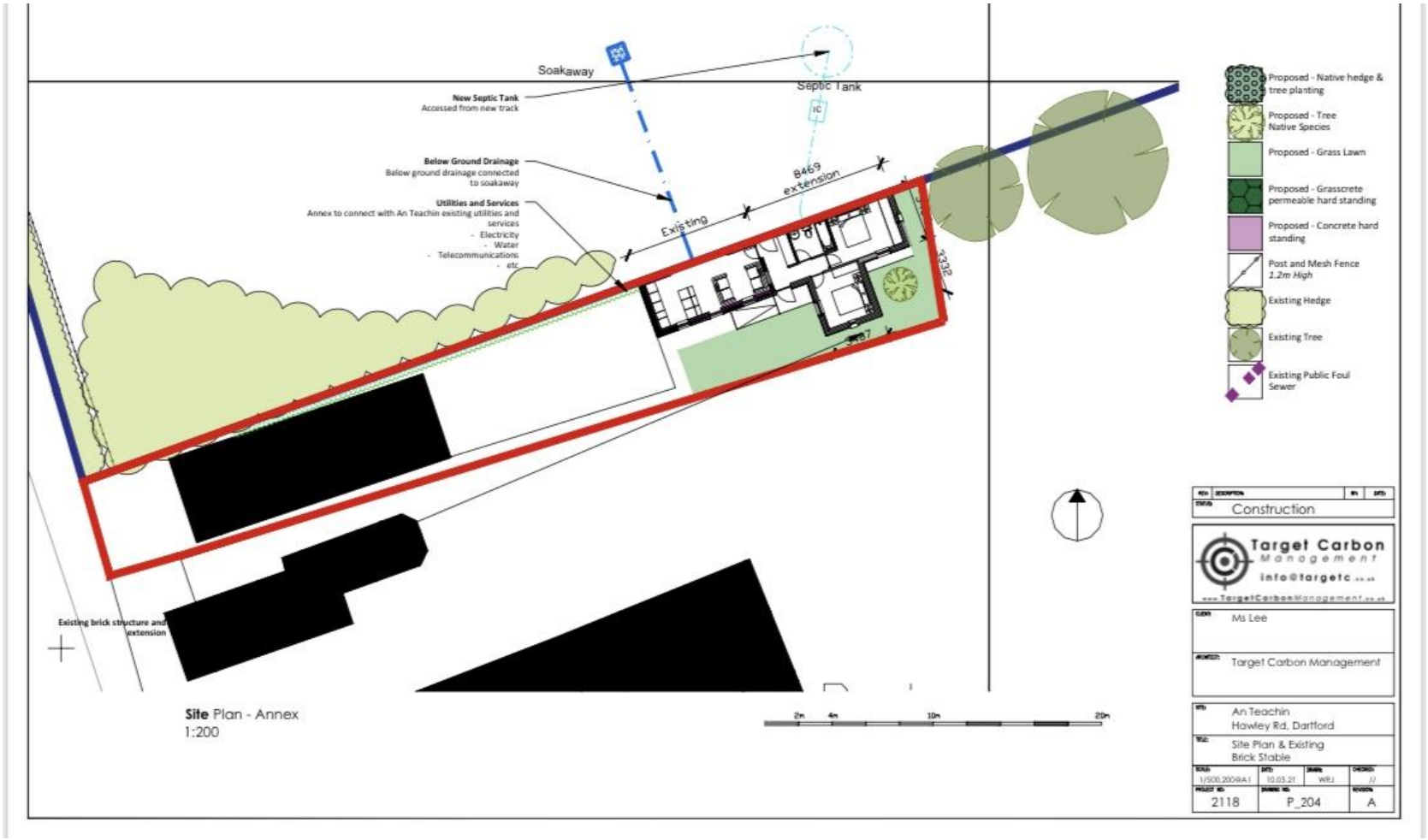

Figure 1.2: Proposed site layout

2 Bat Distribution, Ecology and Status

2.1 Distribution

2.1.1 There are eighteen native species of bats found in the UK. These range from relatively common and widespread species such as common pipistrelle *Pipistrellus pipistrellus* and brown long eared bat *Plecotus auritus* to the rare species such as Bechstein's bat *Myotis bechsteinii* and barbastelle bat *Barbastella barbastellus.*

2.1.2 Both common pipistrelle and brown long eared bats can be found throughout the UK. However, many other bat species have a much more limited distribution. The greater horseshoe bat *Rhinolophus ferrumequinum* is confined to south-west England and southern Wales and Bechstein's bat is located exclusively in the south of England. However it should be noted that there may still be areas of the country where bats are under recorded, and hence the distribution of species is not fully understood.

2.2 Ecology

2.2.1 The habitat preferences of different bat species are diverse, with some species being specialists and others more generalist. For instance Bechstein's bat typically forages and hibernates in mature woodland whereas Daubenton's bat *Myotis daubentonii* tends to hunt prey close to water. Pipistrelle bats on the other hand can be found foraging in almost any habitat and will roost in a variety of habitats ranging from hanging tiles on new buildings to beneath loose bark on trees.

2.2.2 Bat activity is highly seasonal and weather dependent. Generally they enter torpor when the temperature becomes unfavourable, usually from October to March, although bats may still emerge to feed on warmer nights. However, during the active period their behaviour is affected by weather conditions and breeding activity. Typically they are active in warm dry weather and are less active during heavy rain, high winds or in temperatures much below 10°C at dusk.

2.2.3 Mating occurs prior to hibernation with the young being born the following year around April and May. Female bats congregate in maternity roosts often numbering several hundred individuals and will give birth around June or July. Once the young are weaned the females will leave the roost to find mates prior to hibernation.

2.3 Status, Legislation and Policy

2.3.1 In the UK, the general trend is that bat populations have declined over the last century. In an attempt to halt this decline, all species of bat receive the greatest protection afforded by both European and UK wildlife legislation.

2.3.2 National legislation (Wildlife and Countryside Act 1981 (as amended)) gives full protection to the species and their habitats and this is further strengthened by European-derived legislation (Conservation of Habitats and Species Regulations 2017 (as amended)) which provides protection from disturbance and disturbing activities. Under this legislation it is an offence to:

- Intentionally kill, injure or capture/take a bat.
- Intentionally or recklessly damage, destroy, or obstruct access to any structure or place of shelter or protection. This is taken to mean all bat roosts whether or not bats are present.
- Intentionally or recklessly disturb a bat while it occupies such a structure or place that it uses for shelter or protection.
- Sell, offer or expose for sale, or possess, or transport for the purpose of sale, any live or dead bat, any part of a bat, or anything derived from a bat.

2.3.3 Under the Habitats Regulations disturbance includes any activity which is likely to:

- Impair the ability of a bat to survive, breed, reproduce, or rear/nurture its young.
- Impair the ability of a bat to migrate or hibernate.
- Significantly affect the local distribution or abundance of the species.

2.3.4 Local Planning Authorities are obliged to have regard to conserving biodiversity when undertaking their functions. Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 states that public authorities must have regard to conserving, maintaining and enhancing biodiversity. Section 41of the Act requires the Secretary of State to maintain a list of Habitats and Species of Principal Importance in England; the list includes several species of bat.

2.3.5 Furthermore, Government policy (National Planning Policy Framework – Section 15: Conserving and enhancing the natural environment) directs that planning decisions should be "*minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*".

2.4 Guidance and Best Practice

2.4.1 The methodology for the bat surveys was based on the latest *Good Practice Guidelines* from the Bat Conservation Trust (Collins (ed.), 2016; 3rd edition) as well as Natural England Standing Advice on bats. The following documents were used for reference:

- *Acoustic Ecology of European Bats: Species Identification, Study of their Habitats and Foraging Behaviour* (Barataud, 2015);
- Bat Conservation Trust websites; www.bats.org.uk and http://roost.bats.org.uk/;
- *Bat Mitigation Guidelines* (English Nature, 2004);
- *Bat Workers Manual* (Joint Nature Conservation Committee, 2004; 3rd edition);
- *Bats of Britain and Europe* (Dietz & Kiefer, 2016); and
- *British Bat Calls: A Guide to Species Identification* (Russ, 2012).

3 Methods

3.1 Desk Study

3.1.1 Kent and Medway Biological Records Centre (KMBRC) was consulted for records of bat species within a 5km search radius. Additionally, the Multi-Agency Geographic Information for the Countryside (MAGIC) website was consulted for granted European Protected Species (EPS) mitigation licenses for bats within a 2km radius, and for citations of Sites of Special Scientific Interest (SSSI) or Special Areas of Conservation (SAC) which are notified for important populations of bats within 10km of the survey area.

3.2 Field Survey

3.2.1 Field survey work undertaken for the project utilised a range of techniques in order to assess the usage of the site by bats:

- Preliminary Roost Assessment (PRA), including internal/external inspection of structures and trees.

3.3 Preliminary Roost Assessment

3.3.1 Inspection of the structures to be affected was undertaken on 9 July 2021 by a suitably licenced and experienced ecologist. The entire building was subject to an external and where possible internal inspection for potential roost features.

3.3.2 An experienced surveyor undertook the inspection with the aid of the following equipment: telescopic ladders to gain safe access; Wildlife Acoustics EM3 full spectrum bat detector to record and identify the calls of any bats which were present; CB-2 high-powered searchlight fitted with a red filter to search dark areas for signs of bats; telescopic mirror and/or 9mm digital endoscope camera to inspect hidden cavities; Hawke Sport Optics 10x42 close-focusing binoculars to view areas inaccessible on foot; and digital camera with flash to record any evidence of bats or features suitable for use by bats.

3.3.3 All observable features potentially suitable for bats were noted and the overall suitability of the structure for roosting bats was classified with reference to Box 1 (Collins (ed.), 2016). The external inspection from ground-level focused on potential access points and roosting opportunities such as lifted lead flashing, broken, lifted or missing roof or ridge tiles, cracks in the render or gaps between exterior cladding and weatherboards, soffits or fascias. The internal inspection included a search for live animals and other signs that give an indication of past or present occupancy. In the case of bats, typical indicators include droppings (which are characteristic and are often indicative of species), signs of fur oil staining, urine splashing, characteristic odours, and accumulations of discarded prey remains. It also assessed the overall suitability of the structure for roosting bats focusing particularly on the interior roof spaces and cellars (subject to safe

access). The objective was to establish whether structures are of low, moderate or high bat roosting suitability.

Box 1: Potential suitability of structures/trees for roosting bats (after Collins, 2016)	
Suitability	***Roosting habitats***
Negligible	Negligible habitat features on site likely to be used by roosting bats
Low	A structure with one or more potential roost features (PRF) that could be used by individual bats opportunistically, but do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats A tree of sufficient size and age to contain PRFs but with none seen from the ground / using ladders or features seen with only very limited roosting potential
Moderate	A structure or tree 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 status (for roost type only)
High	A structure or tree 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

3.4 DNA Analysis

3.4.1 The structures and trees inspections included a search for bat droppings which, if found, would be collected in accordance with BCT protocols (Collins (ed.), 2016) to be sent for DNA analysis by the ecological forensics team within the School of Life Sciences at the University of Warwick.

3.5 Evaluation

3.5.1 Within this bat survey report, the potential suitability of roosting and foraging/commuting habitats is classified as negligible, low, moderate or high with reference to Table 4.1 in the *Good Practice Guidelines* (Collins (ed.), 2016). The conservation significance of bat roosts is classified as low, moderate or high with reference to Figure 4 in the *Bat Mitigation Guidelines* (English Nature, 2004). However, these are relative terms which require an interpretation of the rarity of different species and regional variations therein. The terms are hence applicable within the survey area only and are intended to indicate which features of the survey area may be of importance to the conservation status of local bat populations.

3.5.2 Evaluation of the potential impacts on bats was undertaken with reference to Chapter 6 of English Nature (2004) and Natural England Standing Advice, with predicted impacts to each feature noted as of Low, Medium or High significance.

3.6 Limitations

3.6.1 See Appendix II for general Legal and Technical Limitations which apply to this document.

3.7 Personnel

3.7.1 The personnel deployed on the survey are listed in Table 3.1.

Table 3.1: Survey personnel and qualifications

Feature / Task	**Personnel**
Preliminary Roost Assessment	Jeff Turton
Personnel	**Qualifications**
Jeff Turton BSc(Hons) GradCIEEM	Ecologist with five years' professional consultancy experience. Licenced to survey for bats (WML-CL17) and great crested newt (WML-CL09).

4 Results

4.1 Desk Study

4.1.1 KMBRC returned 307 records of 11 species of bat from within 5km of the survey area, during a date range of 1983 to 2020, as summarised in Table 4.1. Most of these records were of bats in flight but three roost sites within 1km of the site were returned, the closest to the survey area being a maternity roost located c.450m north-east.

Table 4.1: Summary of bat records data within 2km of the site

Species	Protection
Serotine *Eptesicus serotinus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Daubenton's *Myotis daubentonii*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Whiskered *Myotis mystacinus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Natterer's *Myotis nattereri*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Leisler's *Nyctalus leisleri*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Noctule *Nyctalus noctula*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Nathusius' pipistrelle *Pipistrellus nathusii*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Common pipistrelle *Pipistrellus pipistrellus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full
Soprano pipistrelle *Pipistrellus pygmaeus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41
Brown long-eared *Plecotus auritus*	Habs.Dir.Ax.4, CHS Sch.2, WCA Sch.5 full, NERC s41

Habs.Dir.Ax.2/4 Habitats Directive 92/43/EEC Annex 2 or 4
CHS Sch.2 Conservation of Habitats & Species Regulations 2010 Schedule 2 (EPS animals)
WCA Sch.5 full Wildlife and Countryside Act (1981), Schedule 5 (fully protected)
NERC s41 Natural Environment and Rural Communities (Act 2006) Section 41

4.1.2 A search of the MAGIC database for granted EPS mitigation licenses for bats within a 2km radius found two licenced sites, summary details of which are listed in Table 4.2. There are 27 SSSI and no SAC within 10km of the survey area. Bat populations do not feature among the notified features of any of these sites.

Table 4.2: Summary of granted EPS mitigation licences within 2km of the site

Case ref.	Location	Species affected & licensed actions	Start date	End date
2014-3389-EPS-MIT	c.2km north-east	Soprano pipistrelle Destruction of a resting place	22/09/2014	11/09/2019
2014-3389-EPS-MIT-1	c.2km north east	Soprano pipistrelle Destruction of a resting place	05/11/2014	11/09/2019

4.2 Preliminary Roost Assessment

Landscape setting

4.2.1 The site is located within an area of good quality habitat for foraging bats sited near to open countryside comprising mixed farmland. There is a low density of residential development within the nearby wider area and therefore low levels of artificial lighting. The area supports a number of dark tree corridors, woodlands and a network of mature hedgerows.

Building B1

Exterior

4.2.2 The building was a single storey brick and flint-built farm building that was partially coated with concrete render that had worn off in places. The roof was clad with clay tiles, some of which had broken but most were intact and tightly fitting. The ridge tile was sealed with concrete. There were some gaps in the exterior brickwork that lead into cavities, but these were heavily cobwebbed. The north face of the building was covered with mature ivy *Hedera helix*.

Interior

4.2.3 The building was in constant use at the time of the survey as a shelter for horses. The walls were clad with plasterboard which had been broken by the horses, forming access into cavities. However, the plaster board was not closed at the top or at the sides, meaning light could penetrate into these cavities. There were no windows and no doors, making the inside very light and airy. No feeding evidence was found but this would have been swept away during daily horse care activities. There was an old chimney that lead into a dark cavity. The roof was lined with bitumen felt which was in good condition and had minimal gaps, providing a dark cavity between the tiles and liner.

4.2.4 A search was made of the interior space for signs of bats, at wall bases and beneath the ridge and beams. No live or dead bats, droppings, feeding remains, characteristic odours, urine splashing, or signs of fur oil staining around potential access points were noted.

Trees

4.2.5 There were two trees within the site boundaries. No potential roosting features were seen on these trees from the ground. These trees were considered to be of negligible suitability for roosting bats.

South face of B1

East face of B1

North face of B1 covered in ivy

Holes in brickwork leading into cavities

Broken roof tiles. Roof is lined beneath.

Interior. Fireplace and chimney stack pictured left.

5 Evaluation

5.1 Preliminary Roost Assessment

5.1.1 Table 5.1 considers the evidence from the building in relation to external/internal features which provide access or roost opportunities, signs of bats and hibernation potential, and draws conclusions on the suitability of the building for roosting bats.

Table 5.1: Roost suitability assessment

Roost #	Aspect
External features:	Potential access points under roof tiles and small gaps in brickwork.
Internal features:	Gaps/cracks plasterboard provide access to interior voids. Potential for bats to access crevices within the disused chimney. Potential for bats to access the cavity between roof tiles and liner.
Use:	Shelter for horses
Bats:	None
Signs of bats:	None
Hibernation potential:	Negligible
Conclusion:	Low suitability for species known to roost in crevices such as pipistrelles.

Impact Assessment

Designated sites

5.1.2 No designated sites notified for their bat populations will be affected by the proposals for the site.

Roosts – buildings/structures

5.1.3 Overall the building is considered to offer a low suitability for roosting bats, with a range of external and internal features that could provide the preferred roosting conditions for pipistrelle species. The proposed renovation of B1 could result in killing, injury or disturbance to bats, or damage, destruction or obstruction of a bat roost.

Roosts – trees

5.1.4 No bats roosts in trees will be affected by the proposals for the site.

Recommendations

Presence / likely absence surveys

5.1.5 Building B1 offers low potential for roosting bats; presence absence surveys are required. Presence / likely absence surveys should follow current guidelines (Collins, 2016), comprising dusk emergence and/or dawn re-entry surveys, and can be carried out between May and August. Surveys should begin at least quarter of an hour before dusk and continue for up to 2 hours after sunset, or begin 1.5 to 2 hours before dawn and continue until at least 15mins after sunrise. The level of survey effort required for low potential buildings is one survey visit in total, consisting of one dusk emergence or one dawn re-entry survey.

6 Conclusions

6.1.1 The site is situated within an area of good quality habitat for bats. The proposed development will directly affect building B1, a building that has been assessed as having low suitability for roosting bats. One presence/absence survey is required in line with best practice guidelines (BCT, 2016) to ensure that no bats or roosts are affected.

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Appendix I: Legislation and Planning Context

Legislation

General

The main legislative instruments for ecological protection in England and Wales are the Wildlife and Countryside Act 1981 (WCA; as amended), Countryside and Rights of Way Act 2000 (CRoW; as amended), Natural Environment and Rural Communities Act 2006 (NERC) and the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations; as amended). The Environment Bill (reintroduced to parliament in 2020) is expected to make significant changes to the legislative provisions when enacted.

WCA 1981 consolidated and amended pre-existing national wildlife legislation in order to implement the Bern Convention and the European Union Wild Birds Directive (Council Directive 2009/147/EC). It complements the Habitats Regulations, offering protection to a wider range of species than the latter. The Act also provided for the designation and protection of nationally important conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSI). Schedules of the act list protected species of flora and fauna, as well as invasive species, and detail the possible offences that apply to these species.

The CROW Act 2000 amended and strengthened existing wildlife legislation detailed in the WCA. It placed a duty on government departments & the National Assembly for Wales to have regard for biodiversity, provided increased powers for the protection and maintenance of SSSI, and created a right of access to parts of the countryside. The Act contained lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The NERC Act 2006 consolidated and replaced aspects of earlier legislation. Section 40 of the Act places a duty upon all local authorities and public bodies in England and Wales to have regard to the purpose of conserving biodiversity in exercising all of their functions, including by restoring or enhancing habitats and species populations. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity (otherwise known as priority habitats/species as listed in the now superseded UK Biodiversity Action Plan). These lists supersede Section 74 of the CRoW Act 2000. These species and habitats are a material consideration in the planning process.

Habitats Regulations 2017 are the principal means by the European Union Habitats Directive (Council Directive 92/43/EEC) was transposed into English and Welsh law, and place a duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria in Europe are designated as Sites of Community Importance by the European Commission, and subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. Since the UK's departure from the European Union the European Commission no longer has a role in designating SACs in the UK. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 establish a single stage

designation process, where the appropriate authority is the decision maker. The selection and designation of SACs is based on the criteria set out in Annex III of the Habitats Directive insofar as it applies to the UK, and having regard to the advice of the appropriate nature conservation body.

The 2019 Amendment Regulations have created a new national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes existing SACs, existing Special Protection Areas (SPA) originally designated as a result of Council Directive 2009/147/EC on the Conservation of Wild Birds, and any new SACs and SPAs designated under the 2019 Regulations. SACs and SPAs in the UK therefore no longer form part of the EU's Natura 2000 ecological network.

The Habitats Regulations also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively (European Protected Species (EPS)). Schedule 2 includes species such as otter and great crested newt for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade in these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations. Under the Habitats Regulations disturbance includes any activity which is likely to: impair the ability of a EPS to survive, breed, reproduce, or rear/nurture its young; impair the ability of a EPS to migrate or hibernate; or significantly affect the local distribution or abundance of the species.

When enacted, the Environment Bill is expected, among other things, to: establish an Office for Environmental Protection; require all new development requiring planning permission to achieve a net gain for biodiversity (expected to be at least 10%); amend the NERC Act duty to conserve biodiversity by explicitly adding a duty to enhance; and require local authorities to produce local nature recovery strategies.

Bats (Chiroptera)

Bats and their roosts are fully protected by protected by the WCA and the Habitats Regulations, and seven species of bats are species of principal importance. The legislation makes it an offence, *inter alia*, to:

- Intentionally kill, injure or take a bat.
- Possess or control a live or dead bat, any part of a bat, or anything derived from a bat.
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place that a bat uses for shelter or protection. This is taken to mean all bat roosts whether bats are present or not.
- Intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection.
- Make a false statement in order to obtain a licence for bat work.

Planning context

National Planning Policy Framework (Section 15: Conserving and enhancing the natural environment)

The National Planning Policy Framework (NPPF), published in February 2019, outlines the Government's commitment to the conservation of wildlife and natural features. It is concerned with:

- Protecting and enhancing valued landscapes, sites of biodiversity or geological conservation value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- 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;
- Maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current & future pressures;
- 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
- Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The NPPF requires that local plans should "distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value…; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scape across local authority boundaries".

To protect and enhance biodiversity and geodiversity, the NPPF states that planning policies should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

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

- 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 following wildlife sites should be given the same protection as habitats sites:

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

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. The policies within the NPPF (and additional guidance contained within Circular 06/2005) are a material planning consideration.

UK/Local Biodiversity Action Plan Designations and Birds of Conservation Concern and Red Data Book Listings

Note that BAP designations and status as RSPB Birds of Conservation Concern or Red Data Book species does not offer any further legal protection, but planning authorities are required to prevent these species from being adversely affected by development in accordance with National Planning Policy and the CROW and NERC Acts. The United Kingdom Biodiversity Action Plan (UKBAP), first published in 1994 and updated in 2007, was a government initiative designed to implement the requirements of the Convention of Biological Diversity to conserve and enhance species and habitats. The UKBAP contained a list of priority habitats and species of conservation concern in the UK, and outlined biodiversity initiatives designed to enhance their conservation status.

However, as a result of devolution, and new country-level and international drivers and requirements, much of the work previously carried out by the UK BAP is now focussed at a country-level rather than a UK-level, and the UK BAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in July 2012. The UK lists of priority habitats and species nonetheless remain an important reference source and were used to draw up statutory lists of priority habitats and species in England, Northern Ireland, Scotland and Wales. The priority habitats and species correlate with those listed on Section 41 and 42 of the NERC Act.

The UKBAP required that conservation of biodiversity be addressed at a County level through the production of Local BAPs. These are targeted towards species of conservation concern characteristic of each area. In addition, a number of local authorities and large organisations have produced their own BAPs. Where they exist, Local BAP targets with regard to species and habitats are a material consideration in the planning process.

Local Planning Policy

Policy DP25: Nature Conservation and Enhancement

1. *Development on the hierarchy of designated sites, featuring nationally recognised and locally protected sites, shown on the Policies Map will not be permitted. Development located within close proximity to designated sites, or with likely effects on them, should demonstrate that the proposal will not adversely impact on the features of the site that define its value or ecological pathways to the site.*

2. *Proposals should seek to avoid any significant adverse impact on existing biodiversity features. Any potential loss or adverse impact must be mitigated, including with reference to the following guidance points:*

    a) *Where mitigation measures require relocation of protected species this will only be acceptable when accompanied by clear evidence that the proposed method is appropriate and will provide for successful translocation.*

    b) *Proposals should include provision for protection during construction, and mechanisms for on-going management and monitoring.*

3. *Developments will be expected to preserve and, wherever possible, enhance existing habitats and ecological quality, including those of water bodies, particularly where located in Biodiversity Opportunity Areas. Particular regard should be had to points a) and b) below. Development proposals where the primary purpose is to enhance biodiversity will normally be permitted where:*

    a) *New biodiversity areas make use of native and local species as set out in the Kent Biodiversity Strategy and consider ecological links and adaptability to the effects of climate change*

    b) *Biodiversity features strengthen existing green and ecological corridors; and contribute to the creation and enhancement of the Green Grid.*

Large residential development and North Kent European Protected Sites

4. *Large residential developments located within 10km from the North Kent European Protected sites that are located outside the Borough will be required to undertake a Habitats Regulation Assessment to demonstrate that the mitigation measures proposed are satisfactory to avoid potential adverse recreational effects to protected features. Information on mitigation options is available on the Council's website.*

Trees

5. *In all development proposals existing trees should be retained wherever possible. If retention is demonstrated not to be feasible, replacement provision should be of an appropriate tree species and maturity and/ or canopy cover taking into account the tree that is being replaced and the location.*

Appendix II: Legal and Technical Limitations

- This report has been prepared by Urban Edge Environmental Consulting Ltd (UEEC Ltd) with all reasonable skill, care and diligence within the terms of the contract made with the Client to undertake this work, and taking into account the information made available by the Client. No other warranty, expressed or implied, is made as to the professional advice included in this report or any other services provided by us.
- UEEC Ltd disclaims any responsibility to the Client and others in respect of any matters outside the scope of this contract. This report is confidential to the Client and is not to be disclosed to third parties. If disclosed to third parties, UEEC Ltd accepts no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any third party relies upon the contents of this report at their own risk and the report is not to be relied upon by any party, other than the Client without the prior and express written agreement of UEEC Ltd.
- The advice provided in this report does not constitute legal advice. As such, the services of lawyers may also be considered to be warranted.
- Unless otherwise stated in this report, the assessments made assume that the sites and facilities that have been considered in this report will continue to be used for their current planned purpose without significant change.
- All work carried out in preparing this report has utilised and is based upon UEEC Ltd's current professional knowledge and understanding of current relevant UK standards and codes, technology and legislation. Changes in this legislation and guidance may occur at any time in the future and may cause any conclusions to become inappropriate or incorrect. UEEC Ltd does not accept responsibility for advising the Client or other interested parties of the facts or implications of any such changes;
- Where this report presents or relies upon the findings of ecological field surveys (including habitat, botanical or protected/notable species surveys), its conclusions should not be relied upon for longer than a maximum period of two years from the date of the original field surveys. Ecological change (e.g. colonisation of a site by a protected species) can occur rapidly and this limitation is not intended to imply that a likely absence of, for instance, a protected species will persist for any period of time;
- This report has been prepared using factual information contained in maps and documents prepared by others. No responsibility can be accepted by UEEC Ltd for the accuracy of such information;
- Every effort has been made to accurately represent the location of mapped features, however, the precise locations of features should not be relied upon;
- Populations of animals and plants are often transient in nature and a single survey visit can only provide a general indication of species present on site. Time of year when the survey was carried out, weather conditions and other variables will influence the results of an ecological survey (e.g. it is possible that some flowering plant species which flower at other times of the year were not observed). Every effort has been made to accurately note indicators of presence of protected, rare and notable species within and adjacent to the site but the possibility nonetheless exists for other species to be present which were not recorded or otherwise indicated by the survey;
- Any works undertaken as a consequence of the recommendations provided within this report should be subjected to the necessary health & safety checks and full risk assessments.

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