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Report prepared for: Tony Blair

For the Site of: 25 Church Street, Stanwick, NN9 6PS

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Cherryfield Ecology has prepared this report for the named clients use only.

Ecological reports are limited in shelf life, Natural England usually expect reports for licences to be from the most recent or current season. Therefore, should the project not proceed within 12 months of this report an updated survey should be undertaken in order to check for changes that may have occurred on site. Information is believed to be accurate at the time of survey; recommendations are made without bias based on good practice guidelines within the industry. However, species presence and ecological parameters can change over time.

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## Contents

0.0 Non-Technical Summary .....	3
0.1 Background .....	3
0.2 Results and Findings .....	3
0.3 Impact Assessment and Recommendations .....	4
1.0 Introduction .....	5
1.1 Aim .....	5
1.2 Background Information .....	5
2.0 Methods .....	7
2.1 Limitations .....	8
3.0 Results .....	10
3.1 Desk Study .....	10
3.2 MAGIC .....	10
3.3 Biological Records Data .....	11
3.4 Site Location and Surrounds .....	12
3.5 Building, Tree or Other Structure .....	13
3.6 Observations .....	13
4.0 Conclusions, Discussion, Impacts and Recommendations .....	18
4.1 Conclusion and Discussion .....	18
4.2 Potential Impact .....	18
4.3 Recommendations .....	19
5.0 References .....	23
Appendix I - Site Plans .....	24

# Emergence and Activity Bat Survey (EBS)

## 0.0 Non-Technical Summary

### 0.1 Background

This report follows national guidelines Collins (2023) allowing for dusk and dawn surveys and recommends mitigation and compensation if considered necessary. If a deviation from the guidelines has been made, this will be detailed in the Method Section.

The following report details the findings and recommendations for the site of 25 Church Street, Stanwick, NN9 6PS.

The client commissioned Cherryfield Ecology to undertake an EBS as the proposals include for the demolition B1. It is understood sections of the building are to be demolished (B1a and B1b) due to the poor structural integrity of the building outlined within the structural report (DSA, 2023) which is considered as unsafe.

### 0.2 Results and Findings

Following a Stage 1 Preliminary Roost Assessment undertaken on 11/09/2023 (Cherryfield Ecology, 2023), further surveys were recommended. This included for two dusk emergence surveys within September 2023.

The surveys have shown a Brown long-eared bat emergence from B1b and the presence of Brown long-eared bats flying within the interior of B1a and B1b. There was some foraging and commuting activity within the site from Common Pipistrelles, Soprano Pipistrelles and Myotis species.

A small number of fresh and old bat droppings were found during the initial Preliminary Roost Assessment with B1a and B1b which were identified as Brown Long-eared Bat *Plecotus auritus* following DNA analysis. A single fresh bat dropping was found within B1b during the second emergence survey. This is likely to be from roosting Brown long-eared bats identified within the emergence surveys.

Based on the findings during the emergence surveys, there is a confirmed Brown long-eared bat roost (day) comprised of relatively small numbers within B1 across two different locations with the highest number of individuals observed within an emergence survey being three Brown long-eared bats.

This corresponds with the extent of bat evidence identified within the initial Preliminary Roost Assessment.

### 0.3 Impact Assessment and Recommendations

B1- A bat roost (day) for Brown long-eared bats will be lost when works are undertaken.

Alternate roosts will need to be provided before demolition on B1 commences. A bat license (Bat Mitigation Class) will be required post-grant of planning in order to allow the demolition to proceed lawfully. (Please refer to Section 4.3 of this report for further details).

The findings outlined in this report are valid for one year, after which updated surveys will be required.

Enhancements and mitigation are recommended (please see Section 4.3 for further details).

## 1.0 Introduction

### 1.1 Aim

The aim of this survey is to gather additional information from the site to establish species, population and entry/exit points of bats to aid in the design of mitigation and compensation for bats in the development. The information is used to help inform a license application (if required) and to inform the client and their architect/planner of necessary changes in the design that may be required to ensure bats are protected during works. It should be read in conjunction with any Stage 1 survey such as a Preliminary Roost Assessment (PRA) that may have been undertaken.

### 1.2 Background Information

The client, Tony Blair, has commissioned Cherryfield Ecology to undertake an EBS for the site of 25 Church Street, Stanwick, NN9 6PS. Permission is being sought to demolish the existing building for health and safety purposes due to the poor structural integrity outlined within the structural report (DSA, 2023).

This survey has checked all buildings, trees (from ground level only) or structures due to be affected by the proposals for bats, signs of bats or habitat value e.g. crevices, gaps or holes that cannot be checked for a variety of reasons. In addition, surveyors have been positioned around the building, tree or structure to allow for emerging/re-entering bats to be watched for.

The inspections were conducted on the 14/09/2023 and 28/09/2023.

The survey can only ever provide a ‘snapshot’ of the site at the time of the survey and circumstances may change following this report. Health and Safety restrictions or obstructions may limit the ability to find or see emergence, re-entry and/or evidence. Biological records have been requested to give the report context and allow a study of the surrounds. The information is often sensitive and, therefore, a synopsis is provided. The survey can be conducted between May and September with the optimal season for surveying maternity colonies limited to mid-May to August inclusive, however it can also be limited due to bad weather, when bats are less active.

All 18 species of bat common in the UK (17 known to be breeding) are fully protected under the Wildlife and Countryside Act (as amended) 1981 through inclusion in Schedule

V of the Act. All bat species in the UK are also included in Schedule II of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which transpose Annex II of the Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (“Habitats Directive”) which defines United Kingdom protected species of animals.

Bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

This combined legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.
- Possess or transport bats, unless acquired legally.
- Sell, barter or exchange bats.

A bat roost is well-defined by the legislation as the ‘resting place’ of a bat. However, the word roost is used to describe this resting place and is generally accepted as the word describing where a bat or bats rest, feed or sleep.

## 2.0 Methods

The survey follows the national guidelines Collins (2023) and Interim Guidance Note: Use of night vision aids for bat emergence surveys and further comment on dawn surveys (Bat Conservation Trust, May 2022) the following equipment is available for the inspection:

Torches (e.g. LED Lensar type).

Ladders (Standard 4m telescopic surveying ladder).

Endoscope where holes, cracks and crevices are accessible.

Mirrors (extendable and movable mirror face).

Binoculars (Pentax close focus).

Thermometer/hygrometer.

Camera.

Sample bags for collecting dropping and feeding evidence.

Echo Meter Touch, EM3, and Pettersson D240X.

IR night vision HD Camcorder, 12v IR flood lights.

FLIR one Thermal Imaging Camera (when required).

Night Vision Aids (NVA's) are used to cover the building alongside surveyors. These are not designed to replace surveyors, rather provide night vision, allowing for more accurate survey effort and when found, roost locations. The cameras may not always capture bats entering/exiting roosts due to the size of the building, terrain, narrower field of view and other factors. Video is processed in Openshot video editor and checked in the office after the survey is completed, stills and snapshots are taken and used in reports, as per the guidelines.

Surveyors are positioned around the building(s), tree or structure in order to cover all elevations. The survey then observes for emerging or entering bats from suitable features such as holes, cracks and crevices. Notes on commuting and foraging bats are also made in the surrounds.

If a deviation from the guidelines has been made, the reason and justification will be explained below:

Two surveys have been undertaken within September 2023 which is considered suboptimal for bat surveys. However this was deemed as necessary due to the poor structural integrity of the building outlined within the structural report (DSA, 2023).

## 2.1 Limitations

This survey provides a snapshot of the site at the time of the survey(s) only. Bats are highly mobile and can turn up from time to time unexpectedly. All care has been taken to ensure the results and recommendations are suitable to the context of the development and the information gathered on surveys. The eastern side of the building was unable to be fully assessed due to the adjacent house and garden restricting the view.

Table 1: Roosting features (likelihood) of bat presence assessed against Collins et al (2023) guidelines Source: Adapted from Collins (2023) pp 44, Table 4.1.

Likelihood of bat presence (Habitat Value)	Features that bats can use, regardless of evidence being present.
Confirmed Bat Presence	Bats are found to be present during the survey. Evidence of bats is found to be present during the survey.
Higher likelihood of bat presence.	Pre-20th century or early 20th century construction. Agricultural buildings of traditional brick, stone or timber construction. Large and complicated roof void with unobstructed flying spaces. Large (>20 cm) roof timbers with mortice joints, cracks and holes. Entrances for bats to fly through. Poorly maintained fabric providing ready access points for bats into roofs, walls, bridges, but at the same time not too draughty and cool. Roof warmed by the sun, in particular south facing roofs. Weatherboarding and/or hanging tiles with gaps. Low level of disturbance by humans. Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.

<p>Moderate and Lower likelihood of bat presence.</p>	<p>Modern, well-maintained buildings or built structures that provide few opportunities for access by bats.          Small, cluttered roof space.          Buildings and built structures comprised primarily of prefabricated steel and sheet materials.          Cool, shaded, light or draughty roof voids.          Roof voids with a dense cover of cobwebs and no sections of clean ridge board.          High level of regular disturbance.          Highly urbanised location with few or no mature trees, parkland, woodland or wetland.          High levels of external lighting.</p>
<p>Negligible likelihood of bat presence.</p>	<p>No obvious features suitable for roosting, minor foraging or commuting.</p>
<p>None</p>	<p>No features suitable for roosting.</p>

### 3.0 Results

The following section details the results of the desk study, inspection and survey; it includes MAGIC information, biological records data and map/aerial photo information. The results detail the building, structure or tree (numbered for reference) description of any evidence found and habitat value if no evidence has been located.

#### 3.1 Desk Study

The desk study is centred on Grid Reference - SP 98109 71326 and Postcode - NN9 6PS.

Table 2: Weather Records

Date	Survey	Time: from/to	Weather: Start	Weather: Finish
14/09/2023	Dusk Emergence	19:08 to 21:15 SS: 19:23	Temp: 18 °C Humidity: 86 % Cloud: 100 % Wind: 0/12 Precip: None	Temp: 17 °C Humidity: 87 % Cloud: 99% Wind: 0/12 Precip: None
28/09/2023	Dusk Emergence	18:33 to 20:25 SS: 18:49	Temp: 17 °C Humidity: 68% Cloud: 80% Wind: 0/12 Precip: None	Temp: 16 °C Humidity: 74% Cloud: 100% Wind: 0/12 Precip: None

#### 3.2 MAGIC

The following statutory sites and Natural England Protected Species (NEPS) have been located within the 2km search area (Figure 1).

Table 3: Magic search results

Receptor	Distance and Direction (m/Km)	Description
Statutory sites	~911m west	Upper Nene Valley Gravel Pits (SSSI, Ramsar)

Granted protected species licenses (bats)	n/a	n/a
Priority habitat	-1147m southwest	Coastal and Floodplain Grazing Marsh
	-1516m northwest	Lowland Fens
	-478mm northeast	Deciduous Woodland
	-844m southwest	Traditional Orchards

MAGiC

Magic Map

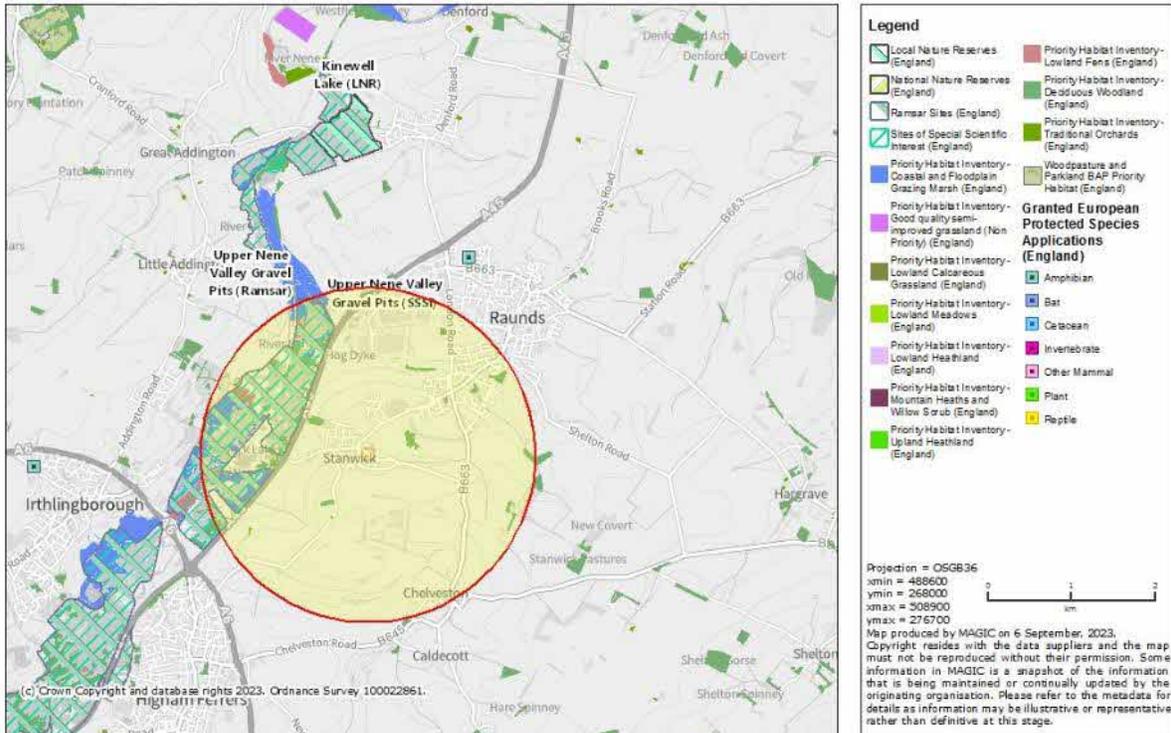


Figure 1: Magic Map Search

### 3.3 Biological Records Data

A 2km data search of existing records for protected species and nature reserves has been commissioned, below details the results and site context.

Biological records were obtained from Northants Bat Group (2023). A total of eight records were provided from a total of five confirmed bat species.

Table 4: Biological Records

Species	Number of Records	Closest record (accuracy)	Most recent record (year)
Barbastelle <i>Barbastella barbastellus</i>	-	-	-
Brown Long-Eared <i>Plecotus auritus</i>	1	353m (1km)	2004
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	1	2.1km (1km)	2008
Daubenton's <i>Myotis daubentonii</i>	1	2.1km (1km)	2008
Leisler's <i>Nyctalus leisleri</i>	-	-	-
Nathusius' Pipistrelle <i>Pipistrellus nathusii</i>	-	-	-
Natterer's <i>Myotis nattererii</i>	-	-	-
Noctule <i>Nyctalus noctula</i>	1	2.1km (1km)	2008
Serotine <i>Eptesicus serotinus</i>	-	-	-
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	1	2.1km (1km)	2008
Unidentified Bat Chiroptera	-	-	-
Unidentified Long-Eared <i>Plecotus</i> sp.	-	-	-
Unidentified <i>Myotis</i> <i>Myotis</i> sp.	-	-	-
Unidentified Pipistrelle <i>Pipistrellus</i> sp.	3	353m (1km)	2009
Unidentified Vesper <i>Vespertilionidae</i>	-	-	-
Whiskered <i>Myotis mystacinus</i>	-	-	-
Whiskered/Brandt's <i>Myotis mystacinus/brandtii</i>	-	-	-

### 3.4 Site Location and Surrounds

The site is located in Stanwick, Northamptonshire and is surrounded by residential housing in the immediate local area. Table 5 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 5: Habitat features suitable for bat use.

Feature	Description
Water course	There are no significant water courses within the search area.

Water bodies	Stanwick Lakes, part of Upper Nene Valley Gravel Pits (SSSI, Ramsar), are located approximately 964m northwest.
Woodland	Areas of woodland are located approximately 489m northeast, and 560m northwest of the site. A smaller area of woodland is located approximately 639m west of the site.
Linear e.g. hedgerows	Field margin and garden hedgerows are found throughout the search area.
Pasture/arable/grassland	Arable fields dominate the search area. A bowling green belonging to Stanwick Bowls Club is located approximately 272m northwest of the site. Stanwick Pocket Park is located approximately 274m northeast of the site.
Other	n/a

### 3.5 Building, Tree or Other Structure

The following section details the structure(s) reference, bats located, evidence located and observed emergence (see Figure 8 for Site Plan). Five surveyors were positioned around the building and IR cameras placed within the interior of B1a and B1b.

Building/tree/structure reference - B1 (Main Building), B1a, B1b and B1c.

### 3.6 Observations

Table 6: Results and observations of the building, tree or structure.

Surveyor	Building, Tree or Structure	Dates, Times and Survey Type	Bat Activity Observed
ZH	B1	14/09/2023 19:08 to 21:15 Dusk	<p>A Brown long-eared bat (BLEB) was observed emerging at 19:58 from the apex of B1b and foraging under the roof across B1a and B1b.</p>  <p>Figure 2- BLEB emergence from apex of B1b.</p> <p>Bats including Common Pipistrelle <i>Pipistrellus pipistrellus</i> (Cpip), Soprano Pipistrelle <i>Pipistrellus pygmaeus</i> (SPip) and</p>

			Myotis sp Myotis sp were observed passing underneath the roof across b1a and b1b flying north and south across the site.
TH	B1	//	Cpip calls were heard but not seen 11 times between 19:50 to 21:09. Cpips were seen flying from the south of the site to the northern end of the site at 19:55.
PH	B1	//	Cpip were heard but not seen six times from 20:03 to 21:09. A Cpip was observed flying south down the site at 19:50.
KP	B1	//	Cpip were heard but not seen twelve times from 19:54 to 21:11.
SK	B1	//	Soprano pipistrelle was first observed passing down the road at 19:51. Cpips were observed passing up and down the road to the north of B1 three times from 19:54 to 20:53. A pipistrelle was observed flying over B1 coming from the western side of the house.
SK	B1	28/09/2023 18:33 to 20:20 Dusk	Cpip was heard but not seen at 19:22 and 19:32 and between 19:48 to 20:04. A Noctule was observed passing from the road towards the southern end of the site at 19:35. An IR camera captured video footage of bats flying internally within B1a.
CF	B1	//	Cpips were observed passing up and down the road between 19:26 and 20:19. Spip was observed flying east along road at 19:48.
EB	B1	//	Cpip was heard but not seen nine times between 19:10 and 20:12. A distant pass of BLEB was heard at 19:36.
LB	B1	//	A possible emergence of an unidentified bat from the ridge across B1a and B1b but this is inconclusive.
JN	B1	//	Cpip was heard at 19:21. Cpips pass north and south across the driveway twice between 19:29 and 19:32. Cpips were heard but not seen between 19:54 and 20:17. A myotis was observed under the arch at 19:49.
Summary of surveys and supplementary observations: 14/09/2023 - A single BLEB was observed flying within the interior of B1a. A single BLEB was observed emerging from B1b.			



Figure 3- Single BLEB flying inside interior of B1a on 14.09.2023.

28/09/2023 - A pair of BLEBs were recorded flying within the interior of the first storey of B1a. A single BLEB was observed flying within the interior of B1b at 20:22.

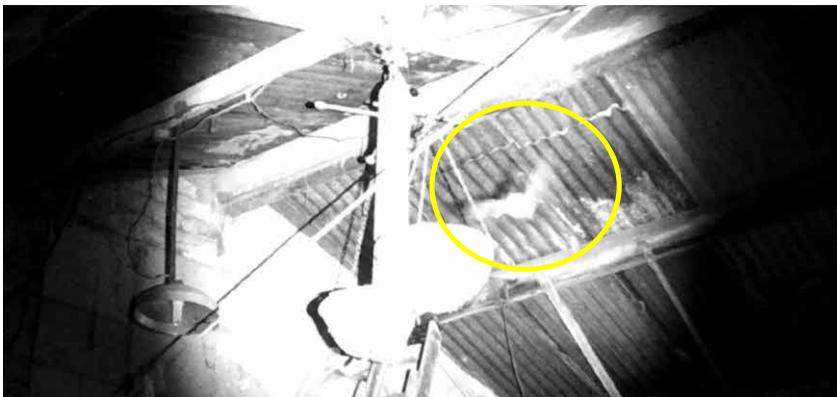


Figure 4- BLEB observed flying within the interior of B1a on 28.09.2023.



Figure 5- Pair of BLEBs observed flying within interior of B1a on 28.09.2023.

Any other protected species that would be affected by the development:

N/A

IR at the darkest point (one per survey):



Figure 6: IR image of B1b on 14.09.2023.



Figure 7: IR image of B1b from 28.09.23.

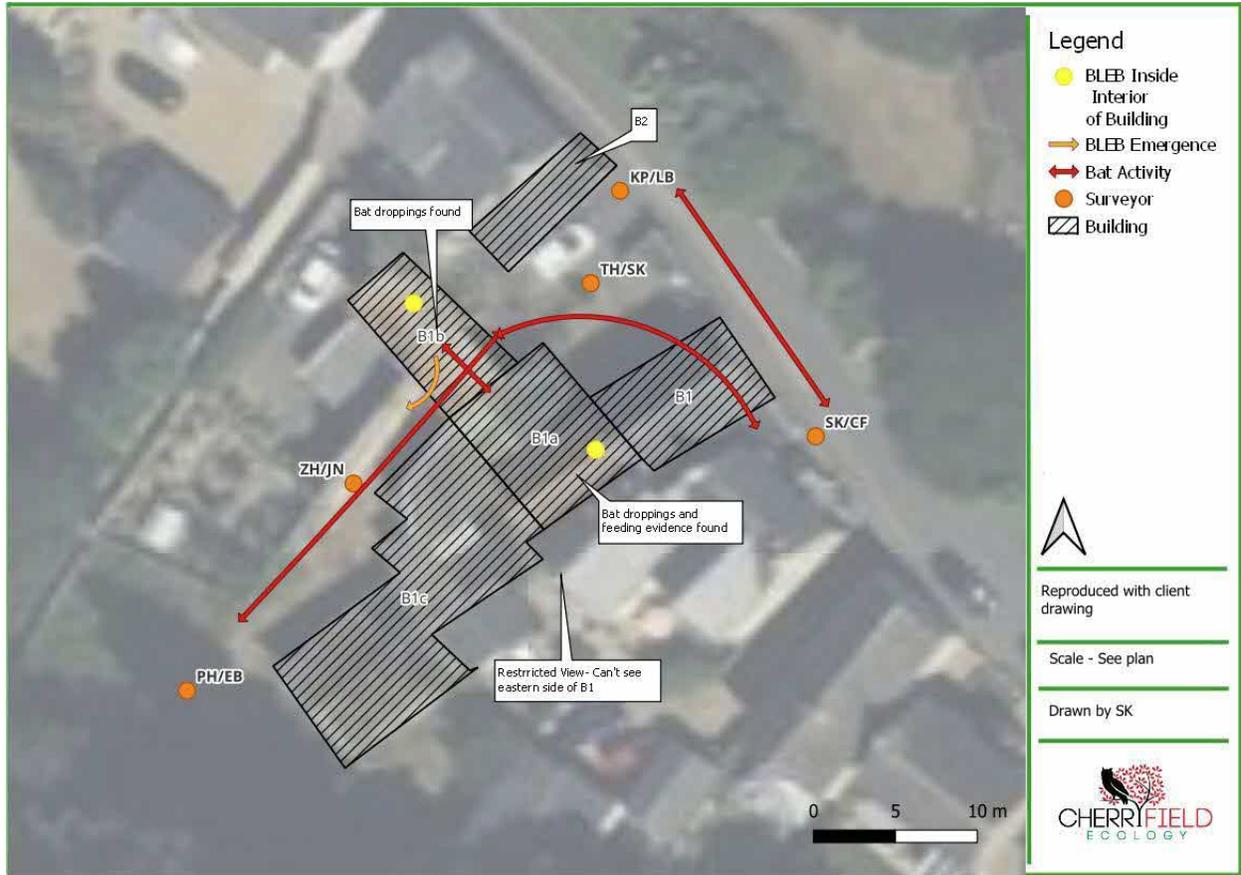


Figure 8: Site Plan

## 4.0 Conclusions, Discussion, Impacts and Recommendations

The following section details the conclusions, discussion and recommendations in the context of the proposed works.

Building/tree/structure reference - B1 (Main Building), B1a, B1b and B1c.

### 4.1 Conclusion and Discussion

The proposals include for the demolition of sections of B1 including B1a and B1b (see Appendix I).

The surveys have shown Brown long-eared bats to be present within the interior of B1a and B1b. A Brown long-eared bat was observed emerging from the eastern apex of B1b on 14.09.2023. A single BLEB was observed flying within the first storey of B1a on 14.09.2023.

No emergences were identified during 28.09.2023. However, a pair of BLEBs were recorded flying within the interior of B1a and a single BLEB was observed flying within the interior of B1b on 28.09.2023.

Based on these observations, there is a confirmed Brown long-eared bat roost present within B1 across two locations (day roost). It is likely that the roost is comprised of a relatively small number of Brown long-eared bats with three being the highest recorded number of bats observed within the emergence survey. This corresponds with the small number of droppings and feeding remains found within the initial PRA survey.

Common Pipistrelles, Soprano Pipistrelles and Myotis species were observed passing through the site.

### 4.2 Potential Impact

Impact assessments must be proportionate to the scale of the development (CIEEM, 2018) and the following details a proportionate impact assessment based on current information.

Table 7: Impact Assessment.

Impact	B1- A day Brown Long-eared bat roost will be lost in the development.
Characterisation of unmitigated impact on the feature	A Brown long-eared bat roost will be destroyed when works are carried out resulting in a low-level loss/impact at a local level, this species is common and widespread and found in the wider area.
Effect without mitigation	Without mitigation individual bats could be killed, injured or trapped during the works.
Mitigation and or enhancement	See Table 8 and 9
Significance of effects of residual impacts (after mitigation)	Once a BMCL is issued and the necessary compensation and mitigation measures are met, the effects would be negligible.

#### 4.3 Recommendations

The following table details the recommended mitigation and compensation required; it also recommends for a Natural England Protected Species License (NEPSL) to be applied for.

License type required: Bat Mitigation Class License as required.

Roost type: Day

Table 8: Mitigation and Compensation.

Work	Specification
General Information	<p>A Natural England Protected Species License must be applied for in order to allow the works to proceed, post-grant of planning.</p> <p>The Three Tests to be answered before planning can be granted (NE, 2017):</p> <p>Test 1: Regulation 53(2)(e) states: a license can be granted for the purposes of “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”.</p> <p>Test 1 can be achieved via the ‘imperative reasons of overriding public interest’. Although not for the ecologist to determine the planning officer will on grant of consent.</p>

	<p>Test 2: Regulation 53(9)(a) states: the appropriate authority shall not grant a license unless they are satisfied “that there is no satisfactory alternative”.</p> <p>Test 2 would be achieved on the grant of consent as no other sites have been considered for the development.</p> <p>Test 3: Regulation 53(9) (b) states: the appropriate authority shall not grant a license unless they are satisfied “that the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.”</p> <p>Test 3 will be achieved once full mitigation appropriate to species and population has been designed and implemented via an NEPS license issued from the statutory authority (Natural England).</p>
<p>Roof and tile linings</p>	<p>‘When a bat roost is present and being mitigated/compensated we advise that the type of linear for the tiles/roof used is a bitumen type 1 traditional felt.</p> <p>The reasoning for this is twofold; firstly, bats can damage the Modern Roofing Membrane (MRM), meaning that the MRM will become useless allowing water to pass through from above and, secondly, bats will become trapped in the fibres and die from dehydration and starvation.</p> <p>There is no reason that building regulations will not allow a traditional ‘cold roof’ and, therefore, this should be designed into any project where bats will be able to access the roof/loft or hung tile/weather boarding etc. etc.</p> <p>However, Natural England will accept an MRM being used in a bat roost under the following circumstances -</p> <p>The MRM must have passed the testing regime set out in Essah et al (2020) and a certificate must be provided as proof of this.’ Natural England will accept an MRM being used in a roost of any type with evidence of the MRM having passed the propensity snagging test.</p>
<p>Mitigation and compensation to be installed via a Bat Mitigation Class or Standard</p>	<p>The following is recommended:</p> <p>Bat Mitigation Class License:</p> <p>Works can occur at any time under a Bat Mitigation Class License (BMCL) once granted from Natural England.</p> <p>Any demolition will require the supervision of a bat licensed ecologist. The suitable roosting features will be stripped by hand only. All areas within the roof/wall tops</p>

<p>Licence application</p>	<p>will be checked for bats i.e. endoscope (were possible). If bats are found, these will be removed by hand and placed in bat boxes that will be in place before works commence.</p> <p>One bat box will be installed on trees or buildings; it is currently understood that there are trees to the rear of the dwelling bordering the garden that could be used for this purpose.</p> <div data-bbox="787 520 1047 926" data-label="Image">  </div> <p>Figure 9: Chillon Woodstone Bat Box (British-made)</p> <p>Commuting bats maybe using the grounds and surrounds; therefore, any tree, hedges or linear feature should be retained were possible.</p>
<p>Lighting</p>	<p>Any lighting near or shining onto any trees/buildings, especially those with bat boxes in or commuting routes shown to be present at further survey stage, will be designed to minimise the impact it has on potential bat roosting and commuting.</p> <p>Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2023) <a href="https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/">https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/</a>)</p> <p>This lighting where possible will be of low level, be on downward deflectors and be on PIR sensors. Using LED directional lighting can also be a way of minimizing the light spill affecting the habitat. No up-lighting should be used. Light spill must be minimized to 0.5lux.</p> <p>This will ensure that the roosting and commuting resources that the bats are likely to be using is maintained.</p>

The local planning authority have a duty to impose enhancements. The following table details the affordable and simple enhancements suitable for the site (Table 9).

Table 9: Enhancements to allow a net gain for protected species.

Work	Specification
<p>Enhancements to provide a net gain as per the LPA's duty.</p>	<p>A minimum of two Chillon Woodstone bat boxes or similar boxes (Figure 10) will be hung on suitable trees or on the sides of the building at a minimum of 3m from ground level and face south/southwesterly. These boxes are known to be used by crevice and void dwelling species.</p> <div data-bbox="824 747 1029 1062" data-label="Image">  </div> <p data-bbox="618 1115 1243 1142">Figure 10: Chillon Woodstone Bat Box (British-made)</p> <p>Two bat tubes can also be built into the building (Figure 11); these require no maintenance and can be hidden by facing the tube with the cladding/brick etc. for aesthetics.</p> <div data-bbox="859 1455 995 1751" data-label="Image">  </div> <p data-bbox="748 1770 1117 1797">Figure 11: Example of bat tube</p>

## 5.0 References

Cherryfield Ecology (2023), Preliminary Bat Roost Assessment Report

CIEEM (2018), Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal, September 2018. Chartered Institute of Ecology and Environmental Management, Winchester, online at <https://www.cieem.net/data/files/ECIA%20Guidelines.pdf>

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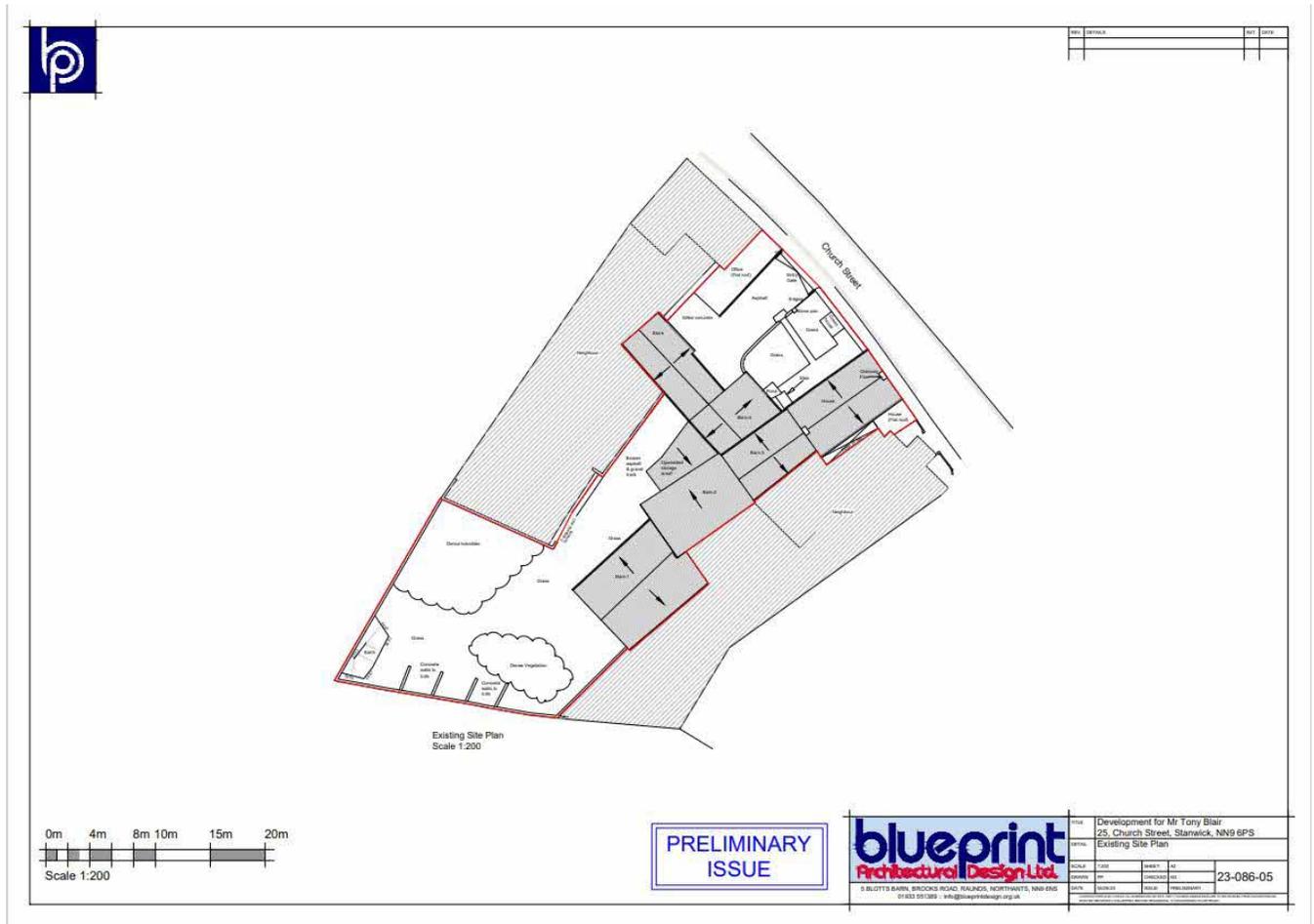
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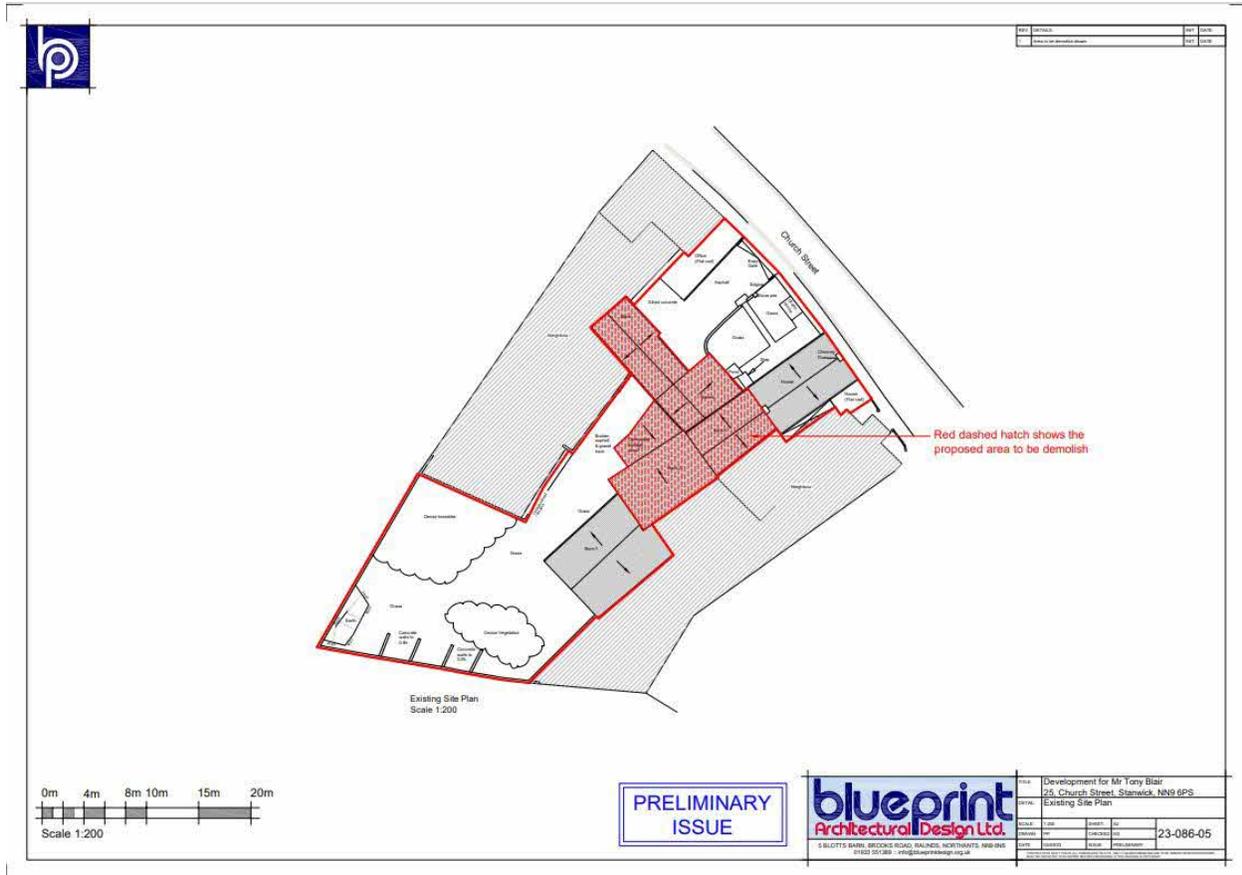
Reason, P.F. and Wray, S. (2023). UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats. Chartered Institute of Ecology and Environmental Management, Ampfield

Records: Northamptonshire Biodiversity Records Centre (2023)

## Appendix I - Site Plans



Existing Site Plan (Blueprint Architectural Design Ltd, 2023).



Proposed Site Plan (Blueprint Architectural Design Ltd, 2023)