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Report prepared for: Duncan Edward

For the Site of: 6 The Drive Wheathampstead St Albans Herts AL4 8LF

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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 licenses 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 the 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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Preliminary Roost Assessment (PRA)

0.0 Non-Technical Summary

0.1 Background

The survey undertaken follows national guidelines (Collins, 2023) allowing for a day-time inspection and recommends for further surveys 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 6 The Drive Wheathampstead St Albans Herts AL4 8LF.

The client commissioned Cherryfield Ecology to undertake a PRA as the proposals include for a two storey extension to the rear of the site. Plans have been provided (Appendix I).

0.2 Results and Findings

The site consists of a detached two-storey dwelling. No bats or evidence of bats were found on site. B1 provides moderate potential for roosting bats due to the presence of some gaps on the affected area, and gaps across the rest of the building.

0.3 Impact Assessment and Recommendations

Presence/likely absence surveys (moderate) will be required (**two surveys, three weeks apart**), with **three surveyors** to cover the **main building and rear extension of the building B1**; these must be undertaken between May to August. If bats are found to be present, one further survey will be required (a minimum of three weeks apart), which can be undertaken in September if required.

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 4.4 for further details).

1.0 Introduction

1.1 Aim of the Survey

This report aims to inform the client of any bat issues that may be present on-site and that could affect the development. It recommends for further surveys when considered necessary and provides possible mitigation and enhancement should this become required.

1.2 Background Information

The client, Duncan Edward, has commissioned Cherryfield Ecology to undertake a PRA for the site of 6 The Drive Wheathampstead St Albans Herts AL4 8LF. Planning permission is being sought for a two storey extension to the rear of the site.

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 features known to be used by bats e.g. crevices, gaps or holes.

The inspection was conducted on 26/09/2024.

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 evidence.

Biological records have been requested to give the report context and allow a study of the surrounding area. The information is often sensitive and, therefore, a synopsis is provided.

The survey can be conducted year-round, however, it can be limited due to bad weather and in the winter when bats are not active, thus evidence and bats are often not found. During these periods, habitat value (likely presence) becomes more important to the assessment of the site.

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 the following equipment is available for the inspection (it may or may not all be used):

- Torches (e.g. LED Lensar type).
- Ladders (Standard 4m telescopic surveying ladder).
- Endoscope where holes, cracks and crevices are accessible.
- Mirrors as above (extendable and movable mirror face).
- Binoculars (Pentax close focus).
- Thermometer/hygrometer.
- Camera.
- Sample bags for collecting droppings and feeding evidence (should this be found).

The assessment allows for a detailed inspection of the site looking for bats, evidence of use by bats e.g. droppings/feeding remains, and features known to be used by bats for roosting e.g. gaps, crevices and holes. Trees and buildings are assessed from ground level only and may require climbed surveys of holes, cracks and crevices.

Biological records data is ordered from the local records centre to provide context and background information. As the data is often sensitive, a synopsis is provided.

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

No deviation from the standard guidelines has been made for this survey.

2.1 Limitations

This survey provides a snapshot of the site at the time of the survey 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.

Table 1: Roosting features (likelihood) of bat presence assessed against Collins (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.
Moderate and Lower likelihood of bat presence.	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.
Negligible likelihood of bat presence.	No obvious features suitable for roosting, minor foraging or commuting.
None	No features suitable for roosting.

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 - TL16951703 and Postcode - AL4 8LF.

3.1.1 MAGIC

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

Table 2: Magic search results

Receptor	Distance and Direction to Nearest (m/km)	Description
Statutory sites	~1670m southwest	Marshall's Heath
Granted protected species licenses (bats)	~1081m north	2014-3918, 2012-4953 Common pipistrelle,
	~1814m southeast	2018-34371 Brown long eared, Common pipistrelle
	~835m south	2018-36307 Brown long eared
Priority habitat	~794m southeast	Good Quality Semi-improved Grassland
	~670m southeast	Lowland Heathland
	~342m east	Ancient Woodland
	~60m north	Deciduous Woodland
	~1237m north	Traditional Orchards
	~2km east	Woodpasture and Parkland

MAGiC

AL4 8LF

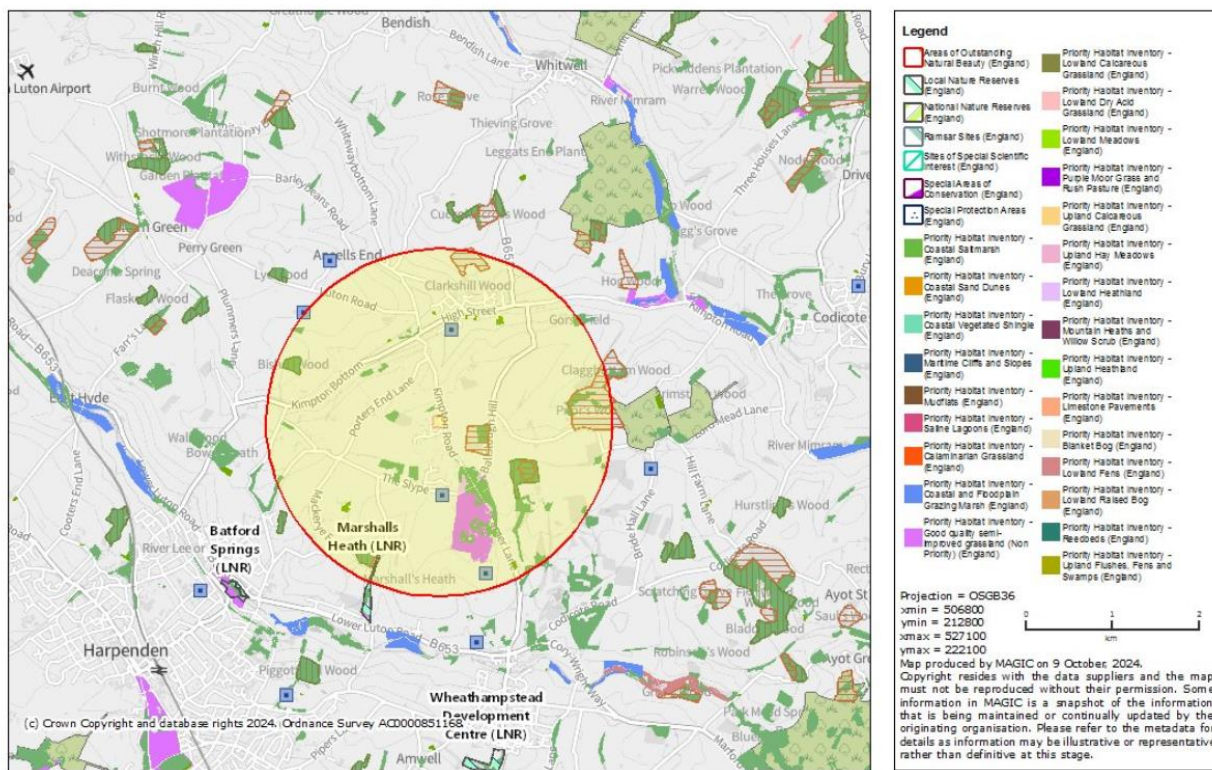


Figure 1: Magic Map Search

3.1.2 Biological Records Data

A standard search of existing records for protected species and nature reserves has been commissioned, below details the results and site context. *Data over 10 years old is not included.*

Biological records were obtained from Herts Environmental Record Centre (2024).

Table 3: 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>	10	0m (10km)	2018
Common Pipistrelle <i>Pipistrellus pipistrellus</i>	9	770m (100m)	2018

Daubenton's <i>Myotis daubentonii</i>	10	0m (10km)	2016
Leisler's <i>Nyctalus leisleri</i>	1	1810m (10m)	2017
Nathusius' Pipistrelle <i>Pipistrellus nathusii</i>	-	-	-
Natterer's <i>Myotis nattereri</i>	14	0m (10km)	2016
Noctule <i>Nyctalus noctula</i>	3	1170m (1m)	2018
Serotine <i>Eptesicus serotinus</i>	-	-	-
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	2	1170m (1m)	2018
Unidentified Bat <i>Chiroptera</i>	3	1330m (10m)	2015
Unidentified Long-Eared <i>Plecotus sp.</i>	3	1810m (10m)	2017
Unidentified Myotis <i>Myotis sp.</i>	1	1810m (10m)	2017
Unidentified Pipistrelle <i>Pipistrellus sp.</i>	1	1550m(100m)	2014
Unidentified Vesper <i>Vespertilionidae</i>	-	-	-
Whiskered <i>Myotis mystacinus</i>	-	-	-
Whiskered/Brandt's <i>Myotis mystacinus/brandtii</i>	-	-	-

3.1.3 Site Location and Surrounds

The site is located in St Albans, Hertfordshire and is surrounded by low density housing and arable fields in the immediate local area. Table 5 details the commuting, feeding and habitat features in a 1km radius of the site.

Table 4: Habitat features suitable for bat use in the general area.

Feature	Description
Watercourses	There are no significant watercourses within the search area.
Waterbodies	There are no significant waterbodies within the search area.
Woodland	Hall Wood is located approx. 366.53m southeast. An unnamed woodland is located approx. 657.95m southeast. Lamer Wood is located approx. 980.85m southeast.
Linear e.g. hedgerows	Garden and field margin hedgerows are found across the search area.
Pasture/arable/grassland	Arable fields can be found to the north, east and west of the site, approximately 125m away. Small patches of grassland can be found throughout the search area.
Other	Mid Herts Golf Course is located approx. 926.06m southeast.

3.2 Building, Tree or Other Structure

This section details the structures reference and description (see Figure 11 for Site Plan).

Building/tree/structure reference - B1 (Main Building)

3.2.1 General Description

The site consists of a detached dwelling (B1) with associated gardens surrounded by low-density residential housing.

Table 5: Weather Records

Parameter	Unit/Value
Temperature	19°C
Cloud cover	40%
Precipitation	None
Wind	1/12

Table 6: Building/Tree/Structure description(s)

Building/Tree/Structure Number	Description
B1	External B1 is a two-storey, brick built detached residential dwelling. The roof is in a complex, hipped structure, with clay roofing tiles and two chimneys present. Tightly fit timber soffit box surrounds the eaves of the building. Single storey extensions can be found to the front and the rear. The front extension will be unaffected by the proposed plans and is in a hipped structure with dormers and clay roofing tiles. The rear extension will be demolished during the proposed plans, it is single storey and brick built with a chimney and clay roofing tiles present.



Figure 2: Example of B1's exterior



Figure 3: Example of B1's exterior



Figure 4: Example of B1's front extension



Figure 5: Example of B1's rear extension

Internal

Internally B1 has one loft void, in a hipped structure with three cross gables. The loft is timber framed and the tiles are lined with felt and timber, the floor is insulated and boarded.



Figure 6: Example of B1's loft void

3.3 Bats, Evidence or Likelihood of Bat Presence

The following table details the results of the survey.

Table 7: Bats, evidence or likelihood of bats being present.

Bats found	No bats were found at the time of the survey.
Evidence of bat use	No evidence of bats was found at the time of the survey.

Potential for bat use	Level of likelihood of presence - B1 - Moderate B1 provides moderate potential for roosting bats due to the gaps in the clay roofing tiles which will be affected by the proposed plans, and some other gaps along the rest of the building.  Figure 7: Example of gaps in the rear extension's roofing tiles  Figure 8: Example of gaps in the effected roofing tiles on the main building
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Figure 9: Example of gaps in the roofing tiles



Figure 10: Example of the tight soffit box

3.4 Supplementary Observations

Table 8 other protected species found at the time of the survey.

Breeding Birds	n/a
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Figure 11: Site Plan

4.0 Conclusions, Discussion and Recommendations

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

Building/tree/structure reference - B1 (Main Building)

4.1 Conclusion and Discussion

The proposals include for a two storey extension to the rear of the site.

The site consists of a detached two-storey dwelling. No bats or evidence of bats were found on site. B1 provides moderate potential for roosting bats due to the presence of some gaps on the affected area, and gaps across the rest of the building.

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 8: Impact Assessment.

Impact	A bat roost may be lost in the development.
Characterisation of unmitigated impact on the feature	A bat roost could be destroyed when the buildings are demolished resulting in a low-level loss/impact at a local level.
Effect without mitigation	Without mitigation, individual bats could be killed, injured or trapped during the works.
Mitigation and Enhancement	See Table 9 and 10
Significance of effects of residual impacts (after mitigation)	If lost roosts are replaced by bat boxes, the effects would be negligible.

4.3 Recommendations

Presence/likely absence surveys (moderate) will be required (**two surveys, three weeks apart**), with **three surveyors** to cover the **main building and rear extension of the building B1**; these must be undertaken between May to August. If bats are found to be present, one further survey will be required (a minimum of three weeks apart), which can be undertaken in September if required.

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 4.4 for further details).

4.4 Recommended Mitigation and Enhancements

The following table details the recommended mitigation if bats are found following further surveys (Table 9).

Table 9: Proposed mitigation and compensation if bats are found following further survey.

Work	Specification
Precautions to be undertaken during works.	The following must be undertaken: All works must be undertaken within 12 months of this report, thereafter a material change check will be required to check for changes that could affect potential bat habitat.
Lighting	Any lighting near or shining onto any trees will be designed to minimise the impact it has on potential bat roosting and commuting. Lighting will be in line with the BCT lighting guidelines (Bats and Lighting in the UK (Bat Conservation Trust, 2023) https://www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/ 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 minimising the light spill affecting the habitat. No up-lighting should be used. Light spill must be minimized to as

	low a lux as possible. This is because moonlight is 0.3lux, any lighting currently present on site will exceed this, thus making it impossible to achieve a lux on site of less than 1lux. This will ensure that the roosting and commuting resources that the bats are likely to be using are maintained.
General Information	No development will occur until bat surveys consistent with the Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition (Collins, 2023) have been undertaken in the appropriate survey season, May to September (Mid-May to August optimal). The Three Tests to be answered before planning can be granted (NE, 2017): <i>Test 1:</i> Regulation 53(2)(e) states: a licence 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”. 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. <i>Test 2:</i> Regulation 53(9)(a) states: the appropriate authority shall not grant a licence unless they are satisfied “that there is no satisfactory alternative” Test 2 would be achieved on the grant of consent as no other sites have been considered for the development. <i>Test 3:</i> Regulation 53(9) (b) states: the appropriate authority shall not grant a licence 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.” Test 3 will be achieved once full emergence/re-entry surveys are conducted and full mitigation appropriate to species and population has been designed and implemented via an NEPS licence issued from the statutory authority (Natural England), if this becomes necessary following a dusk and pre-dawn survey.
Mitigation	Based on 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, <u>subject to change following stage 2 surveys.</u> Under license demolition of suitable bat roosting features e.g. roofing tiles etc. will require the supervision of a bat licensed ecologist. The suitable bat roosting features e.g. roofing tiles. will be stripped by hand only. All areas across the roof/wall tops/weatherboarding etc. will be checked for bats i.e.

endoscope (where possible) and via destructive search. If bats are found, these will be removed by hand (Ecologist only) and placed in bat boxes that will be in place before works begin.

Bat boxes will be installed. These will be no less than 3m above ground level and away from any neighbouring ledge to prevent local cats from predating on bats using the boxes.

A minimum of one Chillon Woodstone bat box(es) or similar boxes (Figure 12) will be hung on the trees 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.



Figure 12: Chillon Woodstone Bat Box (British-made)

Bat tubes can also be built into the building (Figure 13). These require no maintenance, can be installed on a gable end/under an eave, no less than 3m above ground level, face south or north and can be faced in any material to provide an aesthetic matching the reminding building.



Figure 13: Example of bat tube

Commuting bats may be using the grounds and surrounds - therefore, any tree, hedges or linear feature should be retained where possible.

Roof and Tile Linings	Bitumen Felt - When a bat roost is present and being mitigated/compensated we only recommend this type of linear for the tiles/roof covering. There is no reason that building regulations will not allow a traditional 'cold roof' and, therefore, we recommend this as the best design for bats in any project where bats are able to access the roof/loft or hung tile/weatherboarding etc. 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. However, Natural England will accept an MRM being used in a bat roost under the following circumstances - 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. Assuming the certificate is provided with the license application, NE will issue/register the site. It is for the client to provide the certificate to the Ecologist applying for the license.
Timing	Once the NEPS licence is obtained, works can occur during the designated timeframe; it is best to avoid the maternity (mid-May to August) and hibernation (December to March) seasons. It is not always necessary if the roost can be shown to be a day roost of a common species. Works will be timed in order to take advantage of mild weather conditions. Several consecutive nights with temperatures no lower than 7°C to avoid disturbing potentially hibernating bats. Ideally, the demolition will occur when bats are active and can be moved to alternative roosts in the area e.g. Autumn when bats are moving away from summer roosts to mating roosts.

The local planning authority have a duty to impose enhancements. The following table details the affordable and simple enhancements suitable for the site (Table 10).

Table 10: Enhancements to allow a net gain for protected species.

Work	Specification
Enhancements to provide a net gain as per the LPA's duty.	A minimum of one Chillon Woodstone bat boxes or similar boxes (Figure 14) will be hung on the trees 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.  Figure 14: Chillon Woodstone Bat Box (British-made) Bat tubes can also be built into the building (Figure 15); these require no maintenance and can be hidden by facing the tube with the cladding/brick etc. for aesthetics.  Figure 15: Example of bat tube

5.0 References

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>

Collins, J. (ed.), (2023), Bat Surveys for Professional Ecologists: Good Practice Guidelines 4th Edition, BCT, London

Google Earth, (2024), Located on site postcode, online

MAGIC, (2024): Magic maps, NEPS licences and designated sites, online

<http://www.magic.gov.uk/Login.aspx?ReturnUrl=%2fMagicMap.aspx>,

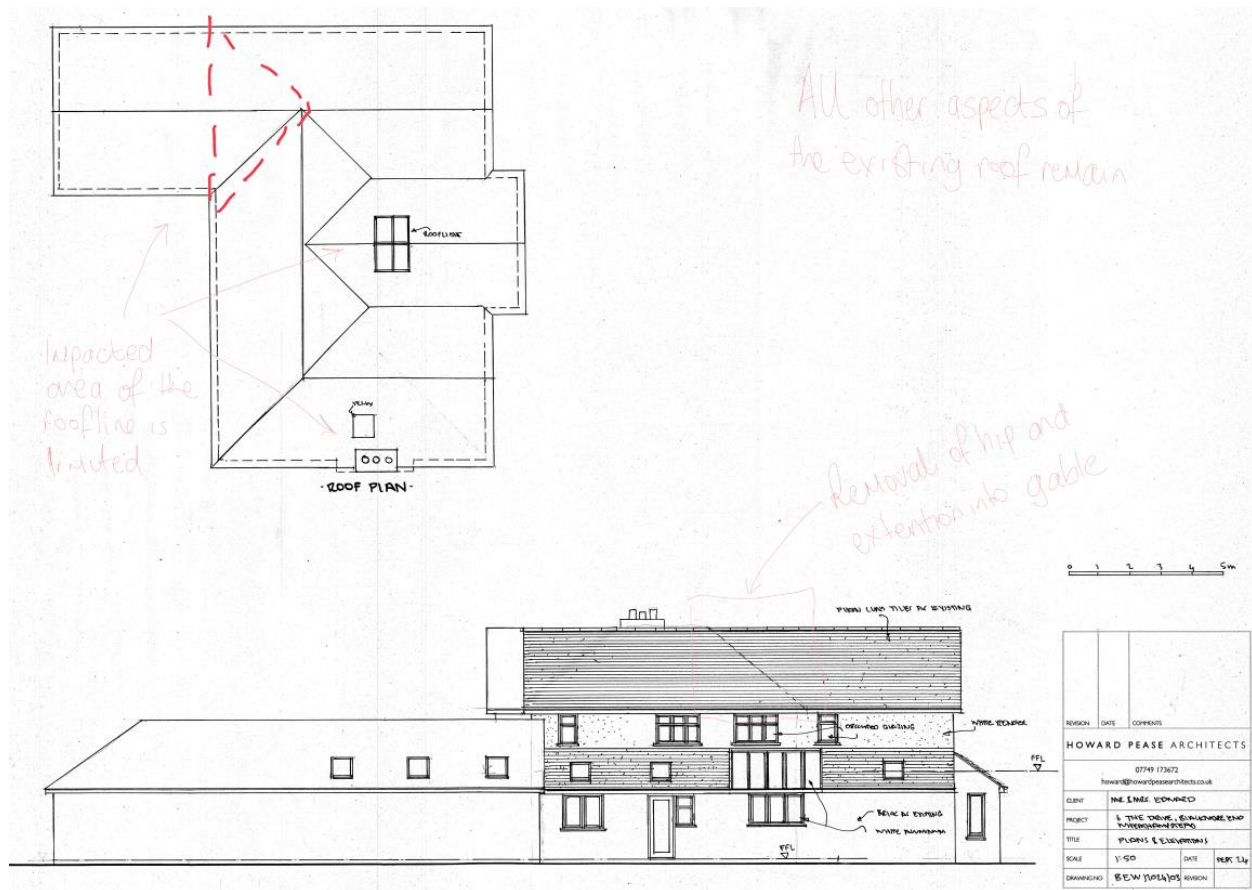
accessed as report date.

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: Herts Environmental Record Centre (2024)

Appendix I - Site Plans



Proposed Site Plan (Howard Pease Architects, 2024)