

BAT SURVEY

58 LANGBOROUGH ROAD
WOKINGHAM
RG40 2BT

Client: Arthur Tong

Our reference: ECO3842b

Report date: 02 October 2025

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1.0 Introduction

Survey and reporting

- 1.1 This report details the results of a Bat Survey of 58 Langborough Road, Wokingham, RG40 2BT.
- 1.2 The survey comprised a preliminary bat roost assessment, carried out on 13 June 2025, followed by three dusk emergence surveys carried out between July and September 2025.

Application site

- 1.3 The application site is located towards the eastern end of Langborough Road, a residential road to the south of Wokingham town centre (Grid Reference SU81316825; Figure 1).
- 1.4 It comprises a detached bungalow, detached garage, and, front and rear gardens.
- 1.5 The local planning authority is Wokingham Borough Council.

Details of proposed works

- 1.6 It is proposed to extend the house and convert the loft space into habitable roof level (see Figure 2). The existing conservatory and chimney stack will be removed to facilitate the proposals.
- 1.7 In addition, the detached garage will be demolished and replaced with a carport.
- 1.8 No trees will be affected by the proposed works.

Figure 1 – Site location

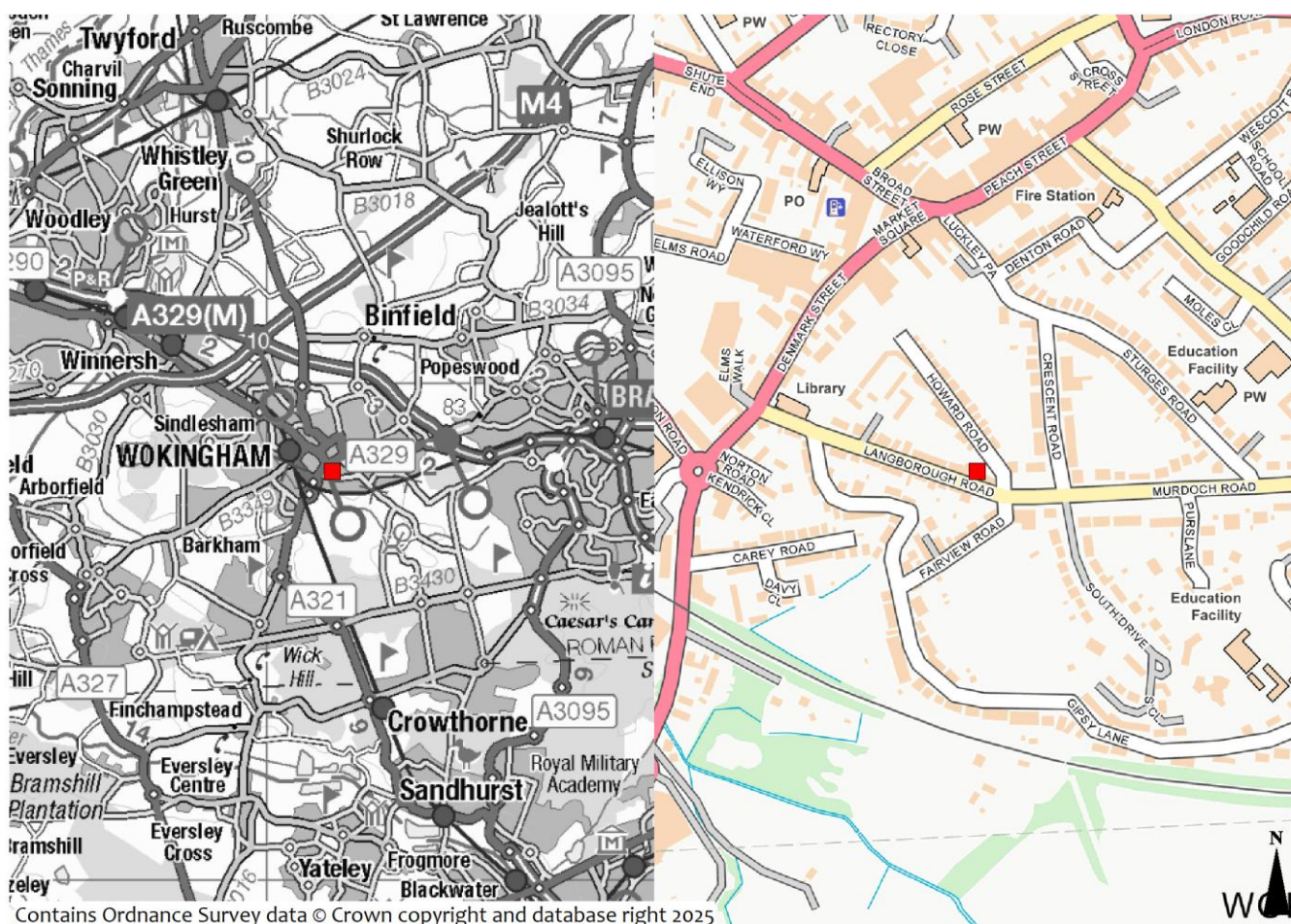
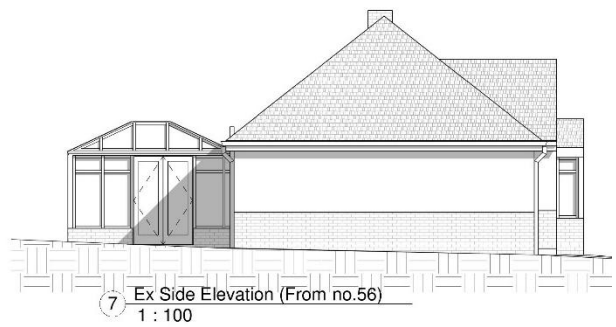


Figure 2 – Existing and proposed elevations



2.0 Methodology

Desk study

- 2.1 A desk study data search was undertaken. This involved reviewing publicly available datasets and citations of statutory designated sites of importance for nature conservation and Natural England's Ancient Woodland Inventory for sites within the zone of influence of the survey area (considered to be a maximum of 500m in this case).
- 2.2 In addition, species records (on the MAGIC website¹) were accessed, and aerial photographs and Ordnance Survey maps were studied for features of interest.

Bat survey

Daytime Bat Walkover (DBW)

- 2.3 A survey to assess the suitability of habitats for bats to roost, commute and forage within and adjacent to the site (where accessible). Habitat suitability was assessed as per Table 1 below.

Preliminary Roost Assessment (PRA)

- 2.4 This survey consisted of a detailed search of the interior and exterior of the buildings looking for bats and/or evidence of bats including droppings (on walls and windowsills and in roof and loft spaces), rub or scratch marks, staining at potential roosts and exit holes, live or dead bats and features, such as raised or missing tiles, potentially suitable for use by roosting bats. Binoculars, an endoscope, a ladder and a high-powered torch were used as required.
- 2.5 The buildings were classified in terms of their suitability for use by roosting bats (see Table 2) and in accordance with the Bat Conservation Trust's Bat Survey Guidelines².
- 2.6 Classification was dependent on a number of factors including:
 - Bats and/or signs of bats
 - External and internal features potentially suitable for use by roosting bats (e.g. raised or missing tiles, gaps behind fascia boards)
 - Setting
 - Night time light levels
 - Disturbance levels
 - Proximity of suitable foraging habitat and flight-paths (e.g. ponds, streams, woodland, large gardens, hedgerows)

Dusk emergence surveys

- 2.7 Three dusk emergence surveys of the main house were carried out on 02 July, 06 August, and 02 September 2025. Two surveyors were present during each survey.

¹ <http://www.natureonthemap.naturalengland.org.uk/>

² Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn) Bat Conservation Trust

- 2.8 Surveyors were equipped with professional ultrasonic bat detectors and bat calls were recorded to facilitate bat species identification with specialist software.
- 2.9 Night-vision aids (NVAs) were also stationed around the building so that all potential roosting features could be seen. Footage from the NVAs was reviewed the following day on desktop PCs using specialist software with the ability to motion track, zoom in and watch footage in slow motion.
- 2.10 The dusk surveys started 15 minutes before sunset and continued until one and a half hours after sunset.
- 2.11 Surveys were carried out in accordance with the Bat Conservation Trust's Bat Survey Guidelines. Timings, weather, and survey results are given in Appendix 2.

Surveyor details

- 2.12 The preliminary roost assessment was undertaken by Ryan Davies BSc (Hons) ACIEEM (senior ecologist) of GS Ecology Ltd.
- 2.13 Ryan holds a Natural England WML A34 Level 2 bat survey licence and is an associate member of the Chartered Institute of Ecology and Environmental Management with more than 10 years' experience as professional ecologist.
- 2.14 The dusk emergence surveys were undertaken by Cherry Leung Qualifying CIEEM, Alastair Bayliss, Callum Waldie, and Teresa Verney Brookes of GS Ecology Ltd. All are experienced bat surveyors.

Table 1 – Habitat suitability scale for potential flight-paths and foraging bats

		Potential Suitability	Description
Potential Suitability of potential flight-paths and foraging habitats	High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flight-paths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.	
	Moderate	Continuous habitat connected to the wider landscape that could be used by bats for flight-paths such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.	
	Low	Habitat that could be used by small numbers of bats as flight-paths such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.	
	Negligible³	No obvious habitat features on site likely to be used as flight-paths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour.	
	None [Not suitable]	No habitat features on site likely to be used by any commuting or foraging bats at any time of the year (i.e. no habitats that provide continuous lines of shade/protection for flight-lines, or generate/shelter insect populations available to foraging bats).	

³Negligible is defined as 'so small or unimportant as to be not worth considering, insignificant.' This category may be used where are places that a bat could roost or forage (due to one attribute) but it is unlikely that they actually would (due to another attribute)

Table 2 – Description of the categories used to assess a building’s bat roost potential and the survey effort required to determine the likely presence or absence of bats

	Roost status	Description	Survey effort required to determine the likely presence or absence of bats
Bat Roost Potential Status	Confirmed	Bats or evidence of bats found.	Surveys would be required to establish the status of the roost. Generally, three dusk emergence surveys between May and September. Optimum period May – August (two surveys should be undertaken during the optimal period). Surveys should be carried out at least three weeks apart.
	High	A structure 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 (For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance) and surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site.	Three dusk emergence surveys between May and September. Optimum period May – August. Two surveys should be undertaken during the optimal period. Surveys should be carried out at least three weeks apart.
	Moderate	A structure 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 (with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is made irrespective of species conservation status, which is established after presence is confirmed).	Two dusk emergence surveys, between May and September (one of the surveys needs to be carried out between May and the end of August). Surveys should be carried out at least three weeks apart.
	Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites 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 (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).	One dusk emergence survey between May and the end of August (but only if features will be affected by the proposals).
	Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.	No further surveys required.
	None [No potential]	No habitat features on site likely to be used by any roosting bats at any time of the year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).	No further surveys required.

3.0 Results

Weather conditions

- 3.1 Weather conditions during the preliminary roost assessment were 22°C, 1/8ths cloud cover, wind at Beaufort scale 1 and with no rain.
- 3.2 Weather conditions during the dusk emergence surveys are given in Appendix 2.

Desk study

Statutory sites of importance for nature conservation and ancient woodland

- 3.3 There are no statutory sites of importance for nature conservation or ancient woodland listed on Natural England's Ancient Woodland Inventory within 500m of the application site.

Bat licence records

- 3.4 Within 2km of the application site there are seven records of licences issued by Natural England for works affecting bat roosts on The MAGIC website. These records are summarised in Table 3 below.

Table 3 – Summary of Natural England licence records within 2km of the application site

Distance and direction from the application site	Species affected	Breeding site	Year licence was issued
0.7km South-east	Brown long-eared bat, common pipistrelle	No	2018
0.7km West	Common pipistrelle	No	2015
1.3km North-west	Noctule	Yes	2010
1.5km North-west	Brown long-eared bat	No	2016
1.6km North	Brown long-eared bat, common pipistrelle, soprano pipistrelle	No	2020
1.9km South-west	Brown long-eared bat	No	2014
1.9km South-west	Brown long-eared bat, common pipistrelle	No	2014

Surrounding land use

- 3.5 The application site is located towards the eastern end of Langborough Road, a residential road to the south of Wokingham town centre. Directly adjacent to the site, and further in all directions, are residential properties and their associated gardens with some trees. In places – notably 120m east – these gardens abut one another to form areas of continuous green space.
- 3.6 Approximately 65m south is Langborough Recreation Ground, an amenity grassland field bound by scattered trees. To the north (approx. 100m) lies Howard Palmer Gardens, a community garden with scattered trees, beyond which is the urban town centre of Wokingham.
- 3.7 Further to the south west (approx. 140m) are Gipsy Lane Allotments, which are bound at their peripheries by trees.
- 3.8 Approximately 280m south is a railway corridor bound by trees. Beyond this is a series of agricultural fields with numerous scattered trees, and, through which flows the Emm Brook, a watercourse lined by trees.
- 3.9 The habitats surrounding the site are therefore of predominantly “moderate” suitability for commuting and foraging bats (see Table 1).

Habitats within the application site

- 3.10 The application site comprises a detached bungalow, detached garage, and, front and rear gardens. The front garden has two segments of amenity grassland lawn divided by a garden path. At the peripheries are shrub borders and small, ornamental trees.

- 3.11 The rear garden has a flagstone patio, amenity grassland lawn, flowerbeds and rockeries, and, a small, ornamental pond. There are two outbuildings in the rear garden – a greenhouse and a wooden panelled garden shed – both of which are unsuitable for use by roosting bats.

Bat survey - preliminary roost assessment

Main house

- 3.12 58 Langborough Road is a detached bungalow with cavity brick walls, which are rendered one metre above ground level. The roof is pitched, hipped and clad with clay tiles. There is a secondary pitch at the front elevation, with a pitched-roof bay window at its gable end – both roofs are clad with clay tiles.
- 3.13 There is a UPVC conservatory at the rear of the building at there are UPVC soffits at the eaves. There is UPVC cladding on the front bay window and no bargeboards at the gable verge.
- 3.14 Generally, the building is in good condition, with most of the roof tiles tightly fitted and the soffits rendered to the wall. In addition, the north eastern roof hip appears to have been recently repointed.
- 3.15 However, the house has a number of features potentially suitable of used by roosting bats including:
- Gaps between tiles on the front gable verge
 - Gaps due to raised tiles towards the gable verge
 - Gaps due to raised tiles adjacent to the chimney breast
 - Small gaps under roof tiles on the front and rear elevations
- 3.16 Internally the house has a single, large loft space with wooden beams and ridge boards. The roof is lined with bituminous underfelt. The loft is insulated with fibreglass and partially boarded out. The roof lining is generally in good condition, expect for a tear in the felt adjacent to the chimney breast. It was also possible to see daylight between the chimney breast and roof.
- 3.17 Approximately 80 droppings – akin to those of brown long-eared bats – were found within the loft space. These were scattered throughout the loft, with small piles of droppings below the eastern hip apex, and, the ridgeline of the gabled pitch.
- 3.18 58 Langborough Road is therefore a ‘confirmed’ bat roost (see Table 2).

Garage

- 3.19 At the north of the site, leading to Howard Road, is a small concrete driveway and detached, single garage. The garage has prefabricated concrete walls and a shallow-pitched roof, clad with corrugated fibreboard. Internally the roof and walls of the garage are unlined.
- 3.20 No bats or signs of bats were observed inside or outside of the garage, and it is assessed as having ‘negligible’ potential to host a bat roost (see Table 2).

Bat survey – dusk emergence surveys

Survey 1

- 3.21 During the first dusk emergence survey of the main house, carried out on 02 July 2025, 2 bat passes were recorded from 2 different species: Common pipistrelle (1 pass) and noctule (1 pass).
- 3.22 No bats emerged from the building during the survey.

Survey 2

- 3.23 During the second dusk emergence survey, carried out on 06 August 2025, 13 bat passes were recorded from 2 different species: Common pipistrelle (12 passes) and soprano pipistrelle (1 pass).

3.24 No bats emerged from the building during the survey.

Survey 3

3.25 During the third dusk emergence survey, carried out on 02 September 2025, 5 bat passes were recorded from 3 different species: Common pipistrelle (3 passes), soprano pipistrelle (1 pass), and noctule (1 pass).

3.26 No bats emerged from the building during the survey.

4.0 Assessment and recommendations

Legislation

- 4.1 All species of bats receive special protection under UK law and it is a criminal offence under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 (The Habitat Regulations), deliberately or recklessly to destroy or damage their roosts, or to disturb, kill or injure them without first having obtained the relevant licence for derogation from the regulations from the Statutory Nature Conservation Organisation (the SNCO - Natural England in England).
- 4.2 In issue a licence, the SNCO must apply the requirements of the Regulations and, in particular, the three tests set out in sub-paragraphs 55(2)(e), (9)(a) and (9)(b). These are as follows:
- (1) Regulation 55(2)(e) states that 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”.
 - (2) Regulation 55(9)(a) states that the appropriate authority (the SNCO) shall not grant a licence unless they are satisfied “that there is no satisfactory alternative”.
 - (3) Regulation 55(9)(b) states that the appropriate authority (the SNCO) 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.”
- 4.3 Planning Authorities have statutory duties under The Habitat Regulations. The Planning Authority needs to be satisfied that a licence for development works affecting bats is likely to be granted by Natural England and in order to be satisfied that this is the case they will need to consider whether the development meets the tests of The Habitat Regulations⁴.

Survey constraints

- 4.4 The surveys were carried out at times of year suitable for undertaking preliminary bat roost assessments and dusk emergence surveys and there were no constraints to the survey.

Site status

Main house

- 4.5 The presence of fresh bat droppings in the loft at 58 Langborough Road indicates that bats have roosted in the building (likely within the last 12 months). However, no bats emerged from the building during the dusk surveys carried out in 2025 and it is therefore considered that bats were not roosting in the building at the time of the dusk surveys. The bats (or bat) were likely to have been roosting in the main loft space, accessed via gaps between the roof and chimney.
- 4.6 Brown long eared bats – the species most likely to have been roosting in the building - are a quiet species that emerge from their roosts late into the evening and change roosts frequently (i.e. they may have multiple day roosts within their home range).

⁴ The courts have considered the application of a planning authority's duty under the Habitat Regulations (and therefore the Habitat Directive) in the cases of Woolley vs Cheshire Borough Council (2009) and Morge vs Hampshire County Council (2010). In the Morge vs Hampshire County Council case the supreme court has ruled that it cannot see why planning permission should not be granted unless the proposed development:

- Would be likely to offend the prohibitions in Article 12(1) and
- Would be unlikely to be licensed as a derogation from those provisions

- 4.7 If the roost is still active the loss (and replacement) of the roost will not have a detrimental impact on the favourable conservation status of brown long eared bats. This is because:
- Brown long-eared bats are classified as “Widespread all geographies” in all areas of the UK (see Table 3.1 on Page 30 of the UK Bat Mitigation Guidelines⁵).
 - The day roosts of these species are of “site” importance (see Table 3.2 on Page 33 of the UK Bat Mitigation Guidelines).
- 4.8 There are therefore two options for this development:
- (1) Carry out works under a non-licensed method statement (see Section 4.14 below). However, if a bat were to be found then works would need to stop until a licence had been obtained from Natural England which would cause delays. Regardless in accordance with planning policy new roosting provisions would need to be provided.
 - (2) Register the site under Class Licence WML-CL21, which is “to permit activities resulting in disturbance / capture of bats and/or damage/destruction of bat roosts of low conservation significance only”. To be registered under this licence a “Registered Ecological Consultant”⁶ (a professional ecological consultant who has met standards set by Natural England and been successfully registered to use the licence at registered sites) submits licence forms to Natural England. The site is then registered by Natural England under the licence and works can commence. It usually takes no more than three weeks for a site to be registered. This would mean that works would not need to stop if bats were found.
- 4.9 Our advice is that the second option would be the best course of action as it would minimise the risk of delays (and associated costs). Regardless the Mitigation Strategy detailed in section 4.14 below would need to be adhered to for either option.

Garage

- 4.10 The garage has no features potentially suitable for use by roosting bats and is therefore assessed as having ‘negligible’ potential to host a bat roost (see Table 2). As such, this building can be removed or worked on with minimal risk of harm to bats

Further survey requirements

- 4.11 Three bat dusk emergence surveys of the main house at 58 Langborough Road were undertaken over the bat survey season and in accordance with The Bat Conservation Trust’s Bat Survey Guidelines. There are therefore no further survey requirements.
- 4.12 However, if works to the building haven’t commenced by May 2027, an updated bat survey may need to be carried out in order to inform a Natural England licence application (Natural England’s advice is that a licence should be informed by information from the current or most recent bat-active season).

Mitigation strategy

- 4.13 In order to comply with planning policy and wildlife legislation (see sections above) it will be necessary to ensure that following development the “favourable conservation status” of bats will be maintained.

⁵ Reason, P.F. and Wray, S. (2023). *UK Bat Mitigation Guidelines: a guide to impact assessment, mitigation and compensation for developments affecting bats*. Version 1.1. Chartered Institute of Ecology and Environmental Management, Ampfield.

⁶ Giles Sutton is a “Registered Ecological Consultant”

4.14 The following mitigation strategy would meet the requirements detailed above:

New roosting provisions (to ensure that the long term conservation status of bats is maintained)

- (1) Bat boxes - to receive bats found during works: A single Schwegler 2f bat box (see <http://tinyurl.com/lheb63z> or a bat box constructed in accordance with Bat Conservation Trust guidelines) will be installed by the Ecological Clerk of Works (ECoW) in a suitable location in the rear garden prior to the commencement of works. This will be used to receive any bats captured during the works but will remain in place, and therefore be available to bats after the works.
- (2) New roosting provisions - to be provided in extended house as sustainable roosting sites for bats. This will be in the form of 2x integrated bat boxes (see Figure 3) installed behind the new cladding in the locations show in Figure 4.
- (3) All new roof and wall lining (including behind the new cladding) is to be bitumen 1F type roofing felt, or a breathable membrane that has passed a snagging propensity test⁷ as other breathable membranes have been found to kill bats.

Working method statement (to ensure that bats are not harmed during works)

- (4) Prior to the start of construction works a licensed bat ecologist will check inside the loft for bats and or signs of bats.
- (5) All works with the potential to harm bats (removal of: Roof tiles, roof timbers and lining, chimney breast) will be overseen by a Natural England bat licence holder acting as an ECoW.
- (6) The ECoW will oversee the careful dismantling of all features suitable for use by roosting. Any bats are found will be caught by hand or using a hand-held net and moved to the bat box that will have been installed in a suitable location in the rear garden (see above). The entrance to the box will be temporarily blocked with a cloth which will be removed at dusk.
- (7) Once all features potentially suitable for use by roosting bats have been removed contractors will be allowed to continue the works unimpeded.

Ongoing habitat management (to ensure that the roosts remain suitable for use by roosting bats)

- (8) New roost access points will not be illuminated, and care will be taken to ensure that exterior lighting does not illuminate roost access points or large parts of the building. Elsewhere, if security lighting is installed it will be directional low lux and/or triggered by motion detection devices located below (human) head height.

⁷ A snagging propensity test checks that the membrane can stand the repeated snagging actions of roosting bats. To pass, a membrane must show no change in the average number of loops per cm² as rotations are increased from 0 to 1000. See <https://www.gov.uk/government/publications/bats-apply-for-a-mitigation-licence#full-publication-update-history:-:text=Use%20of%20safe%20roofing%20membranes>

Figure 3 – Specifications for integrated bat boxes behind new cladding

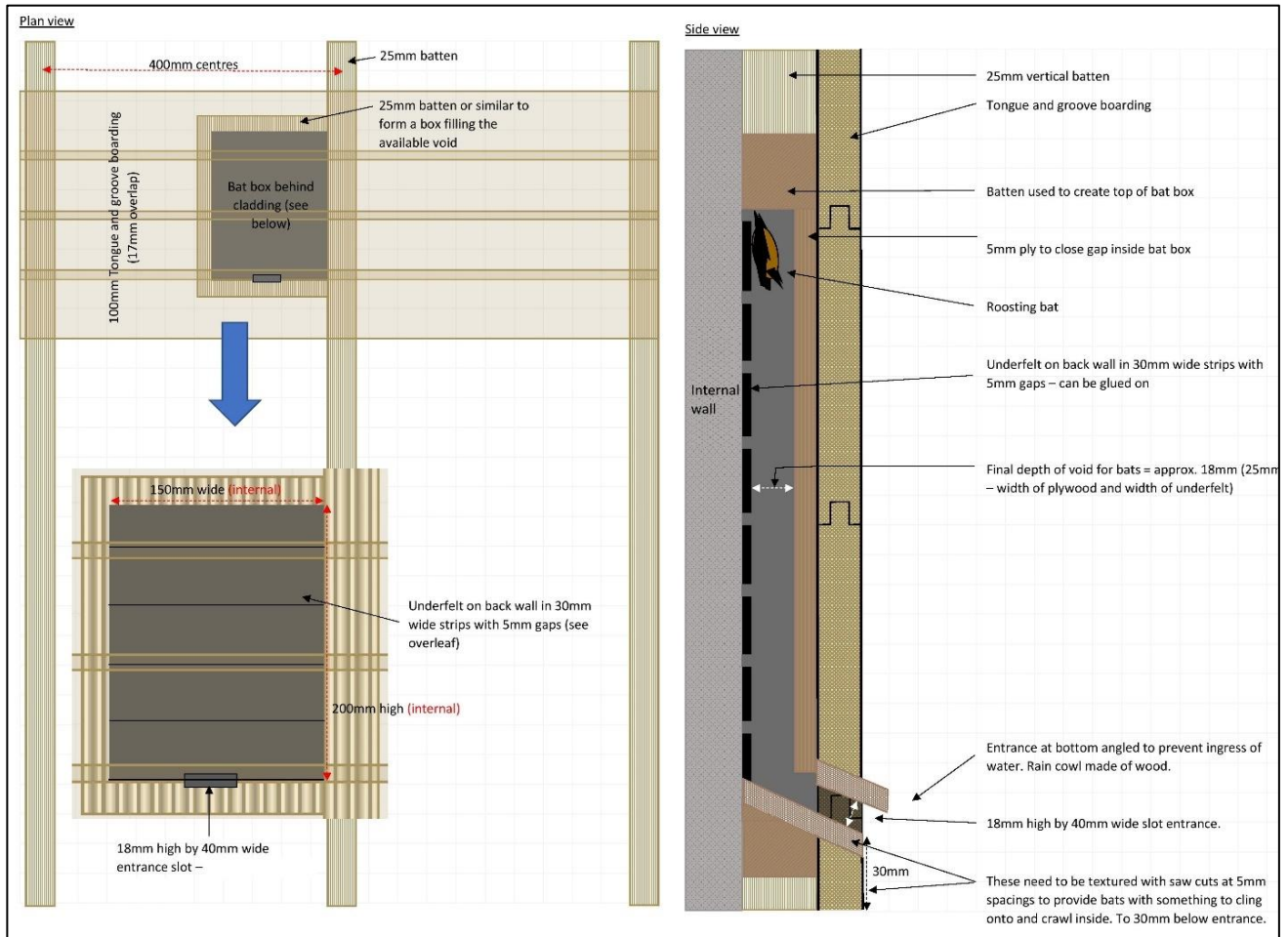
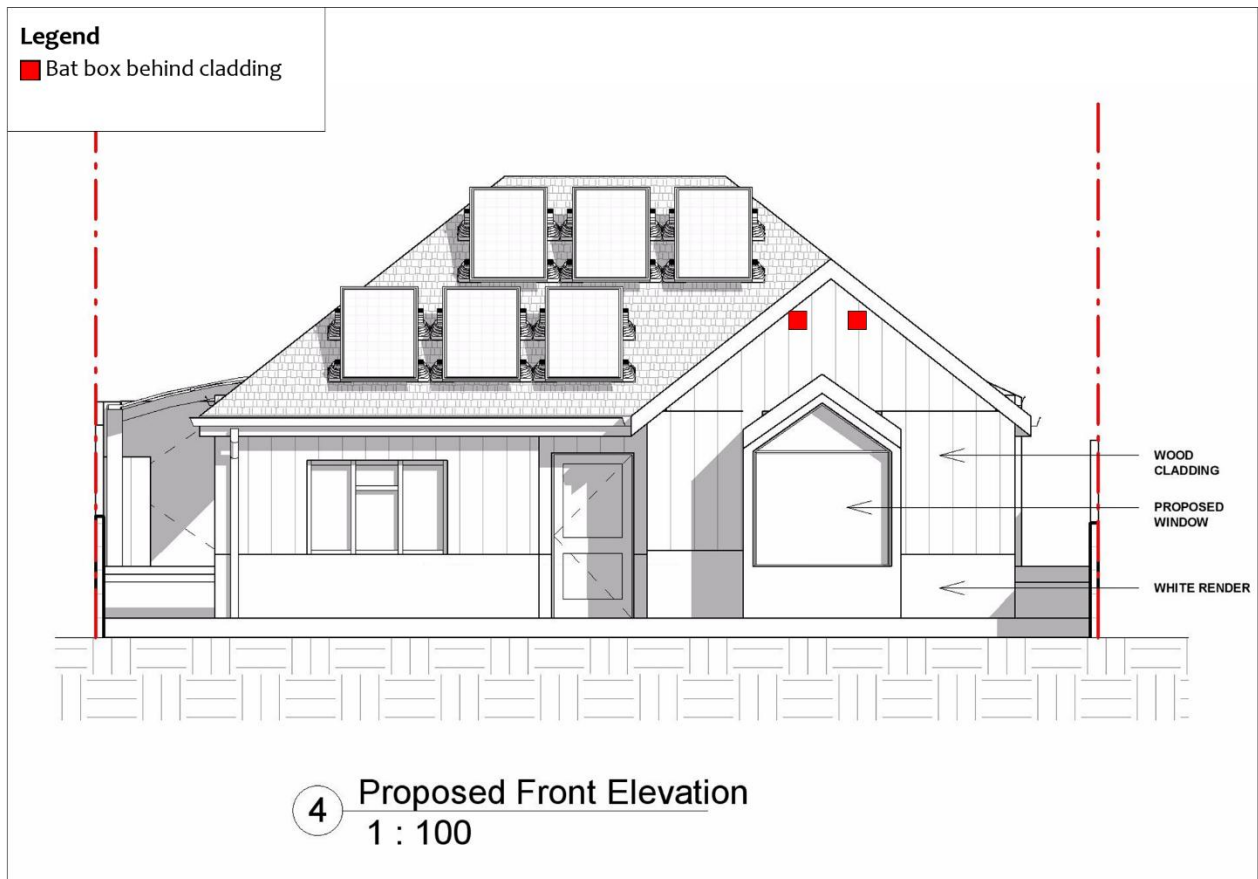


Figure 4 – Proposed front elevation showing locations of bat mitigation measures



5.0 Summary

- 5.1 The presence of fresh bat droppings in the loft at 58 Langborough Road indicates that bats have roosted in the building (likely within the last 12 months). However, no bats emerged from the building during the dusk surveys carried out in 2025 and it is therefore considered that bats were not roosting in the building at the time of the dusk surveys. The bats (or bat) were likely to have been roosting in the main loft space, accessed via gaps between the roof and chimney.
- 5.2 There are therefore two options for this development.
- (1) Carry out works under a non-licensed method statement (as given in this report). However, if a bat were to be found then works would need to stop until a licence had been obtained from Natural England which would cause delays. Regardless in accordance with planning policy new roosting provisions would need to be provided.
 - (2) Register the site under Class Licence WML-CL21, which is “to permit activities resulting in disturbance / capture of bats and/or damage/destruction of bat roosts of low conservation significance only”. This would mean that works would not need to stop if bats were found.
- 5.3 Our advice is that the second option would be the best course of action as it would minimise the risk of delays (and associated costs). Regardless the Mitigation Strategy detailed in section 4.14 this report would need to be adhered to for either option.
- 5.4 The garage has ‘negligible’ potential to host roosting bats and can be demolished with minimal risk of harming bats.

Appendix 1 - Photographs

Photos 1 and 2 –



Photos 3 and 4 – Gaps between tiles towards the gable verge



Photo 5 – Gaps under tiles adjacent to the gable verge, Photo 6 – Raised tiles adjacent to the chimney

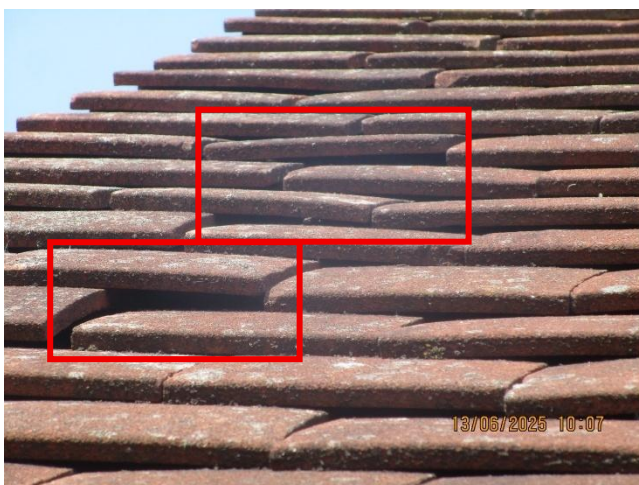


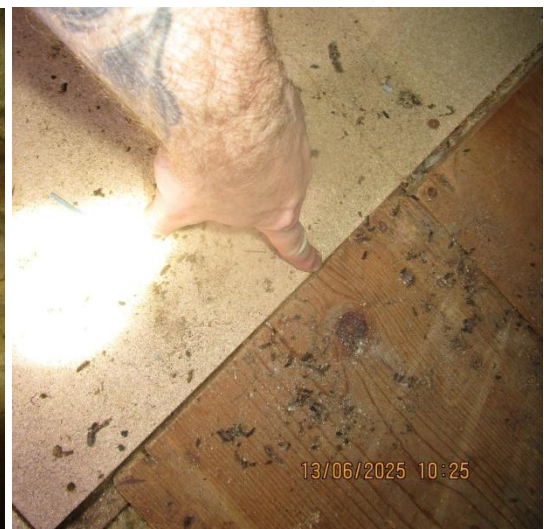
Photo 7 – Rear roof elevation, with tiles generally tightly fitted and recently repointed hip tiles, and,
Photo 8 – Tightly fitted soffits



Photos 9 and 10 – Inside the loft at 58 Langborough Road



Photos 11 and 12 – Bat droppings inside the loft space



Photos 13 and 14 – The garage viewed from the side and rear



Photo 15 – Inside the garage

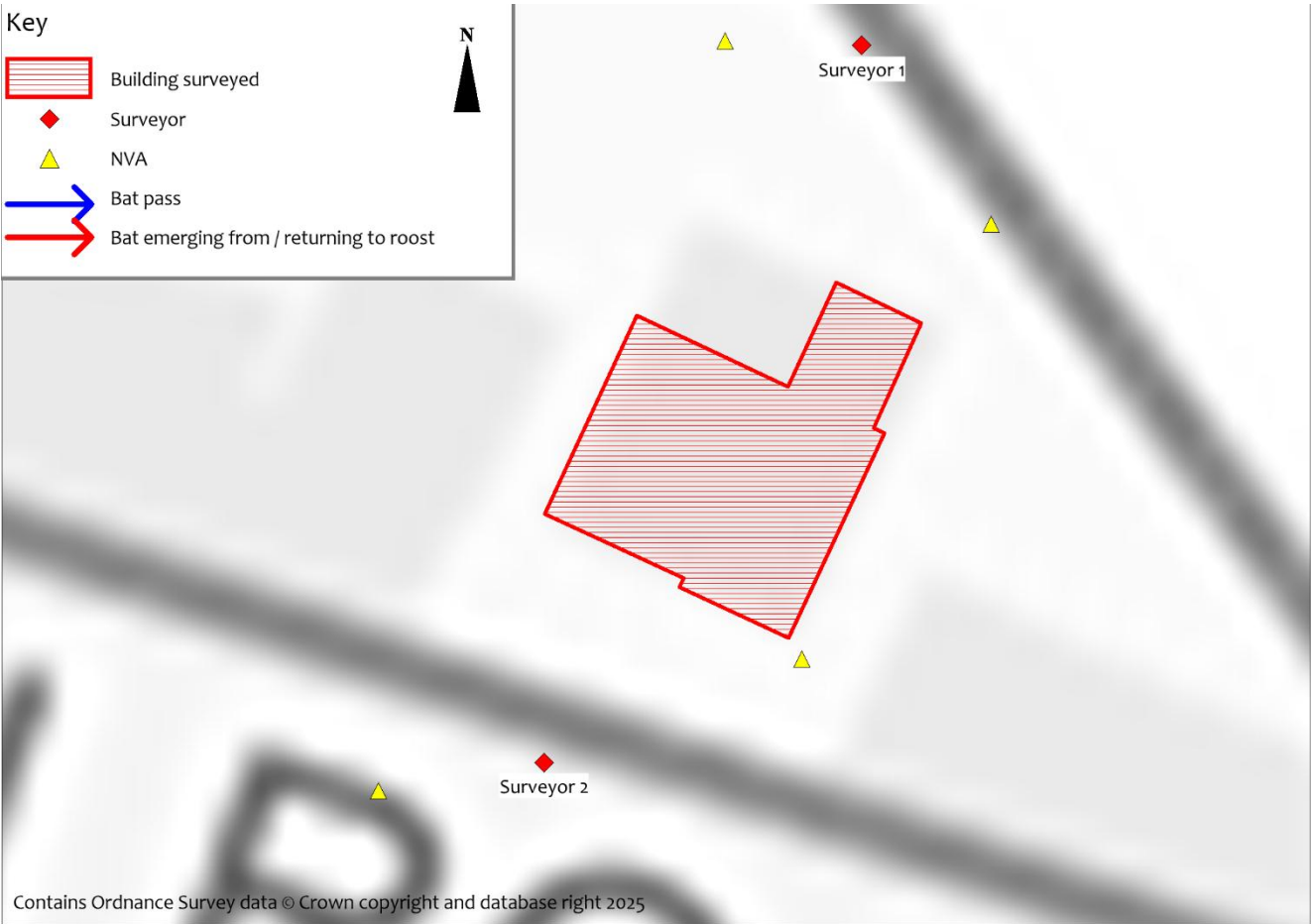


Appendix 2 – Dusk survey results

Survey 1

Date	02/07/2025	Weather	Start	End
Sunset time	21:23	Temperature (Celsius)	19	16
Start time	21:08	Cloud cover (8ths)	0	0
End time	22:53	Wind (Beaufort scale)	1	1
		Rain	None	None
Surveyor 1	CL	Surveyor 2	AB	
Bat detector	EM Touch	Bat detector	EM Touch	

Surveyor	Time	Species	Number of bats	Map ID	Notes
1	22:36	Common Pipistrelle	1	N/A	Not seen
1	22:38	Noctule	1	N/A	Not seen

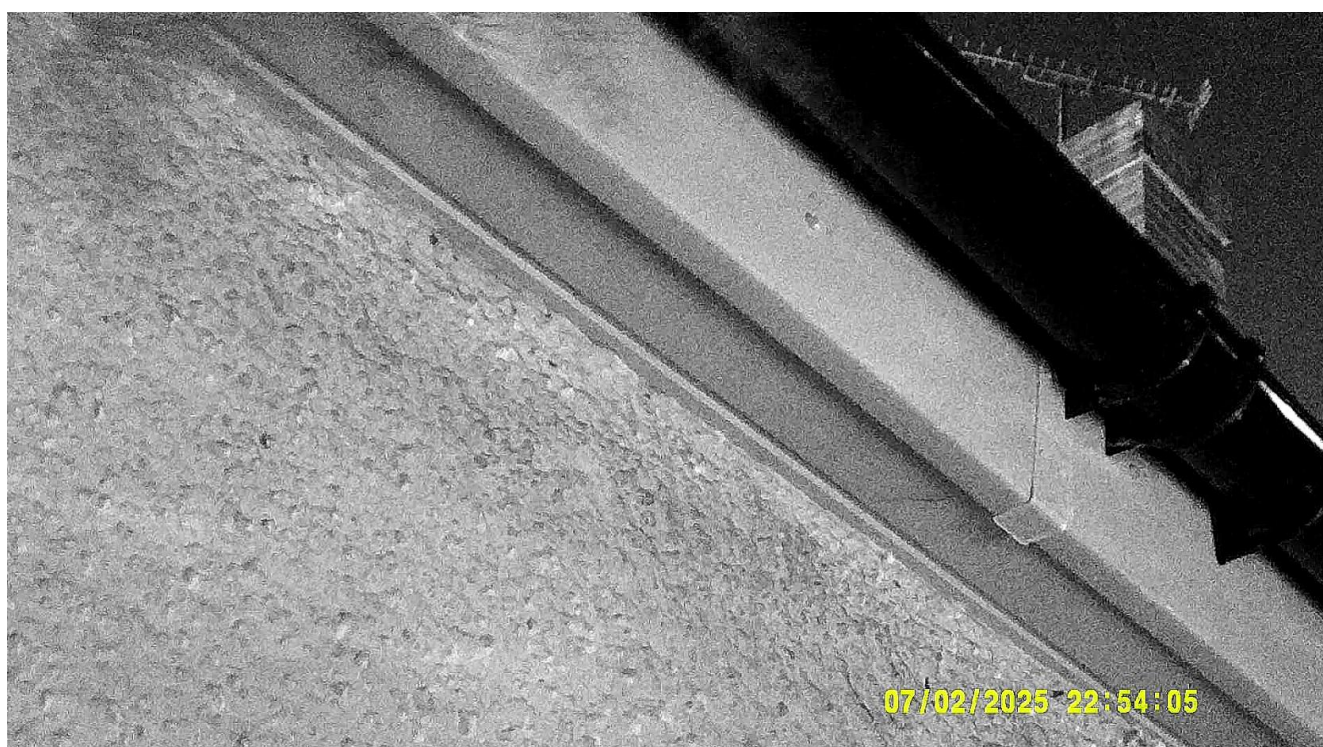


Infrared images from the darkest point of survey (all taken on Nightfox Whisker)

Surveyor 1 (2x NVAs)



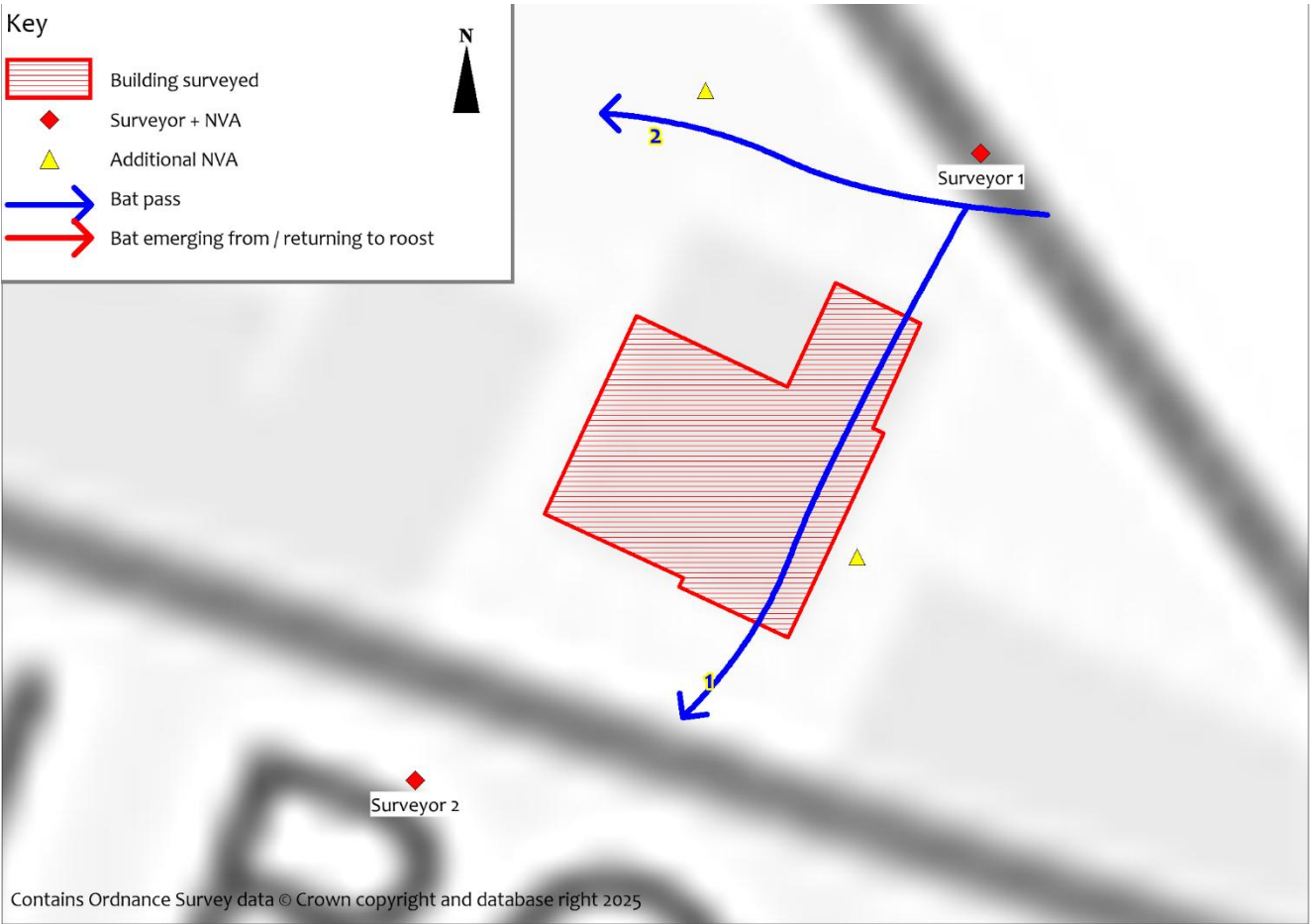
Surveyor 2 (2x NVAs)



Survey 2

Date	06/08/2025	Weather	Start	End
Sunset time	20:43	Temperature (Celsius)	19	17
Start time	20:28	Cloud cover (8ths)	6	7
End time	22:13	Wind (Beaufort scale)	1	2
		Rain	None	None
Surveyor 1	CL	Surveyor 2	TVB	
Bat detector	EM Touch	Bat detector	EM Touch	

Surveyor	Time	Species	Number of bats	Map ID	Notes
1	21:01	Common Pipistrelle	1	1	Commuting
1	21:03	Common Pipistrelle	1	N/A	Not seen
1	21:04	Common Pipistrelle	1	2	Foraging
1	21:08	Common Pipistrelle	1	N/A	Not seen
1	21:17	Soprano Pipistrelle	1	N/A	Not seen
1	21:52	Common Pipistrelle	1	N/A	Not seen
1	22:04	Common Pipistrelle	1	N/A	Not seen
1	22:07	Common Pipistrelle	1	N/A	Not seen
1	22:08	Common Pipistrelle	1	N/A	Not seen, social calls
2	21:01	Common Pipistrelle	1	N/A	Not seen
2	21:52	Common Pipistrelle	1	N/A	Not seen
2	22:05	Common Pipistrelle	1	N/A	Not seen
2	22:08	Common Pipistrelle	1	N/A	Not seen, social calls



Infrared images from the darkest point of survey (all taken on Nightfox Whisker)

Surveyor 1 (2x NVAs)



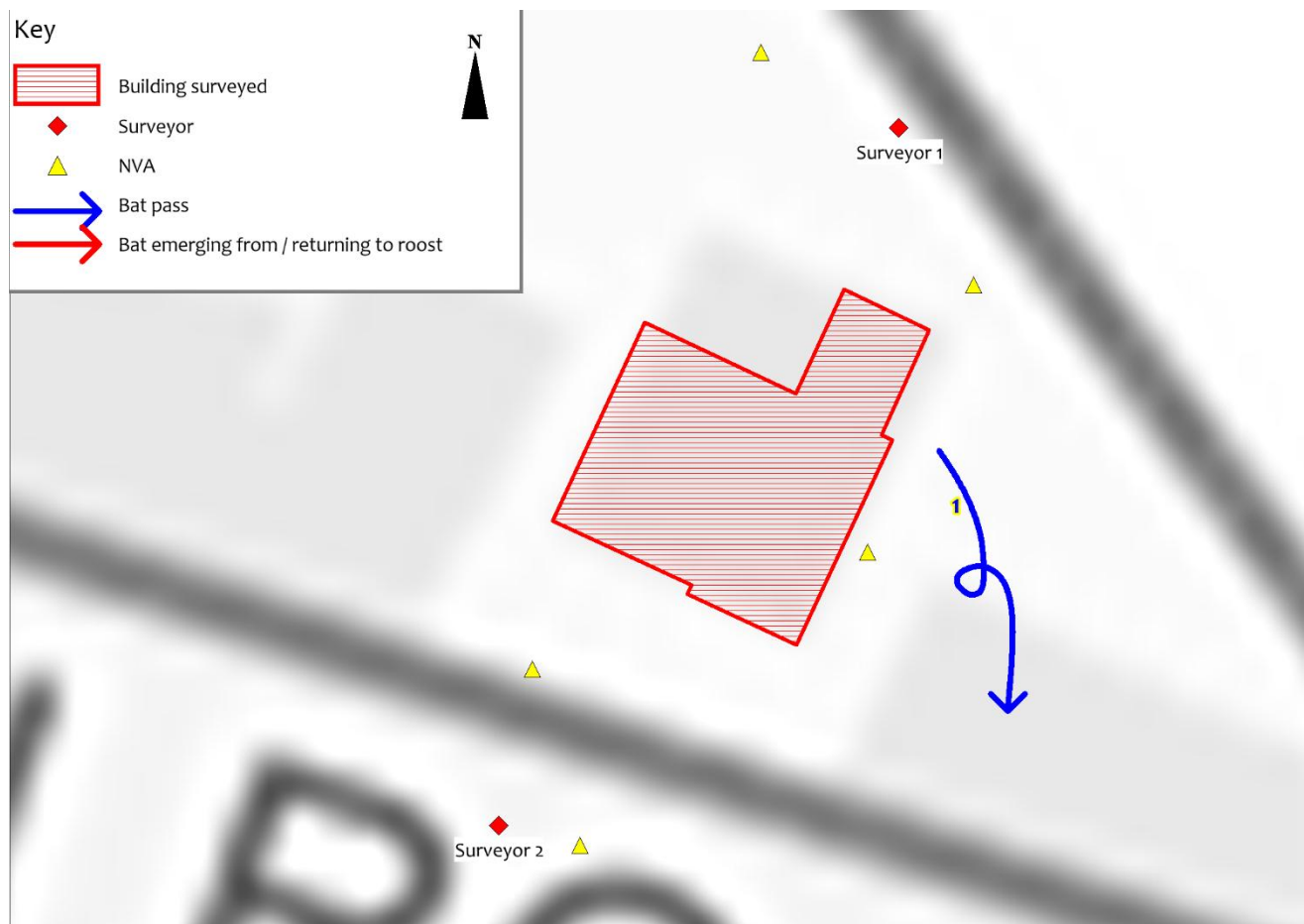
Surveyor 2 (2x NVAs)



Survey 3

Date	02/09/2025	Weather	Start	End
Sunset time	19:46	Temperature (Celsius)	18	16
Start time	19:31	Cloud cover (8ths)	4	5
End time	21:16	Wind (Beaufort scale)	1	2
		Rain	None	None
Surveyor 1	CW	Surveyor 2	TVB	
Bat detector	EM Touch	Bat detector	EM Touch	

Surveyor	Time	Species	Number of bats	Map ID	Notes
1 & 2	19:53	Common Pipistrelle	1	1	Commuting
1 & 2	20:25	Noctule	1	N/A	Not seen
1	20:46	Common Pipistrelle	1	N/A	Not seen
2	20:28	Soprano Pipistrelle	1	N/A	Not seen, faint call
2	20:40	Common Pipistrelle	1	N/A	Not seen, social calls



Infrared images from the darkest point of survey (all taken on Nightfox Whisker)

Surveyor 1 (3 x NVAs)





Surveyor 2 (2x NVAs)





Appendix 3 - Bat ecology and conservation status

Background

Bats are the only true flying mammals and belong to their own taxonomic group, the *Chiroptera*. Worldwide there are almost 1,000 species, with 16 in the UK. All species in the UK are insectivorous. They have a highly sophisticated echolocation system that allows them to avoid obstacles and catch invertebrates, either in flight or by picking them off water, the ground or foliage.

Bat species in the UK

There are 16 species of bat that are known to exist in the UK mainland, with a further two - the greater mouse eared bat *Myotis myotis*, and the parti-coloured bat *Vespertilio murinus* - that are thought to occur as rare migrants or to have small populations in the UK. Bats in the UK belong to one of two taxonomic families, the Rhinolophidae (horseshoe bats) and the Vespertilionidae (all other UK bats).

Bat Conservation Status

Bat populations have undergone a significant decline in the past sixty years. For example, estimates from the National Bat Colony Survey suggest that the UK pipistrelle population (one of our commonest bat species), declined by approximately 70% between 1978 and 1993. Factors contributing to this decline include:

- Loss of, and damage to, roosting sites, including buildings, trees, and underground structures (mines, tunnels, ice-houses, cellars, etc).
- Loss and fragmentation of suitable insect-rich feeding habitats such as wetlands and deciduous woodland.
- Reduction in the abundance and diversity of insect prey due to intensive agriculture, particularly over-grazing and the use of pesticides.
- Loss of linear features such as tree-lines and hedgerows, depriving bats of commuting routes between roosts and feeding areas.
- Loss of winter roosting sites in buildings and old trees.
- Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.

Roosts

Bats use a variety of roosts of different types including trees, buildings, caves, mines and other structures. Most species are colonial and roost in groups. This can make populations particularly vulnerable to loss of roosts as the loss of a single roost may affect the whole population. Some species hang in obvious locations, such as the timbers near to the apex of a roof, others roost in cracks and crevices, such as the gaps under tiles, and as such can be very difficult to locate.

During the winter (November to February), when there is a reduction in insect numbers, bats hibernate to conserve energy. They prefer sites with a constant low temperature and a high relative humidity. On mild winter's nights, bats may wake up and feed. However, bats are particularly vulnerable to disturbance at this time of year, as flying in winter uses up large quantities of energy that cannot easily be replaced.

In the spring, after emerging from hibernation, bats often move from site to site and may congregate in small groups. Female bats gather together in the summer (approximately May to August dependant on species) in maternity roosts. Once the young have stopped suckling, and the baby is independent, bats tend to disperse and use other roosts. Maternity roosts are particularly vulnerable to disturbance, as

bats may have come from a wide geographical area, and have a strong tradition of returning to the same roost year after year.

During the late summer and early autumn males occupy mating roosts which are visited by several females. After mating some species gather together at swarming sites to fatten up prior to hibernation.

Habitat associations

In addition to roosts, bats also need foraging habitats to find suitable food resources, and commuting routes to get to these areas. As would be expected, the highest numbers of bats are found in areas with abundant invertebrates. Some species specialise in catching small invertebrates in flight, whilst others specialise in catching larger invertebrates such as moths and beetles. The distances that bats travel to foraging areas varies between species; records have shown some greater horseshoe bats travel up to 22km to forage, although many species will typically feed within 1km of a roost.

Bats, especially the smaller species, tend to follow linear features (such as hedgerows and tree lines) to their foraging habitats and will often not cross open spaces. A gap of 10m in a linear feature will often not be crossed by bats, and it is important that developments do not create such gaps if linear features are used by bats.

Appendix 4 - Legislation and planning policy

Planning Authorities have a legal duty to consider biodiversity when assessing planning applications. Where there is a reasonable likelihood that a planning application might affect important protected sites, species or habitats, information on the species, habitat or site likely to be affected, together with an assessment of the impacts of the proposals, will almost certainly be required.

The legal duty for Planning Authorities to have regard to the conservation of biodiversity was introduced in the 2006 Natural Environment and Rural Communities Act (The NERC Act). This act clarified existing commitments with regard to biodiversity, raised the profile of biodiversity and aimed to make the consideration of biodiversity a natural and integral part of policy and decision making.

In addition to the NERC Act there is also national and international biodiversity legislation. This includes legislation in relation to protected species and sites which operates outside of the planning system. Local Authorities and developers have a duty to comply with this legislation.

National planning policy

Paragraph 99 of the Government Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System (this document has not been revoked by the recently published National Planning Policy Framework) states that:

'It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision.'

As such, in line with national planning policy, most planning authorities will ask for this information to be provided before a planning decision is made and in many cases before it is registered.

Local planning policy

In addition to national planning policy, most councils have planning policies to protect biodiversity, and to enhance it where practicable within and adjacent to development sites.

European protected species

The United Kingdom hosts a number of European Protected Species (EPS) of animals (table 1) and plants (table 2). These species receive special protection under UK law and it is an offence under the Wildlife and Countryside Act 1981 (as amended) and the European Habitats and Species Directive (92/43/EC), enacted in the UK through The Conservation of Habitats and Species Regulations 2017, to deliberately or recklessly destroy or damage their habitat, or to disturb, kill or injure the species without first having obtained the relevant licence from Natural England.

Planning Authorities have a statutory duty under these regulations to have regard to the requirements of the Habitats Directive and need to be satisfied that the development is likely to receive a licence from Natural England, and therefore comply with the Habitats Directive, before granting planning permission.

Table 1 – European Protected Species of Animal found in the UK

Common name	Scientific name
Bats, Horseshoe (all species)	<i>Rhinolophidae</i>
Bats, Typical (all species)	<i>Vespertilionidae</i>
Butterfly, Large Blue	<i>Maculinea arion</i>
Cat, Wild	<i>Felis silvestris</i>
Dolphins, porpoises and whales (all species)	<i>Cetacea</i>
Dormouse	<i>Muscardinus avellanarius</i>
Frog, Pool	<i>Rana lessonae</i>
Lizard, Sand	<i>Lacerta agilis</i>
Moth, Fisher's Estuarine	<i>Gortyna borellii lunata</i>
Newt, Great Crested (or Warty)	<i>Triturus cristatus</i>
Otter, Common	<i>Lutra lutra</i>
Snail, Lesser Whirlpool Ram's-horn	<i>Anisus vorticulus</i>
Snake, Smooth	<i>Coronella austriaca</i>
Sturgeon	<i>Acipenser sturio</i>
Toad, Natterjack	<i>Bufo calamita</i>
Turtles, Marine	<i>Caretta caretta</i> <i>Chelonia mydas</i> <i>Lepidochelys kempii</i> <i>Eretmochelys imbricata</i> <i>Dermochelys coriacea</i>

Table 2 – European Protected Species of Plant found in the UK

Common name	Scientific name
Dock, Shore	<i>Rumex rupestris</i>
Fern, Killarney	<i>Trichomanes speciosum</i>
Gentian, Early	<i>Gentianella anglica</i>
Lady's-slipper	<i>Cypripedium calceolus</i>
Marshwort, Creeping	<i>Apium repens</i>
Naiad, Slender	<i>Najas flexilis</i>
Orchid, Fen	<i>Liparis loeselii</i>
Plantain, Floating-leaved water	<i>Luronium natans</i>
Saxifrage, Yellow Marsh	<i>Saxifraga hirculus</i>

Nationally protected species

Many species of animal are protected under the 1981 Wildlife and Countryside Act (as amended). 'Full protection' applies to EPS and some non EPS species such as the water vole. This prohibits the intentional killing, injuring or taking (capture. etc); possession; intentional disturbance whilst occupying a 'place used for shelter or protection' and destruction of these places; sale, barter, exchange, transporting for sale and advertising to sell or to buy. Many species, such as common species of reptile and amphibian, are protected from intentional killing and injuring and trading.

Badgers

Badgers and their setts are protected under the 1992 Protection of Badgers Act and the Wildlife and Countryside Act 1981 (as amended). It is illegal to intentionally or recklessly kill, injure or take badgers or to interfere with a badger sett. Interference with a sett includes blocking tunnels, or damaging the sett in any way, and could include blocking a badger pathway if it were to stop badgers entering or leaving a

sett. Penalties for offences can be severe, with fines of up to £5,000 plus up to six months' imprisonment, for each illegal sett interference, badger death or injury.

Work that disturbs badgers occupying a sett is illegal without the appropriate licence from the relevant statutory authority being held. Natural England issue licences for reasons including science, education or conservation, for development such as the building of houses and for investigation of offences against badgers. They also issue licences for the prevention of serious damage to land, crops or other form of property, as well as for agriculture, forestry, drainage operations and prevention of the spread of disease.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), whilst they are actively nesting or roosting. Section 1 of this Act makes it an offence to kill, injure or take any wild bird, and to intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built. It is also an offence to take or destroy any wild bird eggs.

In addition, bird species listed under Schedule 1 of the Act receive extra protection. The Act states that 'it is an offence to intentionally or recklessly disturb any wild bird listed in Schedule 1 while it is nest building, or at (or near) a nest containing eggs or young, or disturb the dependent young of such a bird'.

In practice this means that in areas where birds are likely to be nesting works should not be undertaken during the nesting season, which is generally considered to be March to September, although this very much depends on weather conditions, habitats and the species involved. If works cannot be avoided then areas should first be checked for nesting birds. Habitats likely to host nesting birds include trees, hedgerows and dense scrub, buildings, reedbeds and riverine habitats and open areas with tussocky vegetation.

Appendix 5 - About GS Ecology

Established in 2009, GS Ecology is an independent ecological consultancy in Berkshire. We carry-out surveys and ecological consultancy services for public and private sector clients including in Berkshire, Oxfordshire and Hampshire, London and the south of England. We can advise you on cost effective sustainable solutions for your project, whether it be a bat survey to inform a planning application, the ecology chapter of an Environmental Statement or a Woodland Management Plan.

Our work is undertaken by experienced and qualified ecologists, who are members of the Chartered Institute of Ecology and Environmental Managers. Our services include:

- Ecology surveying and reporting to inform planning applications, e.g.
 - Preliminary Ecological Appraisal
 - Extended Phase 1 Habitat Survey in Hampshire, Berkshire, Oxfordshire, London and Southern England
 - Protected species surveys, e.g. badgers, dormouse, great crested newts
 - Bat surveys in Oxfordshire, Berkshire, Hampshire, London and Southern England
- Code for sustainable homes or BREEAM ecology assessments – to demonstrate the sustainability of a new building
- Protected species licensing such as bat and great crested newt licences for development sites after planning permission has been obtained
- Providing advice to land managers and writing ecological management plans, such as woodland management plans and farm environmental plans for England woodland Grant Scheme and Environmental Stewardship applications
- Providing ecology advice to Local Authorities and Local Planning Authorities