BAT SURVEY

29 THE SQUARE, SPENCER'S WOOD WOKINGHAM, RG7 1BS

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1.0 Introduction

Survey and reporting

1.1 This report details the results of a Bat Survey of 29 The Square, Spencer's Wood, Wokingham, RG7 1BS, undertaken to inform a planning application for the site.

1.2 The survey comprised a preliminary bat roost assessment carried out on 07 May 2025, followed by two dusk emergence surveys carried out between June and August 2025.

Application site

1.3 The application site is located at the northeastern corner of The Square, a residential lane in Spencer's Wood, south of Reading (Ordnance Survey Grid Reference SU71666680; Figure 1).

1.4 It comprises a semi-detached one- and two-storey house, driveway and rear garden.

Details of proposed works

1.5 It is proposed to erect part single, part two-storey, side and rear extensions, following the removal of a single storey rear lean-to (see Figures 2 and 3).

1.6 It is understood that no trees will be affected by the proposed works.

Figure 1 – Site location

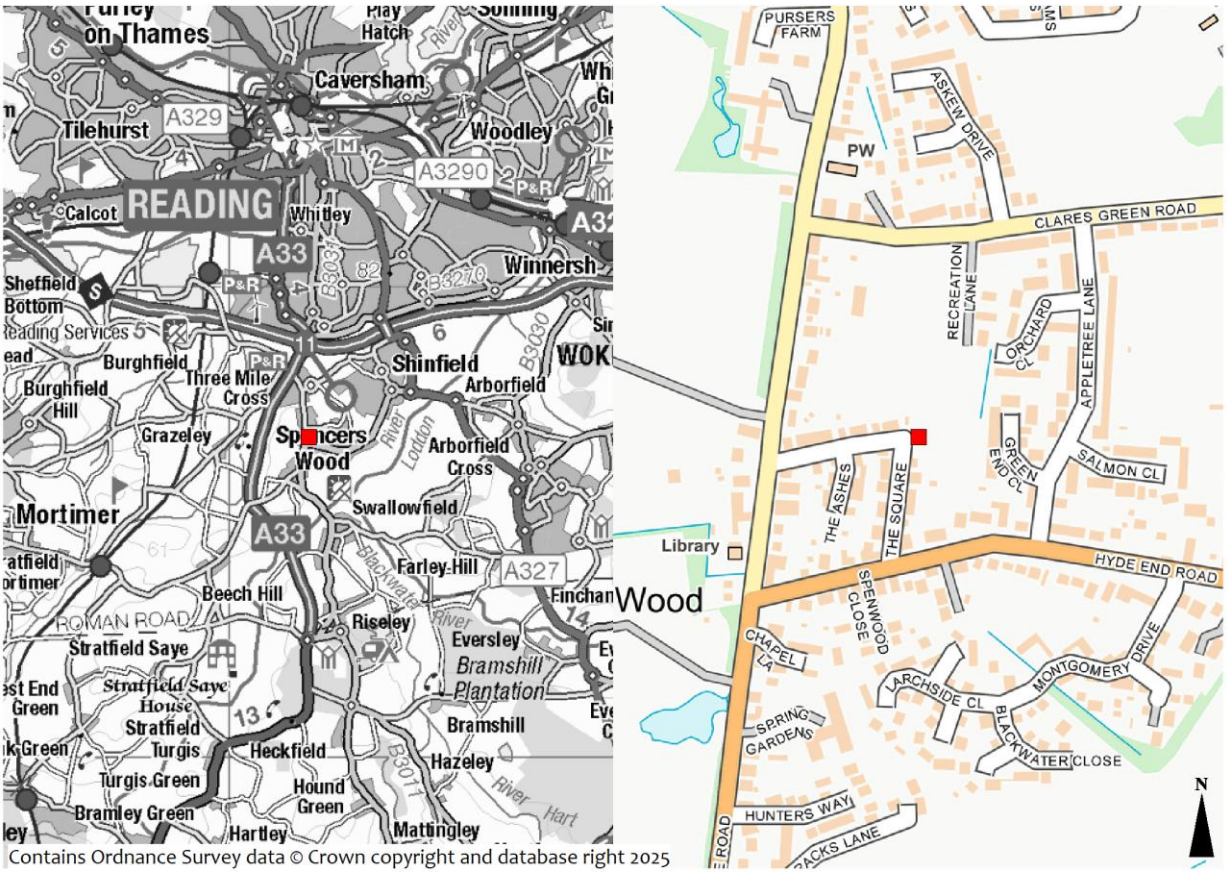
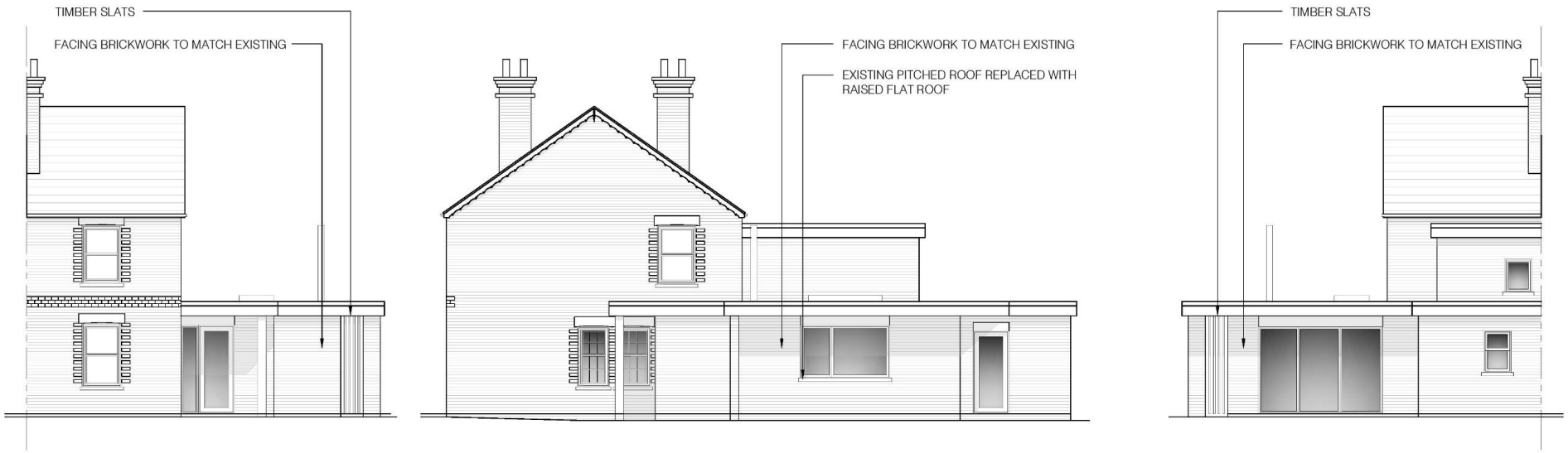


Figure 2 – Proposed elevations



FRONT ELEVATION
SCALE 1:100

SIDE ELEVATION
SCALE 1:100

REAR ELEVATION
SCALE 1:100

Figure 3 – Proposed floor plans

GROUND FLOOR

FIRST FLOOR

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 1km in this case).

2.2 In addition, species records (on the MAGIC website[1]) 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 Bat Roost Assessment

2.4 This survey consisted of a detailed search of the interior and exterior of the building 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 Buildings are 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 Guidelines[2].

2.6 Classification is 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 Two dusk emergence surveys of the house were carried out on 09 June and 05 August 2025. Two surveyors were present during the survey. Surveyors were equipped with professional ultrasonic bat detectors and bat calls were recorded to facilitate bat species identification with specialist software.

2.8 Three night-vision aids (NVAs) were also stationed around the house 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.

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

2.9 The dusk surveys started 15 minutes before sunset and continued until one and a half hours after sunset.

2.10 Surveys were carried out in accordance with the Bat Conservation Trust's Bat Survey Guidelines[3]. Timings, weather, and survey results are given in Appendix 2.

Surveyor details

2.11 The preliminary roost assessment was undertaken by Ryan Davies ACIEEM and Matthew Stephenson of GS Ecology Ltd.

2.12 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.

2.13 The dusk surveys were undertaken by Myriam El Harouchy MCIEEM (licensed bat worker), Matthew Stephenson, and Charlotte Allchin (both experienced bat surveyors) of GS Ecology Ltd.

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.
	Negligible[4]	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).

3 Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn) Bat Conservation Trust
4Negligible 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 initial survey were 17°C, 3/8ths cloud cover, wind at Beaufort Scale 1 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 site of importance for nature conservation or areas of woodland listed on Natural England's Ancient Woodland Inventory within 500m of the application site.

Bat licence records

3.4 Within 2km of the site there are eleven records of licenses issued by Natural England for works affecting bat roosts on The MAGIC website, one of which is within 0.1km of the site. These records are summarised in Table 3 below.

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

Distance and direction from the application site	Species affected	Breeding site	Year licence was issued
0.1km South	Common pipistrelle	No	2013
0.6km Northeast	Brown long-eared	No	2017
0.6km Northeast	Brown long-eared	No	2017, 2018
0.6km Southeast	Brown long-eared	No	2015
0.8km Southeast	Brown long-eared	No	2010
0.9km North	Brown long-eared, soprano pipistrelle	No	2012
1.1km East	Brown long-eared, common pipistrelle	Yes	2018, 2019
1.3km North	Brown long-eared, common pipistrelle	No	2009
1.3km North	Brown long-eared, common pipistrelle	No	2015
1.7km West	Brown long-eared, common pipistrelle	Yes	2016
1.9km Northeast	Common pipistrelle, soprano pipistrelle	No	2016

Surrounding land use

3.5 The application site is located at the north eastern corner of The Square, a residential lane in Spencers Wood, south of Reading. Directly adjacent in all directions, and, further to the east and south are residential properties and their associated gardens with trees. In places – notably to the east and south east – the surrounding gardens meet to form areas of continuous green space.

3.6 To the north is Recreation Lane Allotment, a series of allotment gardens bound by hedgerows in places. Further north is Spencer's Wood Recreation Ground a large area of amenity grassland bound by hedgerows at its peripheries.

3.7 Further to the west, approximately 150m from the application site, is a large area of parkland with numerous scattered trees and blocks of woodland (situated approx. 200m, 600m and 700m from the site).

3.8 Approximately 200m east is the Shinfield Cemetery with a number of scattered trees and a small block of woodland. Further to the south (approximately 400m and beyond) are large grassland fields bound by hedgerows with trees.

3.9 The habitats surrounding the site are therefore of 'moderate' to 'high' suitability for commuting and foraging bats (see Table 1).

Habitats within the application site

3.10 The application site comprises a semi-detached one- and two-storey house, a gravel driveway and rear garden.

3.11 The rear garden has an amenity grassland lawn at its western end which has a sparse sward and is colonised by weeds at its peripheries. The eastern half of the rear garden had recently been cleared by the new owners. At the southern boundary had a hedge with some scattered trees.

Bat survey - preliminary roost assessment

3.12 29 The Square is a semi-detached one- and two-storey house with single skinned brick walls. The main roof is pitched and clad with slate, with concrete ridge tiles and a 'dry ridge' system. At the eastern elevation there is a secondary pitch (perpendicular to the main pitch) clad with slate and with clay ridge tiles. At the eastern elevation there is a single-storey lean-to with clay-tiled roof. The house has painted wooden barge boards and soffit boxes throughout.

3.13 The house has a number of features potentially suitable for use by roosting bats including:

- Gap under lead flashing of front chimney
- Long gaps between bargeboard and brickwork at the southern gable
- Gaps under the end tiles of the secondary roof – [NB. a possible bat dropping was stuck below this feature although it could not be reached to inspect]
- Gaps under clay tiles of lean-to

3.14 The house has a single loft space, below the main roof pitch. The roof has wooden beams and ridge board and is lined with breathable membrane. The loft floor is insulated with fibreglass, boarded out and used for storage. The shared and end wall are sealed with expandable foam.

3.15 Below the secondary pitch there is a small, inaccessible void.

3.16 The rear the lean-to is open to the roof, which has wooden beams and is lined with breathable membrane.

3.17 No bats or signs or signs of bats were found inside the building.

3.18 29 The Square was assessed as having 'moderate' potential to host a bat roost (see Table 2).

Bat survey – dusk emergence survey

Survey 1

3.19 During the first dusk emergence survey, carried out on 09 June 2025, 22 bat passes were recorded from 4 different species: Common pipistrelle (15 passes), noctule (4 passes), soprano pipistrelle (2 passes), brown long-eared bat (1 pass)

3.20 No bats emerged from or went to roost in 29 The Square during the survey.

Survey 2

3.21 During the second dusk emergence survey, carried out on 05 August 2025, 44 bat passes were recorded from 6 different species: Common pipistrelle (17 passes), soprano pipistrelle (13 passes), bats from the Myotis genus (8 passes), noctule (3 passes), serotine (2 passes), Daubenton's bat (1 pass).

3.22 No bats emerged from or went to roost in 29 The Square during the survey.

4.0 Assessment

Legislation

4.1 All species of bats receive special protection under UK law. 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) to deliberately or recklessly 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).

Survey constraints

4.2 The surveys were carried out at a time of year suitable for undertaking preliminary bat roost assessments and dusk emergence surveys, there were no significant constraints to the surveys.

Site status

4.3 29 The Square was assessed as having "moderate" potential to host a bat roost (see Table 2). This is because the building has a number of features potentially suitable for use by roosting bats, and, is located in habitat of 'moderate' to 'high' suitability for commuting and foraging bats (see Table 1).

4.4 However, no bats emerged from, or went to roost, in the house during dusk emergence surveys carried out between June and August 2025.

4.5 It is therefore concluded that the building does not currently host a bat roost and there should be no bat related constraints to the proposed works.

Further survey requirements

4.6 There are no requirements for further surveys. However, if the works on site haven't commenced by May 2027 (i.e. 2 active seasons after the last survey) an updated survey should be undertaken to determine if the status of the site for bats has changed.

Planning policy

4.7 Paragraph 99 of the Government Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System (NB this document has not been revoked by the 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. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. "*

4.8 In this case, because it has been established that the proposed works are very unlikely to have any adverse impact upon bats (or other protected species) the proposals will be in accordance with the above planning policy.

5.0 Summary

5.1 29 The Square was assessed as having "moderate" potential to host roosting bats due to the presence of a number of features potentially suitable for use by roosting bats, and, the sites' location in habitat of 'moderate' to 'high' suitability for commuting and foraging bats.

5.2 However, no bats emerged from, or went to roost, in 29 The Square during dusk emergence surveys carried out between June and August 2025. It is therefore concluded that the building does not currently host a bat roost and there should be no bat related constraints to the proposed works.

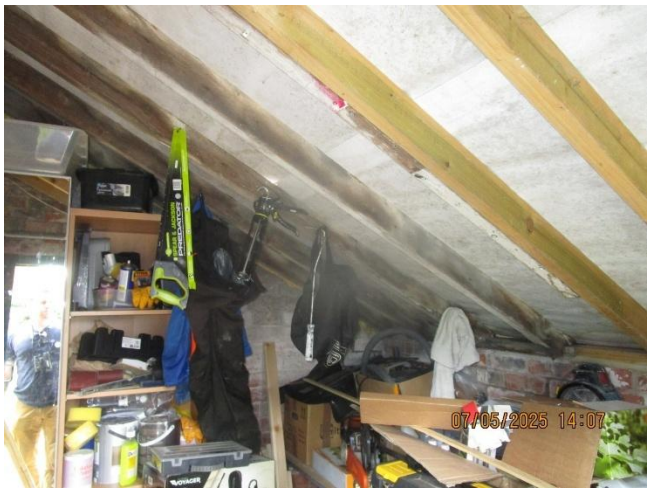
Appendix 1 - Photographs

Photos 1 and 2 – 29 The Square viewed from the west and south

Photo 3 – 29 The Square viewed from the south east, and Photo 4 – Gap under lead flashing

Photo 5 – Gaps between bargeboard and brickwork, and Photo 6 – Gaps between clay tiles of lean-to (lost as a result of the proposals).

Photo 7 - Gaps under end tiles towards apex of secondary roof, and Photo 8 - Inside the lean-to



Photos 9 and 10 – Inside the loft space of the main roof

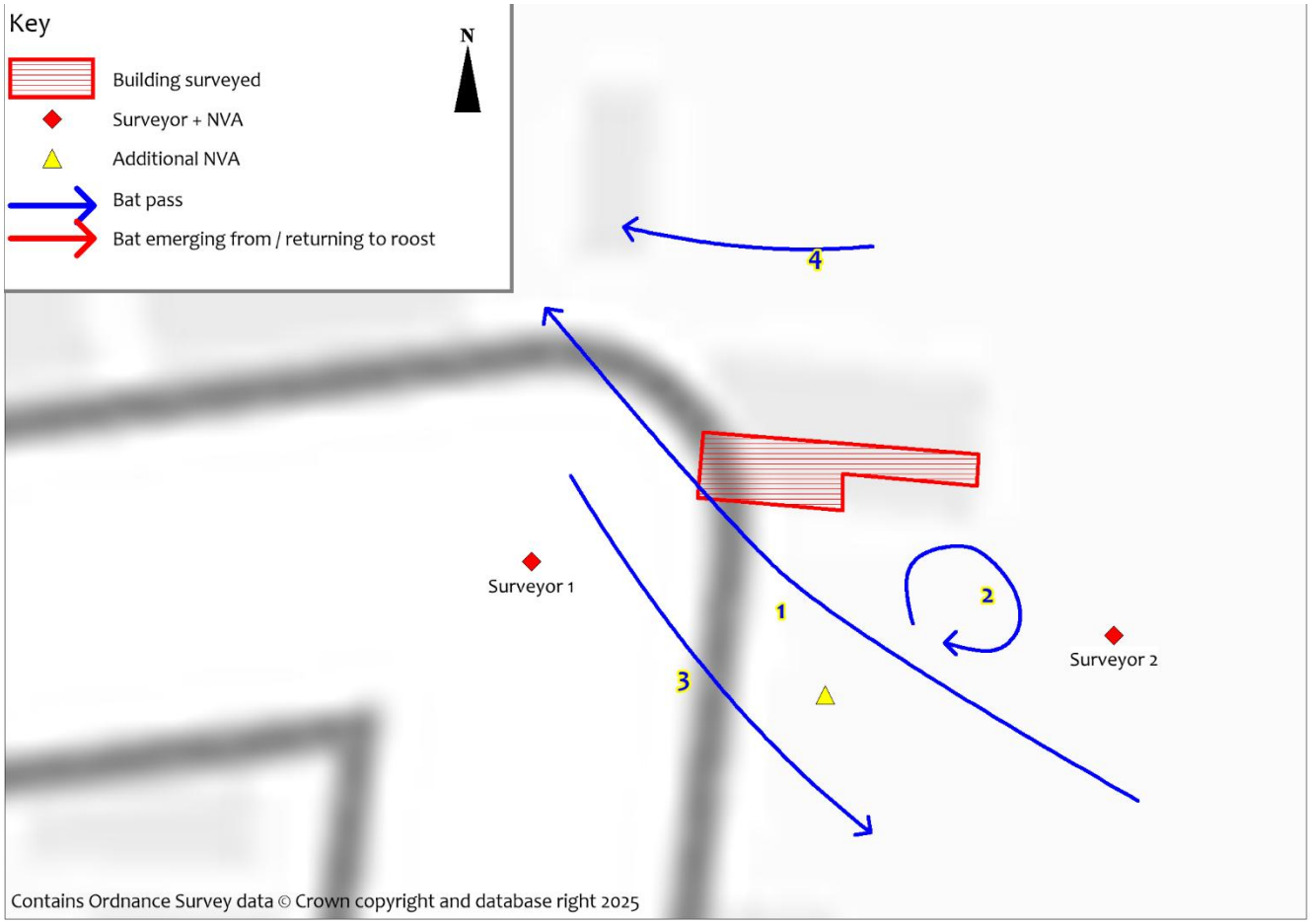
Photos 11 and 12 – The rear garden, part of which has been cleared

Appendix 2- Dusk emergence survey results

Survey 1

Date	09/06/2025	Weather	Start	End
Sunset time	21:19	Temperature (Celsius)	15	14
Start time	21:04	Cloud cover (8ths)	7	7
End time	22:49	Wind (Beaufort scale)	3	1
		Rain	None	None
Surveyor 1	MS	Surveyor 2	MEH	
Bat detector	EM TOUCH	Bat detector	EM TOUCH	

Surveyor	Time	Species	Number of bats	Map ID	Notes
1	21:11	Common Pipistrelle	1	N/A	Not seen
1+2	21:17	Common Pipistrelle	1	1	Commuting
1+2	21:19	Common Pipistrelle	1	1	Commuting
1+2	21:20	Soprano Pipistrelle	1	1	Commuting
1+2	21:20	Common Pipistrelle	2	1	Commuting
1	21:23	Common Pipistrelle	1	1	Commuting
1+2	21:32	Common Pipistrelle	1	1+2	Foraging and commuting
1	21:36	Noctule	1	N/A	Not seen
1	21:53	Noctule	1	N/A	Not seen
1	22:00	Common Pipistrelle	1	3	Commuting
1	22:09	Common Pipistrelle	1	2	Commuting
1	22:27	Common Pipistrelle	1	N/A	Not seen
1	22:39	Brown Long-eared Bat	1	N/A	Not seen
2	21:06	Common Pipistrelle	1	4	Commuting
2	21:12	Common Pipistrelle	1	N/A	Not seen
2	21:35	Noctule	1	N/A	Not seen
2	21:50	Soprano Pipistrelle	1	N/A	Not seen, social calls
2	21:53	Noctule	1	N/A	Not seen
2	21:59	Common Pipistrelle	1	N/A	Not seen
2	22:10	Common Pipistrelle	1	N/A	Not seen
2	22:27	Common Pipistrelle	1	N/A	Not seen



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

Surveyor 1 (2x NVAs)

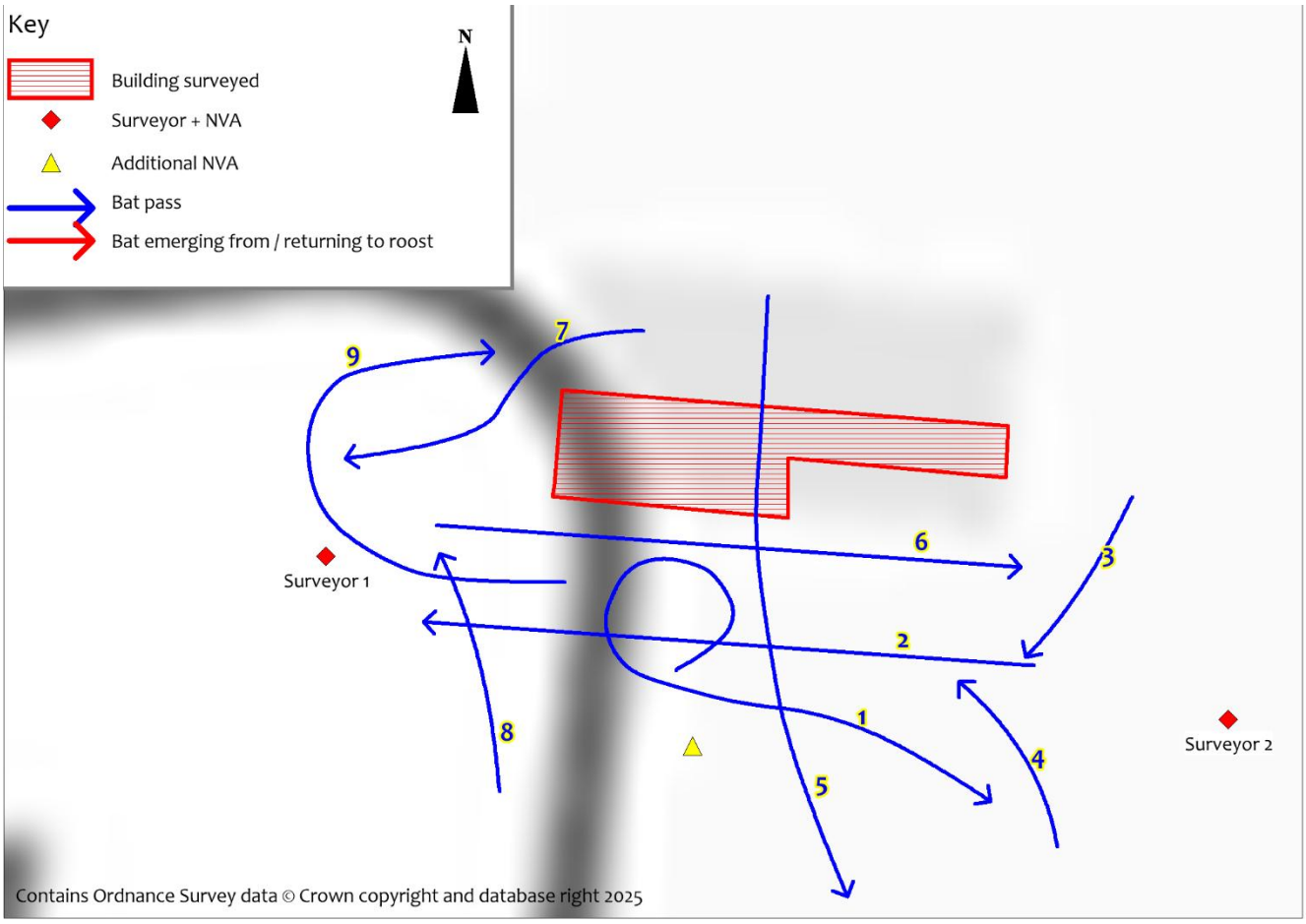
Surveyor 2

Survey 2

Date	05/08/2025	Weather	Start	End
Sunset time	20:46	Temperature (Celsius)	18	15
Start time	20:31	Cloud cover (8ths)	2	0
End time	22:16	Wind (Beaufort scale)	0	0
		Rain	None	None
Surveyor 1	CA	Surveyor 2	MEH	
Bat detector	EMTouch	Bat detector	EMTouch	

Surveyor	Time	Species	Number of bats	Map ID	Notes
1+2	21:01	Common Pipistrelle	1	1	Foraging
1+2	21:03	Common Pipistrelle	1	2	Foraging
1+2	21:05	Common Pipistrelle	1	3+2	Foraging
1	21:14	Common Pipistrelle	1	N/A	Not seen
1	21:15	Common Pipistrelle	1	N/A	Not seen
1	21:17	Common Pipistrelle	1	4+2	Foraging
1	21:18	Noctule	1	N/A	Not seen
1	21:18	Soprano Pipistrelle	1	3+2	Foraging
1	21:20	Common Pipistrelle	1	N/A	Not seen
1	21:23	Serotine	1	5	Foraging
1	21:25	Common Pipistrelle	1	N/A	Not seen
1	21:27	Soprano Pipistrelle	1	N/A	Not seen
1	21:30	Soprano Pipistrelle	1	3+2	Foraging
1	21:33	Soprano Pipistrelle	1	3+2	Foraging
1	21:33	Soprano Pipistrelle	1	6	Foraging
1	21:34	Noctule	1	N/A	Not seen
1	21:36	Soprano Pipistrelle	1	3+2	Foraging
1	21:37	Soprano Pipistrelle	1	3+2	Foraging
1	21;41	Myotis spp.	1	3+2	Foraging
1	21:43	Daubenton's Bat	1	3+2	Foraging
1	21:43	Soprano Pipistrelle	1	3+2	Foraging
1	21:45	Myotis spp.	1	3+2	Foraging
1	21:46	Myotis spp.	1	3+2	Foraging
1	21:52	Myotis spp.	1	3+2	Foraging
1	21:57	Myotis spp.	1	N/A	Not seen
1	22:05	Common Pipistrelle	1	N/A	Not seen
2	21:07	Common Pipistrelle	1	7	Commuting
2	21:09	Common Pipistrelle	1	8	Commuting
2	21:13	Common Pipistrelle	1	8	Commuting
2	21:14	Common Pipistrelle	1	8	Commuting
2	21:19	Soprano Pipistrelle	1	8	Foraging
2	21:19	Common Pipistrelle	1	N/A	Not seen
2	21:22	Serotine	1	N/A	Not seen
2	21:22-23	Soprano Pipistrelle	1	8	Foraging
2	21:25	Soprano Pipistrelle	1	N/A	Not seen
2	21:26	Soprano Pipistrelle	1	N/A	Not seen
2	21:29	Common Pipistrelle	1	N/A	Not seen
2	21:30-55	Soprano Pipistrelle	1	8	Foraging
2	21:32	Common Pipistrelle	1	2	Commuting
2	21:34	Noctule	1	N/A	Not seen
2	21:39	Myotis spp.	1	2	Commuting
2	21:42	Myotis spp.	1	N/A	Not seen
2	21:44-46	Myotis spp.	1	9	Foraging

Surveyor	Time	Species	Number of bats	Map ID	Notes
2	22:05	Common Pipistrelle	1	N/A	Not seen



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

Surveyor 1 (2x NVAs)

Surveyor 2

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

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

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

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