

North Hall Cottage, Staplefield, West Sussex

Bat survey and
assessment

Mr Mellish

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1. Summary

- 1.1.1** Mr Mellish intends to apply for planning and listed building consent to alter and extend North Hall Cottage in Staplefield, West Sussex. The proposed development comprises the demolition of a detached annexe and the construction of a single storey extension to the property.
- 1.1.2** Babec Ecological Consultants were commissioned in May 2024 to undertake a Preliminary Bat Roost Assessment (PBRA) of the property and annexe. The brief was subsequently extended in June 2024 to include three emergence survey visits of the annexe and parts of the property that could be affected by the proposed development and the provision of a report detailing the findings.
- 1.1.3** The objective of the surveys was to determine the presence or likely absence of bat roosts within the annexe and parts of the property that could be affected by the proposed development, and if present characterise the species of bat and type of roosts present. The objectives were to provide appropriate recommendations for mitigation to minimise the impact of the proposed development on roosting bats to allow the works to proceed in accordance with the relevant legislation and planning policy relating to roosting bats.
- 1.1.4** All surveys were undertaken by appropriately licensed and experienced ecologists between June and September 2024 following good practice guidelines¹. No significant limitations were recorded.
- 1.1.5** The results of the bat surveys indicate the likely absence of bat roosts (with the possible exception of hibernation roosts) from the section of the property that will be affected by the proposals, but the presence of three bat roosts within the annexe. These comprise a frequently used soprano pipistrelle day roost under the eaves (Roost 1), a frequently used common pipistrelle day roost under roof tiles on the southern elevation of the annexe (Roost 2) and an occasionally used common pipistrelle day roost under the eaves (Roost 3). All three roosts are considered to be of value at a site level only².
- 1.1.6** All species of bat and their roosts are strictly protected by legislation including the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). Development affecting bats is also subject to a licensing procedure administered by Natural England.
- 1.1.7** Without mitigation and licensing the proposed development would contravene the legislation and planning policy set out above. This is because without mitigation the proposed development would result in the destruction of three bat roosts (Roosts 1, 2 and 3) and could harm individual bats. However, by using established mitigation techniques, it should be possible to avoid harm to individual bats and maintain the populations of common pipistrelles and soprano pipistrelles at a favourable conservation status.
- 1.1.8** Appropriate avoidance and mitigation measures have been provided in Section 6 of this report. This includes gaining a protected species licence from Natural England, installing one-way exclusion devices to the entrances of Roost 1 and 3, undertaking a 'soft strip' approach to removing the roosting features during the demolition of the annexe and the tying in of the extension under ecological supervision outside of the bat hibernation period, and creating access points and roosting features into the extension. Providing these mitigation measures are fully adopted, the proposed development should be compliant with the relevant legislation relating to roosting bats.

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

- 1.1.9** An active wren nest was recorded under the eaves on the southern elevation of the annexe during the building inspection. All birds, their eggs and active nests are protected from damage and destruction under the Wildlife and Countryside Act, 1981 (as amended). If possible, the demolition of the annexe should be undertaken outside of the breeding bird season (1 March to mid-September). However, should this not be possible, then a thorough check for breeding birds should be undertaken prior to demolition taking place. If an active nest is discovered, then the demolition of the annexe must be delayed until the young have fledged or the nest is no longer active.
- 1.1.10** Central and local government policy also encourages the incorporation of ecological enhancements into development proposals. A suggestion for an appropriate enhancement for roosting bats has also been provided in Section 6 of this report.

2. Introduction

2.1 Development background

- 2.1.1** Mr Mellish proposes to alter and extend the Grade II listed North Hall Cottage, which is hereafter referred to as 'the property'. The proposals include the demolition of an adjacent single storey annexe and the construction of a single storey extension to the main property, which is understood may require some roof tiles on the eastern elevation of the property to be temporarily removed. The proposals above are hereafter referred to as 'the proposed development'.
- 2.1.2** The property is located along Mallions Lane, south of the village of Staplefield in West Sussex (What3Words: ///nurse.drizzly.passage), see Figure 1 in Appendix A.

2.2 Planning background

- 2.2.1** It is understood that Mr Mellish is in the process of preparing applications for planning consent and listed building consent for the proposed development for submission to Mid Sussex District Council (MSDC). It is further understood that Mr Mellish has acquired separate consents for the construction of a bridge and parking area within the garden of his property (Reference DM/23/2212).

2.3 Ecology background

- 2.3.1** The Ecology Co-op Ltd undertook a preliminary ecological appraisal of the property in September 2023 to support the separate planning application for the construction of a bridge and parking area³. This did not include an assessment of the potential of the property or annexe to support roosting bats.

2.4 The brief and objectives

- 2.4.1** Babec Ecological Consultants were commissioned on 28 May 2024 to undertake a Preliminary Bat Roost Assessment (PBRA) of the property and annexe. The brief was subsequently extended on 16 June 2024 to include three emergence survey visits of the annexe and parts of the property that could be affected by the proposed development and the provision of a report detailing the findings.
- 2.4.2** The objective of the surveys was to determine the presence or likely absence of bat roosts within the annexe and parts of the property that could be affected by the proposed development, and if present characterise the species of bat and type of roosts present. The objectives were to provide appropriate recommendations for mitigation to minimise the impact of the proposed development on roosting bats to allow the works to proceed in accordance with the relevant legislation and planning policy relating to roosting bats.

³ The Ecology Co-op (2023). Preliminary Ecological Appraisal North Hall Cottage, Staplefield. Dated 22 September 2023.

3. Methods

3.1 Personnel

- 3.1.1** The building inspection for bats was conducted by Tim Buckland BSc MSc MCIEEM with assistance from Jack Hughes BSc. Tim holds a Natural England level 2 class licence for bats (registration number 2015-11006-CLS-CLS), is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and has over 14 years' professional experience in conducting surveys and assessment for bats. Jack is a qualifying member of CIEEM and has one season of professional experience surveying for bats.
- 3.1.2** The emergence surveys, assessment of Night Vision Aid (NVA) video footage and bat call analysis from attended and unattended survey locations was undertaken by Tim and Jack.
- 3.1.3** This report has been written by Jack and has been reviewed by both Tim Buckland and Jon Bannon. Tim and Jon both have over 14 years' experience of making these types of assessment.

3.2 Desk study

- 3.2.1** In the first instance, aerial photographs were examined to assist in understanding the local context of the property, in particular, to identify its connectivity with the surrounding habitat.
- 3.2.2** The Multi-Agency Geographical Information for the Countryside (MAGIC)⁴ interactive map tool was used to search for Special Areas of Conservation (SACs) and Sites of Special Scientific Interest (SSSIs) designated for bat species within a 5km radius of the property. In addition, records of granted protected species licences for bats within the last ten years were searched within a 2km radius of the property.
- 3.2.3** Records of bat roosts within a 2km radius of the property were obtained from the Sussex Biodiversity Records Centre⁵.

3.3 Building inspection

- 3.3.1** An internal and external inspection of the property, annexe and an adjacent shed was undertaken on 17 June 2024 to look for bats or secondary evidence of bats, and to record the presence of potential roosting features (PRF) and potential access points for bats. The property, annexe and shed were then assessed and placed into a category (negligible, low, moderate, or high) for their level of potential to support roosting bats. The building inspection was undertaken in accordance with good practice guidelines⁶.

3.4 Emergence surveys

- 3.4.1** Three emergence surveys were undertaken following the methods set out in the Bat Conservation Trust's good practice guidelines⁷.
- 3.4.2** During each survey visit, emergence surveys were conducted from six separate survey locations, which were carefully chosen to ensure a good view of all PRFs and access points on the annexe and parts of the property which could be affected by the proposed development.

4 MAGIC (2024). *Map and Geographic Information Centre Interactive Map Tool*. <http://magic.gov.uk>. Accessed 13 September 2024.

5 Sussex Biodiversity Records Centre (2024). *Land at North Hall Cottage, Staplefield + 2km radius*. SxBRC/24/294. Dated 18 July 2024.

6 Collins (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

7 Collins (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

3.4.3 Emergence surveys were conducted from each survey location by either a surveyor with a night vision aid (NVA) paired with a full-spectrum Batlogger detector (attended NVA), or an unattended NVA paired with a full-spectrum Batlogger detector (unattended NVA), as detailed in Table 1. NVAs comprised a Canon XA series video camera equipped with one or more infrared lamps and torches. An example of the equipment used during emergence surveys is provided in Figure 1, below.

3.4.4 All emergence surveys commenced 15 minutes before sunset and ended 90 minutes after sunset.



Figure 1. (1) Canon XA series video camera, (2) 7" high-definition screen attached to NVA (used at attended survey locations only), (3) Infrared floodlamp, (4) Batlogger-M, (5) Thermometer.

Emergence surveys from attended NVAs

3.4.5 At attended NVAs, surveyors watched PRFs directly from the start of the survey until ambient light levels were too low for PRFs to be clearly visible, which was approximately 20 minutes after sunset. Surveyors then watched PRFs using a 7" high-definition screen attached to their NVA for the remainder of the survey. Surveyors captured a NVA screenshot at the start and end of each emergence survey (i.e., at the lightest and darkest point of the survey), which are presented in Appendix B.

3.4.6 Video footage was recorded for the full extent of each survey, and recorded footage was reviewed following the survey when considered appropriate, such as if the surveyor left an attended NVA, if a bat roost was recorded or if the surveyor suspected the possible presence of a roost. All bat echolocation calls were analysed using Elekon BatExplorer software.

Emergence surveys from unattended NVAs

- 3.4.7** At unattended NVAs, Batloggers and NVAs were set to record for the full duration of the survey. A NVA screenshot was also taken at the start and end of each emergence survey (i.e., at the lightest and darkest point of the survey), which are presented in Appendix B.
- 3.4.8** Recorded video footage was then reviewed in full by a surveyor on a desktop or laptop computer at up to 1.5x speed. All bat echolocation calls were analysed using Elekon BatExplorer software.

Dates of surveys and weather conditions

- 3.4.9** Weather conditions during each survey visit were recorded, including rain, wind strength, cloud cover, and maximum and minimum temperatures. The dates of the emergence surveys, survey methodology, personnel, and weather conditions recorded during the surveys are provided in Table 1.

3.5 Limitations of survey methods

- 3.5.1** Species data collated during the desk study is mainly derived from records submitted by consultants, members of the public and ad hoc surveys undertaken by volunteers. Therefore, it should not be taken as a definitive list of the protected species that may occur in the local area.
- 3.5.2** During the building inspection, a large section of the properties roof void could not be thoroughly checked as the ceiling joists were unsafe to walk on. This is not considered a significant limitation as no evidence of bats was found in the accessible part of the roof void and the proposed development will not affect the section of roof void that could not be accessed.
- 3.5.3** The emergence surveys were undertaken in optimal weather conditions between July and September which are suitable months for conducting this type of survey and incorporate the bat maternity period⁸.
- 3.5.4** It should be noted that whilst every effort has been made to provide a comprehensive assessment of the use of the property and annexe by roosting bats, no investigation can ensure the complete characterisation and prediction of the natural environment. The results of the surveys will become less reliable as time progresses. As a general rule, the results of the surveys should not be relied upon after 18 months from the date of the last emergence survey.

⁸ Collins (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

Table 1. Date of emergence surveys, survey methodology, personnel, and weather conditions.

Visit No	Date	Survey location	Survey method and personnel	Temp (°C)		Cloud cover* (Start-End)	Rain	Wind** (Start-End)	Overall suitability for survey
				Min	Max				
1	24/07/2024	1	Attended location (Jack Hughes)	16.2	17.0	6-8	None	1-1	Optimal
		2	Unattended location						
		3	Unattended location						
		4	Unattended location						
		5	Unattended location						
		6	Attended location (Tim Buckland)						
2	20/08/2024	1	Attended location (Jack Hughes)	13.2	16.0	0-0	None	3-1	Optimal
		2	Unattended location						
		3	Unattended location						
		4	Unattended location						
		5	Unattended location						
		6	Attended location (Tim Buckland)						
3	17/09/2024	1	Attended location (Jack Hughes)	14.7	15.9	3-2	None	2-4	Optimal
		2	Unattended location						
		3	Unattended location						
		4	Unattended location						
		5	Unattended location						
		6	Attended location (Tim Buckland)						

*Measured in Oktas.

**Measured on the Beaufort scale.

4. Results and interpretation

4.1 Desk study

4.1.1 North Hall Cottage is located along Mallions Lane, approximately 1km south of the village of Staplefield in West Sussex. The property is surrounded by arable and pasture and is bordered to the south by small areas of ancient/semi natural woodland. Overall, the habitat around the property is assessed as being of high quality for foraging and commuting bats.

4.1.2 No SACs or SSSIs designated for bats were recorded within 5km of the property⁹.

4.1.3 Five Natural England granted protected species licences for bats were identified within 2km of the property, as detailed in Table 2 below. It should be noted that only licences granted within the last ten years have been included.

Table 2. Granted Natural England Protected Species Licences for bats within 2km of the property¹⁰.

Natural England licence reference	Bat species listed on the licence	Activities listed on the licence	Licensing period	Minimum distance to the property (km)	Bearing
2018-33253-EPS-MIT	Brown long-eared	Destruction of a resting place	13/03/2018 – 31/03/2019	0.8	W
2017-28531-EPS-MIT-1	Common pipistrelle Brown long-eared	Damage and destruction of a breeding site	05/12/2017 – 15/11/2027	0.8	NE
2017-28531-EPS-MIT	Common pipistrelle Brown long-eared	Damage and destruction of a breeding site	25/04/2017 – 25/04/2027	0.8	NE
2019-39669-EPS-MIT	Common pipistrelle (<i>Pipistrellus pipistrellus</i>) Brown long-eared (<i>Plecotus auritus</i>)	Destruction of a resting place	07/03/2019 – 31/08/2024	1.5	NE
2018-34194-EPS-MIT	Common pipistrelle Brown long-eared	Destruction of a resting place	11/04/2018 – 10/04/2023	1.5	NW

4.1.4 Sussex Biodiversity Records Centre hold no records of bat roosts within the property, however they do hold records of bat roosts within 2km of the property¹¹, as shown in Table 3. Note that only records from the last ten years have been included and where multiple records for the same location exist, these have been combined into a single entry.

⁹ MAGIC (2024). Map and Geographic Information Centre Interactive Map Tool. <http://magic.gov.uk>. Accessed 13 September 2024.

¹⁰ MAGIC (2024). Map and Geographic Information Centre Interactive Map Tool. <http://magic.gov.uk>. Accessed 13 September 2024.

¹¹ Sussex Biodiversity Records Centre (2024). Land at North Hall Cottage, Staplefield + 2km radius. SxBRC/24/294. Dated 18 July 2024.

Table 3. Bat roost records within 2km of the property¹².

Species	Detail	Location	Approx. distance to property (km)	Year
Common pipistrelle	One bat seen emerging from an old dairy building (day roost).	Paternosters, Haywards Heath	1.0	2018
	Two bats seen emerging from a barn (day roost).	Paternosters, Haywards Heath	1.0	2018
	Six bats seen emerging from a house (unspecified roost).	The Old Vicarage, Staplefield	1.5	2018
	Day roost and maternity roost present in two separate buildings.	Little Ashfold Farm, Staplefield	0.9	2016
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	One bat seen emerging from a barn (day roost).	Paternosters, Haywards Heath	1.0	2018
Brown long-eared bat	Three bats seen emerging from a house (unspecified roost).	The Old Vicarage, Staplefield.	1.5	2018
	Maternity roost present.	Little Ashfold Farm, Staplefield	0.9	2016
<i>Pipistrellus</i> sp.	Bat droppings recorded.	Southgate Farm, Warninglid.	1.5	2014

4.2 Building inspection

4.2.1 The results of the building inspection are provided below and are illustrated on Figure 2 in Appendix A.

The property

4.2.2 The property comprises a Grade II listed two-storey brick cottage built circa 1560. The pitched roof of the cottage was replaced in 2017 and features a catslide roof on the northern elevation. The roof is clad with clay tiles and lined with breathable roofing membrane (BRM). Two dormers are present on the western elevation of the property which are clad with hanging tiles. A small wooden lean-to is present over the back door and a single storey glass conservatory is attached to the south-east corner. A roof void is present above the property which measures approximately 6m (l) x 2m (w) x 1m (h). The roof void has fibreglass insulation between the ceiling joists and is partially boarded. The walls of the roof void are uninsulated and are lined with BRM.

4.2.3 No bats or evidence of bats was recorded within the property during the building inspection. However, several potential roosting features (PRFs) were recorded on the property, including gaps under roof and hip tiles, lifted lead flashing, gaps between weather boarding, gaps between hanging tiles and gaps under the eaves.

4.2.4 The property was assessed as having high potential to support day and/or transitional roosts, moderate potential to support maternity roosts, and low potential to support hibernation roosts, night roosts or feeding perches.

¹² Sussex Biodiversity Records Centre (2024). *Land at North Hall Cottage, Staplefield + 2km radius*. SxBRC/24/294. Dated 18 July 2024.

- 4.2.5** A bird box was recorded on the southern elevation of the cottage and there were potential access points for birds under roof tiles and along the eaves.

The annexe

- 4.2.6** A single storey timber framed annexe is also present which has a simple pitched roof lined with BRM and clad with clay tiles. A small wooden lean-to is present on the north-east corner of the annexe, which does not incorporate a roof void.
- 4.2.7** No bats or evidence of bats was recorded within the annexe during the building inspection. However, several potential roosting features (PRFs) were recorded on the annexe, including gaps under roof tiles, gaps between weather boarding, gaps between roof boards on the lean-to and gaps under the eaves.
- 4.2.8** The annexe was assessed as having high potential to support day and/or transitional roosts, and low potential to support maternity, hibernation, night roosts or feeding perches.
- 4.2.9** An active wren nest was recorded under the eaves on the southern elevation of the annexe.

The shed

- 4.2.10** A small wooden shed is also present next to the annexe, with a pitched roof clad in tarpaulin. No bats or evidence of bats was recorded on the shed. However, it does incorporate a potential roosting feature in the form of gaps at the eaves. The shed was therefore assessed as having negligible potential to support maternity and/or hibernation roosts, and low potential to support day, transitional, night roosts or feeding perches.

4.3 Emergence surveys

- 4.3.1** One soprano pipistrelle emerged from a gap under the eaves on the western elevation of the annexe on all three survey visits **(Roost 1)**.
- 4.3.2** One common pipistrelle emerged from under a roof tile on the southern elevation of the annexe at 11 minutes after sunset during survey visit 1 and two common pipistrelles emerged from under roof tiles on the southern elevation of the annexe at 19 and 28 minutes after sunset on survey visit 3 **(Roost 2)**.
- 4.3.3** During survey visit 2, a common pipistrelle emerged from a gap under the eaves on the western elevation of the annexe at 14 minutes after sunset **(Roost 3)**.
- 4.3.4** No bat roosts were recorded within the section of the property that will be affected by the proposals during any of the three emergence surveys.
- 4.3.5** A moderate level of bat activity was recorded at the property during the emergence surveys, with the highest levels being from commuting and foraging common pipistrelles and soprano pipistrelles. Activity from individual commuting barbastelle (*Barbastella barbastellus*), myotis (*Myotis* spp.) and long-eared (*Plecotus* spp.) bats was also recorded.

4.4 Interpretation of bat roosts

- 4.4.1** Our interpretation of roosts recorded during the bat surveys is provided in Table 4.

Table 4. Interpretation of recorded bat roosts.

Bat species	Roost number and description	Roosting location	Egress / access points	Roost value*	Interpretation of species, roost type and numbers of bats
Soprano pipistrelle	Roost 1 One soprano pipistrelle emerged from a gap under the eaves on the western elevation of the annexe on all three survey visits.	The precise roosting location is unknown, but it is considered to be either a crevice between wooden weather boarding and internal wall and/or a gap between the roof tiles and the roofing membrane.	Gap under eaves.	Site	The results of the surveys indicate the presence of a day roost used on a frequent basis by individual or low numbers (likely ≤ 3) of soprano pipistrelle. As the first emergence survey was undertaken during the bat maternity period, there is a likely absence of maternity roosts of this species. However, the presence of a hibernation roost cannot be ruled out.
Common pipistrelle	Roost 2 A common pipistrelle emerged from under a roof tile on the southern elevation of the annexe during survey visit 1 on 24 July 2024. Two common pipistrelles emerged from under roof tiles on the southern elevation of the annexe during survey visit 3 on 17 September 2024.	Gaps between the roof tiles and roofing membrane. Common pipistrelles are highly mobile species that are considered likely to make use of suitable gaps present throughout the roof of the annexe.	Gaps between roof tiles.	Site	The results of the surveys indicate the presence of a day roost used on a frequent basis by low numbers (likely ≤ 3) of common pipistrelle. As the first emergence survey was undertaken during the bat maternity period, there is a likely absence of maternity roosts of this species. However, the presence of a hibernation roost cannot be ruled out.
	Roost 3 One common pipistrelle emerged from a gap under the eaves on the western elevation of the annexe during survey visit 3 on 20 August 2024.	The precise roosting location is unknown, but it is considered to be either a crevice between wooden weather boarding and internal wall and/or a gap between the roof tiles and the roofing membrane.	Gap under eaves.	Site	The results of the surveys indicate the presence of a day roost used on occasional basis by individual or low numbers (likely ≤ 3) of common pipistrelle. As the first emergence survey was undertaken during the bat maternity period, there is a likely absence of maternity roosts of this species. However, the presence of a hibernation roost cannot be ruled out.

* Roost value: in accordance with 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.

5. Assessment

5.1 Roosting bats

- 5.1.1** All species of bat and their roosts are strictly protected by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). Taken together, these make it an offence to deliberately capture, injure, kill or disturb a bat; intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat; or to disturb a bat occupying such places. Development affecting bats and their roosts is subject to a licensing procedure administered by Natural England.
- 5.1.2** In addition to the legislation above, the National Planning Policy Framework¹³ states that “*if significant harm to biodiversity resulting from a development cannot be avoided..., adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused*”. This aspect of national policy is recognised in Strategic Policy DP38 of MSDC’s District Plan¹⁴.
- 5.1.3** Soprano pipistrelle is also listed as a Species of Principal Importance under the Natural Environment and Rural Communities (NERC) Act 2006, which places a duty on Mid Sussex District Council to have regard for this species when determining the planning application.
- 5.1.4** Without mitigation and licensing the proposed development would contravene the legislation and planning policy set out above. This is because without mitigation the proposed development would result in the destruction of three bat roosts (Roosts 1, 2 and 3) and could harm individual bats.
- 5.1.5** However, by using established mitigation techniques it should be possible to avoid harm to individual bats and maintain the populations of common pipistrelle and soprano pipistrelle at a favourable conservation status, allowing the proposed development to proceed in line with the relevant legislation and planning policy with respect to roosting bats. The recommendations outlined in Section 6 set out how this may be achieved.
- 5.1.6** As set out in Section 4.2, both the property and annexe have low potential to support hibernating bats. Bat hibernation surveys of buildings with low potential to support hibernation roosts are generally not required if precautionary avoidance measures can be employed¹⁵. As such, precautionary avoidance measures for hibernating bats are set out in Section 6 of this report. Providing these measures are followed then the proposed development should be compliant with the relevant legislation and policy relating to roosting bats.

5.2 Nesting birds

- 5.2.1** All birds, their eggs and active nests are protected from damage and destruction under the Wildlife and Countryside Act, 1981 (as amended). The precautionary avoidance measures set out in Section 6 should therefore be followed to ensure that the proposed development is compliant with the law with respect to breeding birds.

5.3 Ecological enhancements

- 5.3.1** Central government policy also encourages the incorporation of ecological enhancements into development proposals. For example, Paragraph 180d of the National Planning Policy Framework

¹³ Ministry of Housing, Communities & Local Government (2021). *National Planning Policy Framework*.

¹⁴ Mid Sussex District Council (2018). *Mid Sussex District Plan Adopted March 2018 (2014-2031)*.

¹⁵ Collins (ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th edn). The Bat Conservation Trust, London.

(2021) states that '*... opportunities to improve biodiversity in and around developments should be integrated as part of their design...*'. Recommendations for a suitable ecological enhancement in accordance with this policy have also been provided in Section 6 of this report.

6. Recommendations

6.1 Licensing and mitigation

6.1.1 Once full planning and listed building consent have been granted and any conditions relating to roosting bats discharged, it will be necessary to obtain a protected species licence from Natural England to allow the proposed development to lawfully proceed. Licence applications for works affecting bats are subject to close scrutiny and must satisfy regulations set out in the Conservation of Habitats and Species Regulations 2017 (as amended) that:

- The actions are essential for '*imperative reasons of overriding public interest*';
- '*There is no satisfactory alternative*'; and
- '*The action authorised will not be detrimental to the maintenance of the population of the species conserved at a favourable conservation status in their natural range*'.

6.1.2 The protected species licence application must demonstrate compliance with these regulations.

6.1.3 Given the bat species, roost types and numbers of bats that will be affected by the proposed development, it is considered likely that the works would qualify for registration under Natural England's Bat Mitigation Class Licence (BMCL)¹⁶. To ensure that the proposed development will not be detrimental to the favourable conservation status of common pipistrelle or soprano pipistrelle bats in their natural range, the BMCL will need to be undertaken in accordance with the avoidance and mitigation measures outlined in Section 6.2.

6.2 Avoidance and mitigation measures for roosting bats

Demolition of the annexe

6.2.1 The following avoidance and mitigation measures will be adopted during the demolition of the annexe:

- As a precautionary measure, roosting features from the annexe will only be removed outside of the bat hibernation period, which is generally taken to be between 1 November and 15 March, when bats are most vulnerable to harm and disturbance. Therefore, roosting features should only be removed between mid-March and 31 October. Furthermore, roosting features should only be removed in suitable weather conditions (no heavy rain or high winds) and once overnight temperatures have been above 8°C for at least four consecutive nights.
- Prior to the commencement of any works, two crevice bat boxes will be installed on a suitable tree within the curtilage of the property to provide alternative roosts for any displaced bats. The bat boxes will be installed at least 3m from ground level (where possible) with the entrance free from obstruction and not lit by external lighting.
- Prior to any works taking place, the ecologist registered under the BMCL (or an accredited agent) will install one way bat exclusion devices to the entrances of the common pipistrelle and soprano pipistrelle day roosts on the western elevation of the annexe. The devices will allow bats to leave the roosts but will prevent bats from re-entering roosts. The exclusion devices may only be installed between 15 April and 15 October and must remain in place for at least five evenings with suitable weather conditions (no heavy rain or high winds and

¹⁶ Natural England (2024). *Guide to using bat mitigation class licence CL21: registration criteria, how to apply and if you need to pay*. Accessed via the gov.uk website on 10 October 2024.

temperatures of at least 8°C during the period between sunset and three hours after sunset). After this time, the roosting features (together with all other potential roosting features on the annexe) can be carefully removed by hand under the supervision of the ecologist registered under the BMCL (or an accredited agent). This will include (but not be limited to) the removal of roof tiles, the roof area around the eaves and wooden weather boarding. If possible, any bats encountered during this 'soft-strip' will be captured by the ecologist and placed into one of the recently installed bat boxes.

- All contractors involved in the removal of roosting features will be given a toolbox talk by the ecologist registered under the BMCL, or an accredited agent, prior to these works commencing. The toolbox talk will include a discussion of the presence of bat roosts, the location of roosts, the protection afforded to bats, what to do if a bat is found and a suitable working approach.
- In the unlikely event that a bat is seen while the ecologist registered under the BMCL (or an accredited agent) is not present on site then all works will stop, and the ecologist registered under the BMCL will be contacted to determine an appropriate course of action.

Tying in new extension to existing property

6.2.2 The following avoidance and mitigation measures will be adopted during the tying in of the new extension to the existing property:

- As a precautionary measure, the wooden lean-to at the back door and other potential roosting features on the property that need to be removed (including roof tiles) will only be removed outside of the bat hibernation period, which is generally taken to be between 1 November and 15 March, when bats are most vulnerable to harm and disturbance. Therefore, the wooden lean-to and other potential roosting features should only be removed between mid-March and 31 October. Furthermore, PRFs should only be removed in the presence of the ecologist registered under the BMCL during suitable weather conditions (no heavy rain or high winds) and once overnight temperatures have been above 8°C for at least four consecutive nights.
- All contractors involved in the removal of the lean-to and other potential roosting features will be given a toolbox talk by the ecologist registered under the BMCL, or an accredited agent, prior to these works commencing. The toolbox talk will include a discussion of the presence of bat roosts, the location of roosts, the protection afforded to bats, what to do if a bat is found and a suitable working approach
- In the unlikely event that a bat is seen while the ecologist registered under the BMCL (or an accredited agent) is not present on site then all works will stop, and the ecologist registered under the BMCL will be contacted to determine an appropriate course of action.

Compensation measures

6.2.3 The following compensation measures will be adopted as part of the proposed development:

- The use of non-bitumen coated membranes (formerly known as breathable roofing membranes) to line the roof on the new extension will need to be avoided, as bats can get tangled in these and die. In the first instance wooden boarding or hessian-backed bituminous Type 1F felt that is a non-woven short fibre construction should be used. Where this is not possible then only a material that has passed Natural England's 'snagging propensity test' may be used.

- The same roof tiles (or those of similar specification) from the annexe should be used to clad the roof of the new extension, so that suitable gaps are present for the bats displaced from Roost 2. Should this not be possible, then at least two gaps should be created under roof tiles on the southern elevation of the new extension, to allow bats to access the crevice between the roof tiles and roof lining. The installation of the gaps must be supervised by the ecologist registered under the BMCL (or an accredited agent).
- To compensate for the loss of the common pipistrelle and soprano pipistrelle roosts under the eaves (Roost 1 and 3), two gaps under the eaves on the southern elevation of the extension will be created. The gaps will each be at least 20 mm x 40 mm and allow access to a self-contained roosting feature within the eaves at least 30 cm (l) x 30 cm (w) x 4 cm (h). Alternatively, two integrated bat boxes can be installed under the eaves which will be self-contained and allow the bats to enter and roost inside. The installation of the access points and roosting locations or the integrated bat boxes must be supervised by the ecologist registered under the BMCL (or an accredited agent).
- New external lighting will be kept at a minimum. Where lighting is required, it must be located below roof level and point away from any newly installed access points or roosting features for bats.

6.3 Avoidance and mitigation measures for nesting birds

- 6.3.1** If possible, the annexe should be demolished outside of the nesting bird season, which is generally taken to be 1 March to mid-September. However, should this not be possible (for example, due to timing constraints with regards roosting bats), then a thorough check for breeding birds should be undertaken by a suitably qualified ecologist no more than 24 hours prior to demolition taking place. If an active nest is discovered, then the demolition must be delayed until the young have fledged or the nest is no longer active.

6.4 Ecological enhancements

- 6.4.1** Retaining the tree mounted bat boxes after the proposed development works have been completed would enhance the site for roosting bats in accordance with national and local policies.

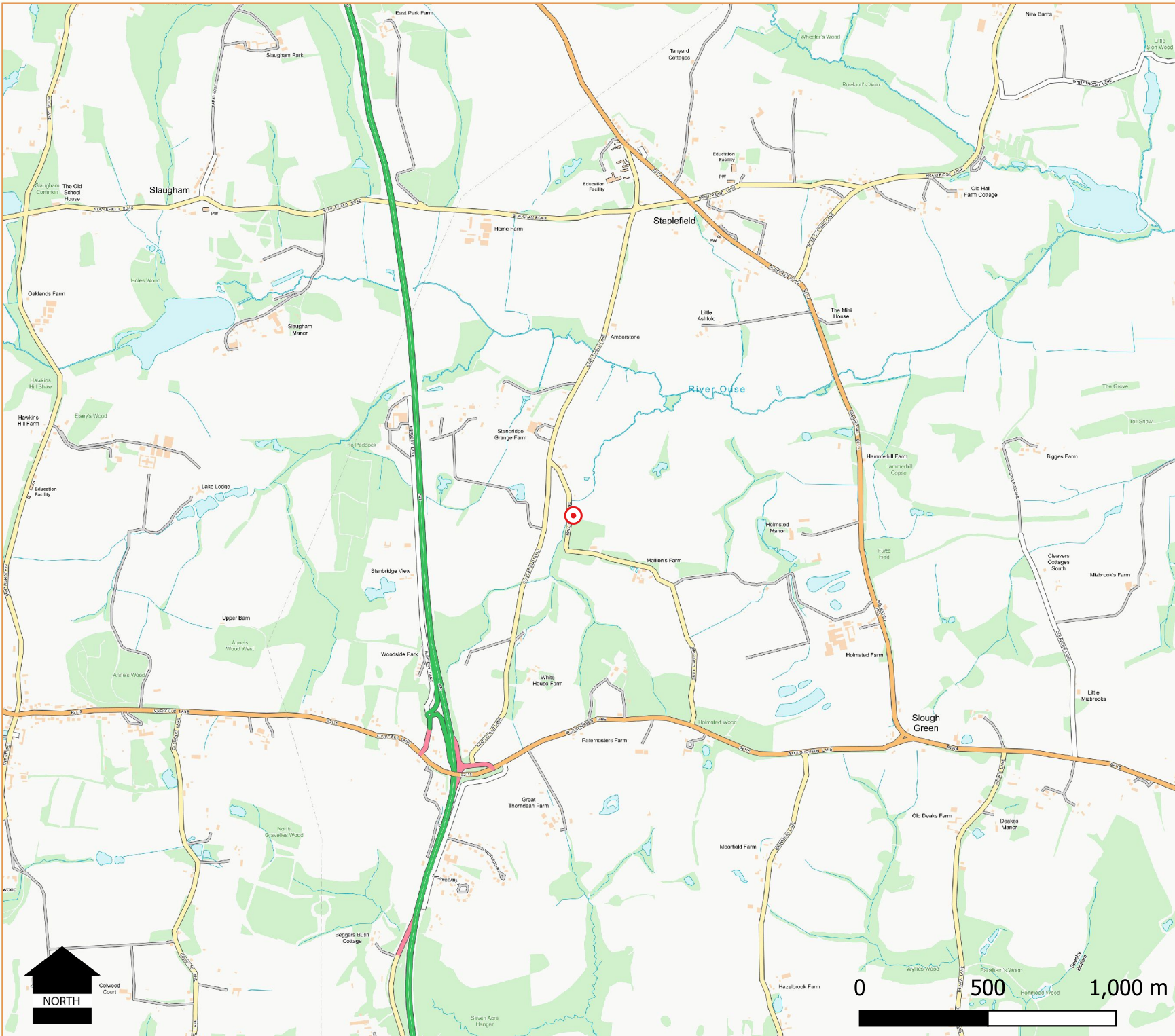


Figure 1.
Location of the property

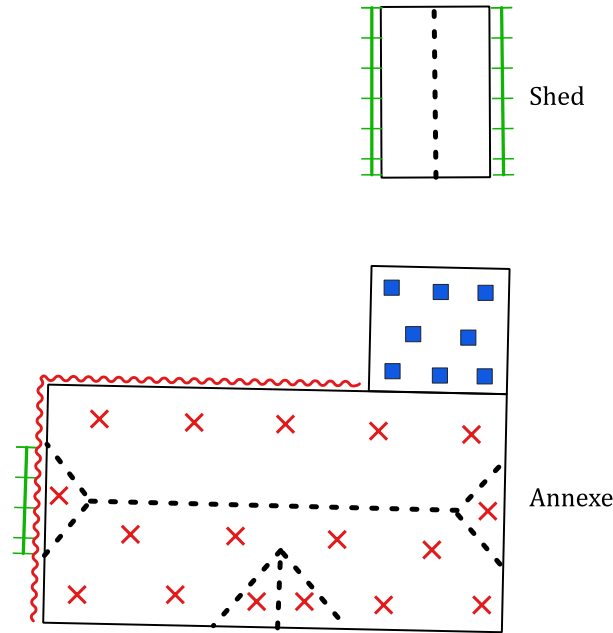
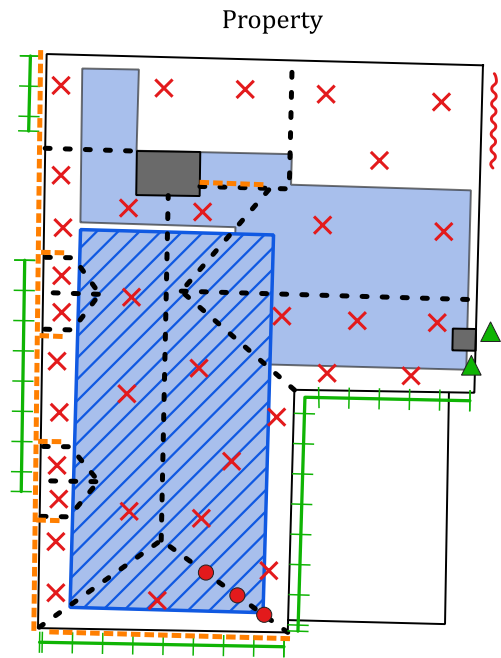
Legend

 Property location

Date of survey	N/A	
Date of issue	23 October 2024	
Job reference	MSH101	
Drawn by	JH	Checked by JB/TB
Status	Final	



Photograph 1. The inaccessible section of the roof void within the property.



Photograph 2. Gaps between weather boarding on the western elevation of the annexe.

Figure 2.
Results of the building inspection

- Legend**
- Indicative property boundary
 - Building detail*
 - Chimney
 - Results of the internal building inspection*
 - Roof void
 - Inaccessible section of void
 - Results of the external building inspection*
 - Gaps between hanging tiles
 - Gaps between weather boarding
 - Gaps between wooden roof boards
 - Gaps under eaves
 - Gaps under hip tiles
 - Gaps under roof tiles
 - Lifted lead flashing

Date of survey	17 June 2024	
Date of issue	23 October 2024	
Job reference	MSH101	
Drawn by	JH	Checked by JB/TB
Status	Final	



Photograph 1. Emergence of a soprano pipistrelle from a gap under the eaves of the annexe at 8 minutes before sunset (Roost 1).



Photograph 2. Emergence of a common pipistrelle from under a roof tile on the southern elevation of the annexe at 11 minutes after sunset (Roost 2).

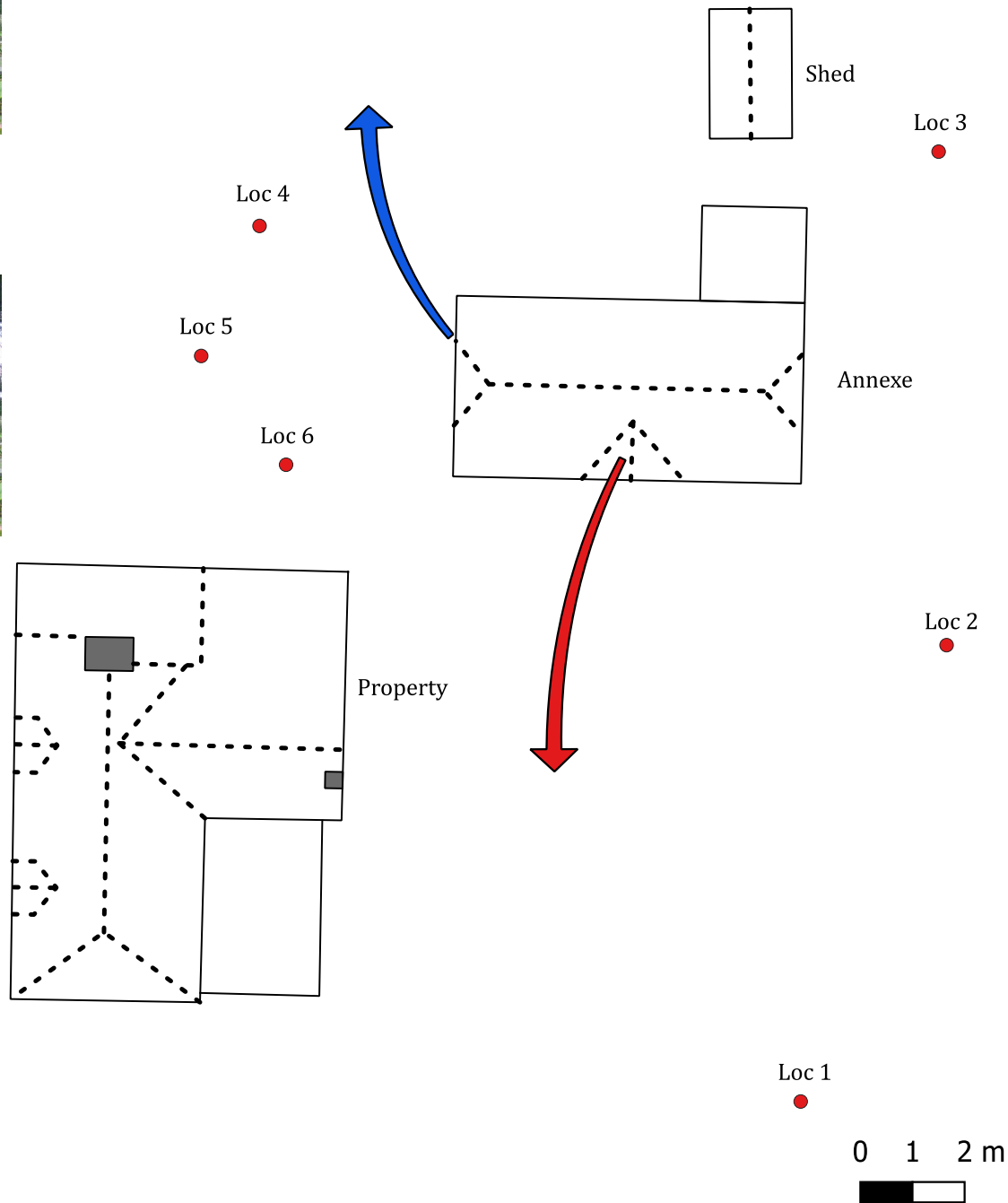
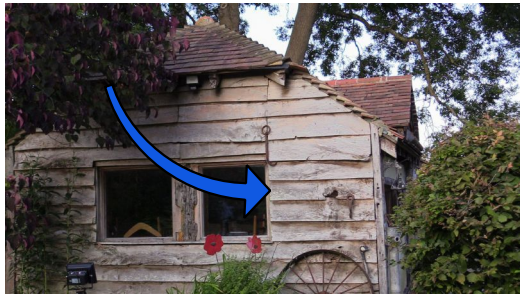


Figure 3.
Results of survey visit 1

- Legend**
- Survey locations
- Results of survey visit 1*
- ➡ Emergence of a soprano pipistrelle (Roost 1)
 - ➡ Emergence of a common pipistrelle (Roost 2)

Date of survey	24 July 2024		
Date of issue	23 October 2024		
Job reference	MSH101		
Drawn by	JH	Checked by	JB/TB
Status	Final		



Photograph 1. Emergence of a soprano pipistrelle from a gap under the eaves of the annexe at 2 minutes after sunset (Roost 1).



Photograph 2. Emergence of a common pipistrelle from a gap under the eaves of the annexe at 14 minutes after sunset (Roost 3).

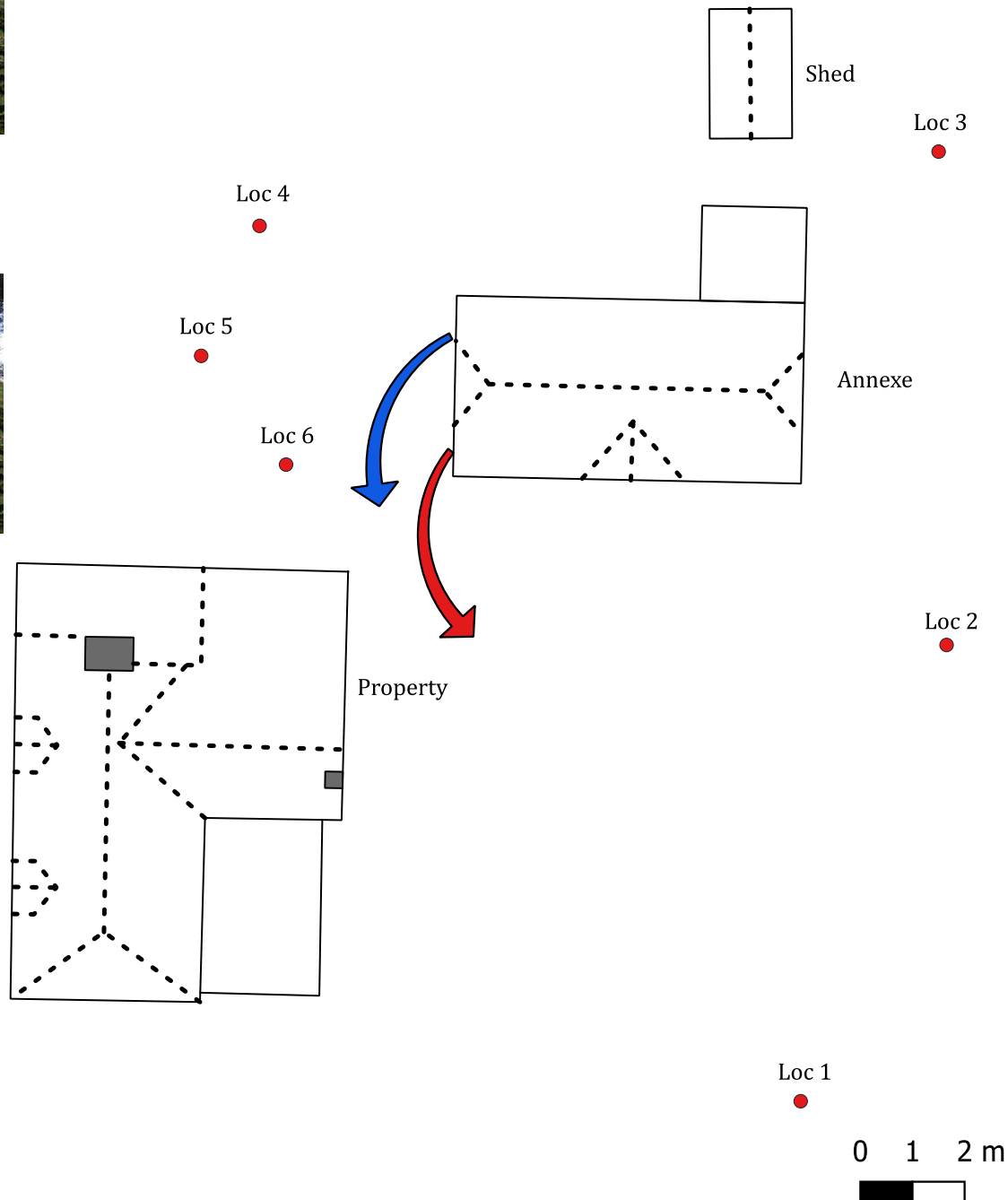


Figure 4.
Results of survey visit 2

- Legend**
- Survey locations
- Results of survey visit 2*
- ➡ Emergence of a soprano pipistrelle (Roost 1)
 - ➡ Emergence of a common pipistrelle (Roost 3)

Date of survey	20 August 2024	
Date of issue	23 October 2024	
Job reference	MSH101	
Drawn by	JH	Checked by JB/TB
Status	Final	



Photograph 1. Emergence of a soprano pipistrelle from a gap under the eaves of the annexe at 3 minutes before sunset (Roost 1).



Photograph 2. Emergence of two common pipistrelles from gaps under roof tiles on the annexe at 19 and 28 minutes after sunset (Roost 2).

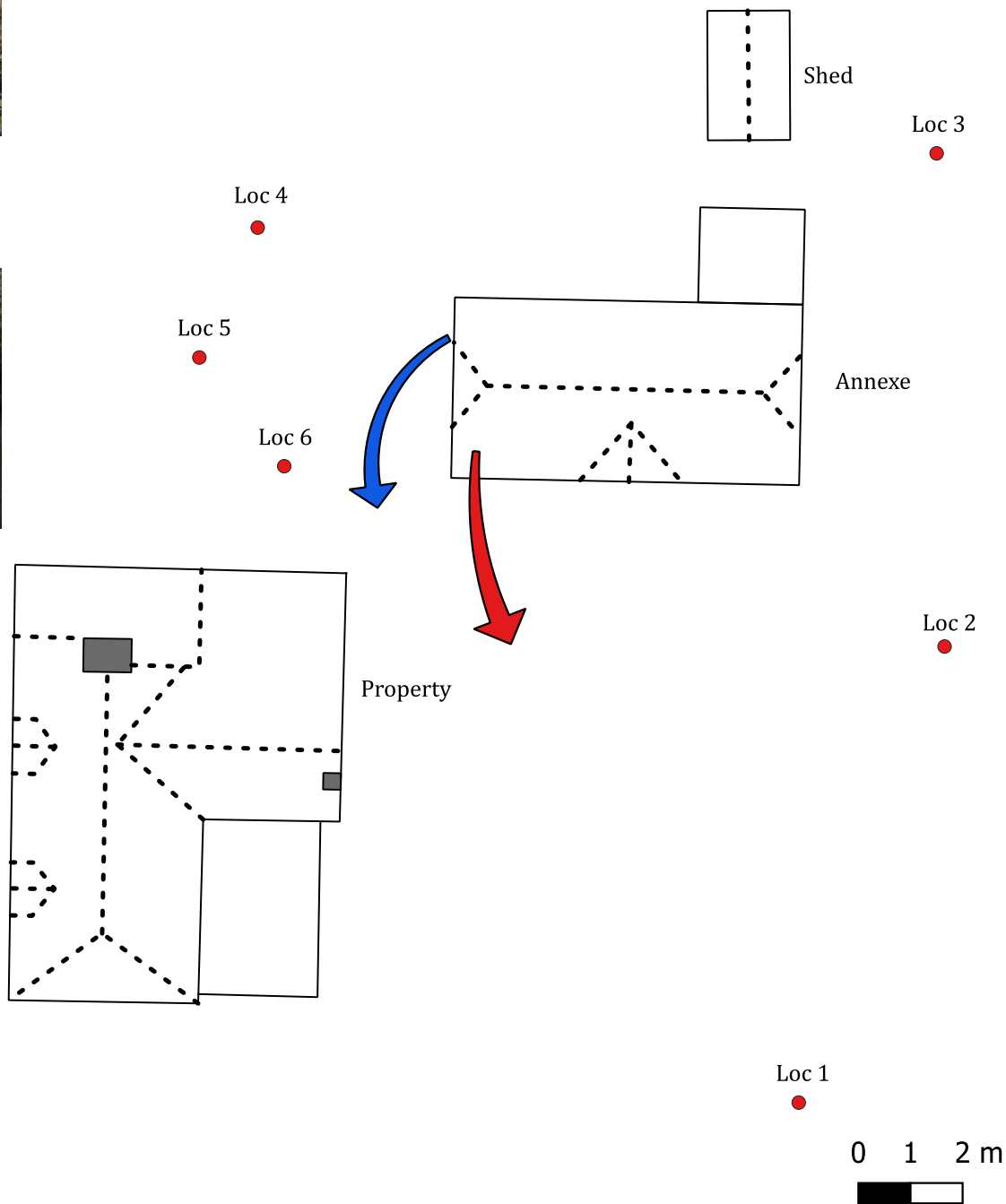


Figure 5.
Results of survey visit 3

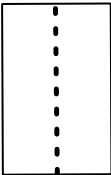
Legend

- Survey locations
- Results of survey visit 3*
- ➡ Emergence of a soprano pipistrelle (Roost 1)
 - ➡ Emergence of two common pipistrelles (Roost 2)

Date of survey	17 September 2024		
Date of issue	23 October 2024		
Job reference	MSH101		
Drawn by	JH	Checked by	JB/TB
Status	Final		



Non-bitumen coated membranes (breathable roofing membranes) will not be used to line the roof or weatherboarding on the new building, as bats can get tangled in these and die. Only hessian-backed bituminous Type 1F felt or another material that passes Natural England's 'snagging propensity test' will be used.



Shed

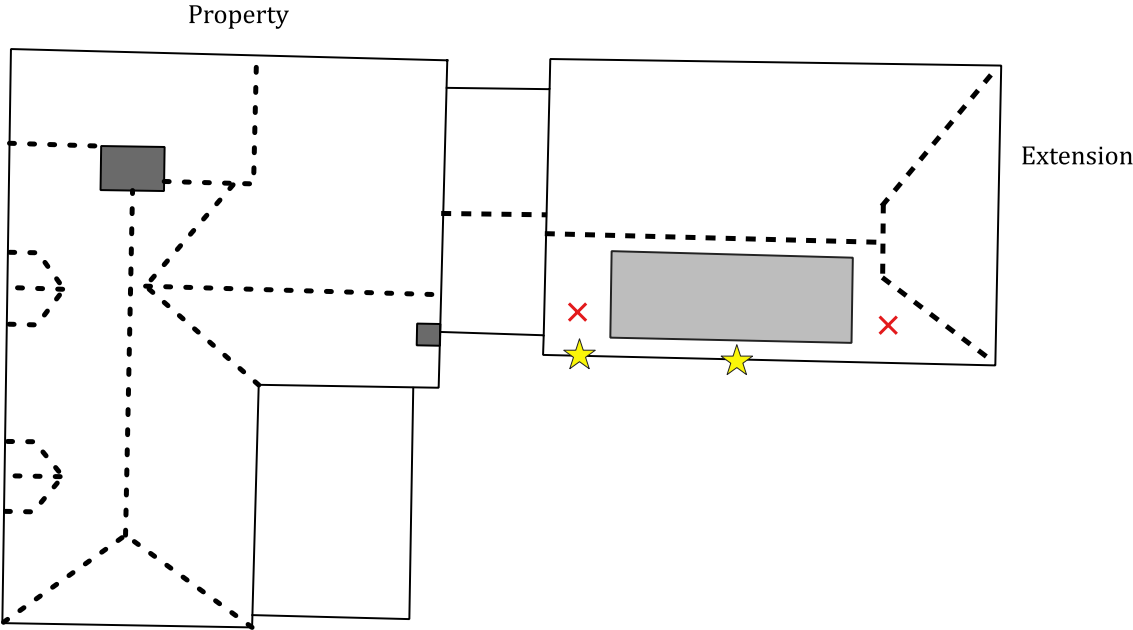


Figure 6.
Mitigation measures

Legend

Indicative property boundary

Building detail

Chimney

Solar panels

Mitigation measures

Indicative locations for the reinstated access gaps or integrated bat boxes under the eaves

Indicative locations for the reinstated roof tiles with suitable access for bats

Date of survey	N/A	
Date of issue	23 October 2024	
Job reference	MSH101	
Drawn by	JH	Checked by JB/TB
Status	Final	





Photograph 1. Northern and western elevations of the property.



Photograph 2. Southern and eastern elevations of the property.



Photograph 3. Southern elevation of the annexe.



Photograph 4. Western elevation of the annexe.



Photograph 5. Northern elevation of the annexe.



Photograph 6. Northern and eastern elevations of the annexe.

Figure 7.
Photographs

Date of survey	N/A	
Date of issue	23 October 2024	
Job reference	MSH101	
Drawn by	JH	Checked by TB/JB
Status	Final	

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Ecological Consultants

Appendix B | Screenshots from Night Vision Aids (NVAs)

Table 1. Screenshots taken from NVAs at each survey location during survey visits 1, 2 and 3.

Surveyor location	Visit no.	Start of survey screenshot	End of survey screenshot
1	1		
	2		
	3		
2	1		

Surveyor location	Visit no.	Start of survey screenshot	End of survey screenshot
	2		
	3		
3	1		
	2		
	3		

Surveyor location	Visit no.	Start of survey screenshot	End of survey screenshot
4	1		
	2		
	3		
5	1		
	2		

Surveyor location	Visit no.	Start of survey screenshot	End of survey screenshot
	3		
6	1		
	2		
	3		