BAT MITIGATION & SURVEY REPORT

27th June 2023

Springfields, Charlton, Wiltshire SP7 0EN

On behalf of: Sally Dhruev

Agent: Proctor Watts Cole Rutter (PWCR) Ltd

ABR Ecology Ltd

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Survey data lifespan

Information and data provided within this report is considered accurate at the time of writing. Bat survey data is considered valid for 18 months from the survey date for planning purposes only. However, as bats are a highly mobile species, update survey(s) will likely be required if (but not limited to):

a) The condition of the building(s) and/or general site changes; and/or
b) If the nature and/or extent of the proposed works change.

If a Natural England bat licence is required, update bat survey(s) will be required for the bat licence application. Preliminary Roost Appraisal (PRA) (i.e., building inspections) data is considered valid for 3 months prior to a bat licence application; and bat activity survey data (emergence/re-entry surveys) is considered valid within the then 'current' bat survey season (e.g., if activity surveys are conducted in the summer survey season (May-September) 2023, emergence/re-entry data is considered valid until 30th April 2024 for the bat licence application).

Reporting and data validity

This report has been produced using all reasonable skill and care, and a Quality Assurance (QA) review process has been conducted prior to issue of this report. However, ABR Ecology Ltd cannot accept responsibility for any inaccuracies and/or discrepancies with third-party data supplied within this report.

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Executive summary

- ABR Ecology Ltd were commissioned by PWCR Ltd on behalf of Sally Dhruev to undertake an update Preliminary Roost Appraisal (PRA) and bat activity surveys of Springfields, Charlton, Shaftesbury, Dorset SP7 0EN to advise on the presence/absence of bats within the building. This report was requested to inform a planning application for conversion of the existing barn and workshop into living accommodation; demolition of the single storey lean-to to the south, which is to be replacement with a single storey gable extension; recladding of the two-storey lean-to to the east; installation of solar panels and reroofing works.
- A Preliminary Bat Roost Assessment (PBRA) was undertaken by Elton Ecology Ltd on 9th March 2023. The survey identified the flat/workshop ('B1') to hold 'moderate suitability with a likely bat roost present' and the barn ('B2') to hold 'moderate suitability with a confirmed bat roost and hibernation suitability' (a torpid bat was identified roosting within the barn during the PBRA and was suspected to be a whiskered or Brandt's bat).
- An update PRA was conducted on 2nd May 2023 by ABR Ecology Ltd; the survey identified both buildings to support **confirmed bat roosts** due to the presence of bat droppings and a physical bat recorded internally. DNA analysis identified the droppings within the loft space above the flat/workshop to belong to brown long-eared bat (*Plecotus auritus*) and whiskered bats (*Myotis mystacinus*).
- Three bat activity surveys were subsequently conducted by ABR Ecology on the 2nd and 18th May and 6th June 2023; a maximum count of one common pipistrelle (*Pipistrellus pipistrellus*) was recorded emerging from the northern gable of the barn end during any one survey. No bats were recorded emerging from/re-entering the flat/workshop during the surveys.
- The barn supports a day roost for an individual common pipistrelle bat and a hibernation roost for an individual whiskered bat (based on the presence of a torpid bat at the start of March), and the flat/workshop supports an assumed day roost for low numbers of brown long-eared and whiskered bats (based on dropping evidence only).
- The conversion works will result in the loss of the common pipistrelle roost at the northern gable end and the loss of the whiskered hibernation roost within the internal area of the barn through internal conversion. The roosts within the roof space above the flat/workshop will also be modified through assumed loss of access at the southern gable. Therefore, **a European Protected Species (EPS) licence from Natural England will be required prior to any works commencing to the property**. A bat mitigation and enhancement plan is detailed in Section 5 of this report which must be strictly implemented under the approved EPS licence.

- A number of bats were recorded using the site and there is potential for artificial lighting to impact roosting, foraging and roosting bats. Ideally, no additional lighting will be installed, but where there is a need for new lighting, a 'bat-friendly' lighting strategy is detailed in Section 5.
- Active jackdaw nests are present in the northwest eaves of the barn ('B2'). A mitigation strategy for nesting birds is detailed in Section 5.
- To ensure the application is compliant with the National Planning Policy Framework (NPPF) and local planning policy, one additional integrated bat tube and one swift brick will be provided within the replacement extension. These are detailed in Section 5.

1. Introduction

ABR Ecology Ltd were commissioned by PWCR Ltd on behalf of Sally Dhruev to undertake an update Preliminary Roost Appraisal (PRA) and bat activity surveys of Springfields, Charlton, Shaftesbury, Dorset SP7 0EN (central grid reference: ST 90368 21931) to advise on the presence/absence of bats within the building. This report was requested to inform a planning application for conversion of the existing barn and workshop into living accommodation; demolition of the single storey lean-to to the south, which is to be replacement with a single storey gable extension; recladding of the two storey lean-to to the east; installation of solar panels and reroofing works.

A Preliminary Bat Roost Assessment (PBRA) was undertaken by Elton Ecology Ltd on 9th March 2023. ABR Ecology Ltd conducted an update PRA on 2nd May 2023 and three bat activity surveys on the 2nd and 18th May and 6th June 2023. Existing and proposed plans are provided in Appendix 1 and 2 of this report, respectively.

Site context

The property is situated in Charlton, in Shaftesbury, Dorset within a rural location. The property comprises a single-storey barn with a slate roof adjoining a workshop on the ground-floor which has a flat with a loft space above. The immediate surrounding landscape comprises excellent habitats for bats including mature trees, woodland, arable land and mature hedgerow networks. The property and general surrounding area provide excellent habitats for roosting, commuting and foraging bats.

Aims and scope of this report

This report is based on the results of the PBRA from Elton Ecology Ltd (2023), and the update PRA and the bat activity surveys by ABR Ecology Ltd, which were principally aimed at determining if a bat roost is present within the property and/or whether the buildings had 'potential' to support roosting bats in line with The BCT Good Practice Survey Guidelines (Collins, 2016).

This report aims to establish whether the proposed works hold the potential to impact roosting bats, which may inform the need for a bat European Protected Species (EPS) licence or a Bat Mitigation Class Licence (BMCL) to allow the works to proceed lawfully.

2. Legislation and planning policy

Legislation and UK BAP priority bat species

Legislation

In England, all bats are legally protected under Schedule 5 of the Wildlife and Countryside Act (1981) (as amended). Additionally, all bats are fully protected under Annex IV of the EC Habitats and Species Directive (1992), which is transposed into UK law under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

The legislation protects bats from many activities and acts, including to:

1. Deliberately take, injure or kill a wild bat.
2. Intentionally or recklessly disturb a bat in its roost or deliberately disturbing a group of bats.
3. Destroy or damage a place used by bats for breeding or roosts (even if bats are not occupying them at the time).
4. Intentionally or recklessly obstruct access to a bat roost.
5. Possess or advertise/sell/exchange a bat species found in the wild in the EU (dead or alive) or any part of a bat.

All birds, their nests and eggs are protected under Section 1 of The WCA (1981) (as amended) and it is thus an offence, to intentionally kill, injure or take any wild bird; intentionally take, and damage or destroy the nest of any wild bird while it is in use or being built.

UK BAP priority bat species

Several species are listed under the UK Biodiversity Action Plan (UK BAP) (JNCC, 2016) as priority species due to their vulnerability or rarity as listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006), and Section 40 places a duty to conserve biodiversity on all public authorities.

These include bats including barbastelle (*Barbastella barbastellus*), Bechstein's bat (*Myotis bechsteinii*), brown long-eared bat (*Plecotus auritus*), both species of horseshoe bat (*Rhinolophus spp*.), soprano pipistrelle (*Pipistrellus pygmaeus*) and noctule (*Nyctalus noctula*).

National and local policy

NPPF – The National Planning Policy Framework

The National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2021) sets out the Government's planning policies for England and how these should be applied. In the context of this report, Section 15 of NPPF is relevant and applicable, Section 15 states:

'*Planning policies and decisions should contribute to and enhance the natural environment by, minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*.'

New developments and projects are supported where plans promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue measurable net gains for biodiversity.

To ensure this application is compliant with Section 15 of NPPF, ecological enhancements are required as part of the project/development.

The Wiltshire Core Strategy

The Wiltshire Core Strategy (2015) (Wiltshire Council, 2015) Core Policy 50 'Biodiversity and geodiversity' states that all proposals for development, including those which will affect sites of regional and local biodiversity, nationally and internationally protected sites will:

'*Development proposals must demonstrate how they protect features of nature conservation and geological value as part of the design rationale. There is an expectation that such features shall be retained, buffered, and managed favourably in order to maintain their ecological value, connectivity and functionality in the long-term. Where it has been demonstrated that such features cannot be retained, removal or damage shall only be acceptable in circumstances where the anticipated ecological impacts have been mitigated as far as possible and appropriate compensatory measures can be secured to ensure no net loss of the local biodiversity resource'*.

Core Policy 50 also states that all development should seek opportunities to enhance biodiversity. Major development in particular must include measures to deliver biodiversity gains through opportunities to restore, enhance and create valuable habitats, ecological networks and ecosystem services. Such enhancement measures will contribute to the objectives and targets of the

Biodiversity Action Plan (BAP) or River Basin/ Catchment Management Plan, particularly through landscape scale projects, and be relevant to the local landscape character.

It is the applicant's/landowner's responsibility to ensure that the proposed development proceeds in full compliance with this report and/or any update version report thereafter, that works are undertaken lawfully, in compliance with national and local policy, and in accordance with all conditions of the obtained planning consent.

3. Methodology

Desktop data search

Wiltshire & Swindon Biological Records Centre (WSBRC) (2023) were contacted to provide records of bats and bat roosts within a 2km radius of the application site. This information was used to inform the assessment of the site and its potential to support roosting, foraging, and commuting bats. This information was also used to identify any possible cumulative effects on bats within the local area through existing and proposed developments.

Preliminary Bat Roost Assessment (PBRA)

A Preliminary Bat Roost Assessment (PBRA) was undertaken by Elton Ecology Ltd on 9th March 2023 and the methodology for this survey is provided within the report referenced: Preliminary Bat Roost Assessment (PBRA) report – Springfields, Charlton, Wiltshire SP7 0EN (Elton Ecology Ltd, 2023).

Update Preliminary Roost Appraisal (PRA)

Natural England class 2 licensed bat ecologist Russell Hoyle ACIEEM and graduate ecologist Chris Payne undertook an update PRA of the buildings on site. Timing and weather conditions for the survey are provided in the table below:

Survey date	Time of survey	Surveyor(s)	Equipment used	Weather conditions		
02/05/2023	19:30pm	Russell Hoyle and Chris Payne	High-powered torch, extendable ladder, and binoculars	Temp:	Oktas cloud cover:	Beaufort wind force:
				14°C	1/8	0/12

The survey was undertaken in accordance with the Bat Conservation Trust (BCT) Good Practice Survey Guidelines (Collins, 2016). A thorough search for evidence of bats was undertaken in any internal loft spaces or voids and on any external features of the buildings, notably any windowsills, walls, floors and flat surfaces. Evidence of roosting bats include:

- Presence of live/dead bats;
- Bat droppings - distinguished from rat/mouse droppings by their crumbly texture;
- Staining from fur around access points; and
- The presence of feeding remains, such as insect wings and casings.

The building(s) were identified as a 'confirmed' bat roost if evidence of roosting bats was recorded. If bat droppings were present, a sample of droppings were collected and sent to Swift Ecology Ltd for DNA analysis to confirm the species of bat present.

Most native bats in the UK are crevice-dwelling species, with bats roosting in remote areas, such as between tiles and membrane, behind cladding, at wall tops, in cavities, soffits and behind lead flashing, to name a few examples. Evidence of these species is often concealed and/or inaccessible due to the remote nature of the roost. Therefore, where no evidence of roosting bats was recorded, an assessment on the availability of potential roosting areas and bat access points around the building(s), as well as the quality/availability of surrounding bat habitat, was conducted. The building(s) were then assigned a category based on a sliding scale of 'negligible' to 'high potential', in accordance with the BCT Guidelines (Collins, 2016):

Bat roosting potential	Description
'High potential'	A building with one or more potential roosting sites that are highly suitable for use by many bats on a regular basis and for a longer period of time.
'Moderate potential'	A building with one or more potential roosting features that could be used by bats due to appropriate conditions but are unlikely to support a bat roost of important conservation status (roost type only, not species).
'Low potential'	The building features one or more potential roosting features that could be used by bats opportunistically. These features do not provide the appropriate conditions to be used on a regular basis by large numbers of roosting bats.
'Negligible potential'	The features of the building are negligible and are highly unlikely to be used by roosting bats.

Bat activity surveys

Three bat activity surveys were conducted using three surveyors to cover the elevations of the buildings. Timing and weather conditions for the surveys are provided in the table below:

Survey date	Timings	Surveyor(s)	Equipment used	Weather conditions		
02/05/2023 – Dusk emergence survey	Start: 20:15 Sunset: 20:31 End: 22:16	Russell Hoyle, Chris Payne and Kieran Mullany	EchoMeter Touch 2 with tablets x 3 and one Sony AX33 with two 15 LED IR floodlights in the northwest	Temp:	Okta cloud cover:	Beaufort wind force:
				Start: 14°C End: 10°C	1/8	0/12
18/05/2023 – Dusk emergence survey	Start: 20:40 Sunset: 20:55 End: 22:35	Russell Hoyle, Chris Payne and Louis Matthews	EchoMeter Touch 2 with tablets x 3 & one Nightfox Whisker infrared device in northwest	Temp:	Okta cloud cover:	Beaufort wind force:
				Start: 14°C End: 12°C	5/8	1/12
06/06/2023 – Dawn re-entry survey	Start: 03:20 Sunrise: 04:56 End: 05:15	Georgia Linter, Louis Fraser and Kieran Mullany	EchoMeter Touch 2 with tablets x 3	Temp:	Okta cloud cover:	Beaufort wind force:
				Start: 9°C End: 8°C	0/8	0-1/12

The activity surveys were conducted in accordance with The BCT Good Practice Survey Guidelines (Collins, 2016); the survey was conducted in suitable weather conditions (i.e., low wind speed, minimum temperature of 10°C at dusk and no precipitation). The surveys involved three surveyors positioned around the buildings. The surveyors were specifically watching for any bats emerging and/or re-entering the buildings, whilst a note was also made on general bat behaviour and activity within the site vicinity, such as foraging, socialising and commuting bats across the site.

The surveyors used specialised bat recording equipment and a Night Vision Aid or NVA to detect any echolocating bats, and any sonograms (images) of bat calls on tablets were used to help identify the species of bat present. The surveyors also listened to the audible bat calls to aid the determination of the bat species, and reviewed any video footage after the surveys to determine if bats were emerging or entering when vision was restricted.

The surveyors used specialised bat recording equipment to detect any echolocating bats, and any sonograms (images) of bat calls on tablets were used to help identify the species of bat present. The surveyors also listened to the audible bat calls to aid the determination of the bat species.

AnalookW (Corben, 2018) sound analysis software was used to analysis bat echolocation call data.

Limitations and constraints

PRA survey – property survey

Information obtained from the Elton Ecology Ltd (2023) report has not been independently verified by ABR Ecology Ltd. ABR Ecology accept no responsibility for the data supplied from this report.

Potential evidence of crevice-dwelling bats may have been missed due to the nature and remote location of potential roosts. However, binoculars were used to identify any potential bat droppings on the exterior features of the buildings, where possible.

The site visit provides a 'snapshot' of the site and does not take into account seasonal variation. Species may have been overlooked due to the constraints of the season and time in which the survey was undertaken. A lack of evidence of a species does not confirm its absence from site, rather there was no indication of its presence at the time of survey.

Bat activity surveys

Long-eared (*Plecotus sp*.) bats echolocate very quietly and are a later-emerging bat species, emerging from their roost when the light is dim. This makes it difficult to identify/observe bat activity and emergences/re-entries into the building.

Bats of the myotis (*Myotis sp.*) genus are difficult to distinguish due to their variable, and often similar, echolocation calls. The identification of myotis bats down to species level was therefore subject to the analyst's interpretation.

Survey data lifespan and data validity

This report is considered valid for 18 months from the survey dates for planning purposes only; and is only intended for the proposed plans outlined within this report. If any material changes to the buildings/site occur or if the nature and/or extent of the proposed development changes, update visit(s) to reassess the buildings will be required, as any conclusions provided herein may not be valid.

Update bat survey(s) will be required to inform a bat licence application; an update building inspection will be required within 3 months of applying for the licence if it has been more than 3 months since a previous site visit. **Bat activity survey data is valid for the then current survey season; if the licence is applied for after 30th April 2024, a minimum of one update dusk survey will be required upon the building to determine the 'status' of the bat roost(s) has not changed since the initial surveys.**

4. Results

Desktop data search

Wiltshire & Swindon Biological Records Centre (WSBRC, 2023) were contacted to provide records of bats and roosts within a 2km radius of the application site and the results of which are provided in the table below:

Species	Number of records	Most recent record	Closest record to site
Brown long-eared bat	10	2021	1.1km northwest
Common pipistrelle	65	2021	1.3km west
Daubenton's bat	22	2021	1.8km northwest
Greater horseshoe	14	2020	1.9km northwest
Leisler's bat	12	2020	1.8km northwest
Lesser horseshoe	13	2020	1.9km northwest
Long-eared bat sp.	11	2021	1.1km north
Myotis sp.	21	2020	1km northwest
Natterer's bat	20	2021	1.8km northwest
Noctule	26	2021	1.1km northwest
Nyctalus sp.	11	2021	1.9km northwest
Pipistrelle sp.	6	2021	1.3km west
Serotine	61	2021	373m northwest
Soprano pipistrelle	128	2021	1.3km west
Western barbastelle	26	2021	1.8km northwest
Whiskered bat	1	2019	1.1km north
Whiskered/ Brandt's bat	11	2021	1.9km northwest

There are records for multiple bats within the local area and therefore a 'bat-friendly' lighting strategy is detailed in Section 5 of this report.

Preliminary Bat Roost Assessment (PBRA)

Elton Ecology Ltd (2023) undertook a 'Preliminary Roost & Nest Assessment' (PRNA) on 9th March 2023 and identified that the main house & workshop building ('B1') held 'moderate suitability with likely bat roost present' and 'approximately 20 droppings likely attributable to bats were observed on the floor within the loft void close to the southern gable wall'. The barn ('B2') adjacent to the north of 'B1' was identified to hold 'moderate suitability with a confirmed bat roost and hibernation suitability' and '1 torpid bat was observed roosting between the wall and wooden joist close to the south gable apex. Species identified as possible whiskered *Myotis mystacinus* or Brandt's bat *Myotis brandtii*.'

Update Preliminary Roost Appraisal (PRA)

Building descriptions

Descriptions of the buildings surveyed for roosting bats are provided in the table below and photographs of the buildings are provided in Appendix 3:

Building name	Description
Flat/workshop ('B1')	• The building comprises a two-storey building constructed of stone and breeze block elevations. • The roof is pitched with slate tiles and a slate ridge. • An internal brick chimney is present in the northwest of the roof and a second chimney is present at the southern gable on the eastern side. • A two-storey extension constructed of block/stone is present on the eastern elevation with a mono-pitch corrugated metal roof. • A single-storey extension is present on the southern gable of the property. • Internally, the workshop forms the ground-floor with a flat/dwelling on the upper floor, and one loft space is present above which is described below: - No lining is present. - Purlin beams and a ridge beam are present. - Older loft insulation is present throughout with some crawl boards present. - The internal loft dimensions are approximately 10m in length, 6m in width and 1.6m in height.
Barn ('B2')	• The barn adjoins the flat/workshop on the northern side and comprises a single-storey building of breezeblock, brick and stone construction. • The roof is pitched with slate tiles and a slate ridge. • A pair of timber doors are present on the northern gable end. • A lean-to structure with a corrugated metal roof is present on the eastern elevation. • Internally, the barn is open to the roof with no enclosed loft void present. • The barn dimensions are approximately 9m in length, 7m in width and 6m in height to the ridge.

Evidence of bats recorded

A summary of any bat evidence recorded during the visit is provided in the table below:

Building name	PRA results
Flat/workshop ('B1')	▪ Approximately 20 bat droppings were recorded below the southern gable within the loft space above the flat. ▪ No evidence was recorded within the ground-floor workshop area.
Barn ('B2')	▪ No evidence of bats was recorded within/around the barn during the survey.

DNA analysis of bat droppings

ABR Ecology undertook DNA analysis of the bat droppings from 'B1' which were sent to Swift Ecology Ltd for DNA analysis; the analysis identified the droppings to belong to brown long-eared bat (*Plecotus auritus*) and whiskered bats (*Myotis mystacinus*).

Building assessments – potential bat roosting areas and bat access points

An inspection of the internal and external features of the buildings was undertaken to identify any potential bat access points and potential areas where bats could roost, and these are summarised below:

Building name	Potential bat access points	Potential roosting provisions	Potential of the building
Flat/workshop ('B1')	• Gaps under the lead flashing at the chimney. • Gaps around the support joists at the northern gable. • Missing mortar around the stone elevations. • Gaps under the ridge tiles at the gable ends.	• Roosting at the roof beam convergence points/where the joists meet the stonework. • At the wall tops/eaves. • Roosting within the loft space including at the ridge beam, rafters and purlins. • Under the lead on the chimney.	Confirmed roost for brown long-eared bats and whiskered bats
Barn ('B2')	• Gaps above the timber doors on the northern gable. • Gaps around the wooden window frame and through a missing window pane on the eastern elevation. • Under lifted ridge tiles towards the northern gable.	• Roosting at the roof beam convergence points. • Wall cavities around the window. • At the wall tops between the roof and stonework. • Internally hanging from beams/the roof.	Confirmed hibernation roost for whiskered bats (based on the presence of a torpid bat roosting internally)

The flat/workshop ('B1') was identified to support confirmed roosts for brown long-eared and whiskered bats based on the presence of bat droppings recorded internally. A torpid bat (suspected whiskered/Brandt's bat) was recorded within the barn ('B2') during the PBRA by Elton Ecology (2023); based on the presence of whiskered bat droppings within the flat/workshop ('B1'), which adjoins the barn, it is assumed that this torpid bat was a whiskered bat rather than Brandt's bat. As a torpid bat was found during early March, the barn ('B2') is considered to support a hibernation roost for an individual whiskered bat.

In line with the BCT guidelines (Collins, 2016), three bat activity surveys were subsequently conducted by ABR Ecology upon the buildings and the results of which are provided below.

Bat activity surveys

Three bat activity surveys were conducted; a summary of the surveys is presented in the table below and full results including locations of bat emergence/re-entry points/roosting locations are presented in Appendix 4:

Survey date	Bat emergences/re-entries	General activity
02/05/2023 – Dusk emergence survey	• No bats were recorded emerging from / re-entering the buildings during the survey.	• Common pipistrelle bats were recorded commuting and foraging over the property between 20:41 and 22:16. • Soprano pipistrelle bats were recorded commuting and foraging around the property between 20:10 and 22:16. • Serotine bats (*Eptesicus serotinus*) were recorded commuting and foraging over the site between 21:09 and 22:16.
18/05/2023 – Dusk emergence survey	• No bats were recorded emerging from/re-entering the flat/workshop ('B1') during the survey. • At 21:05 one common pipistrelle (*Pipistrellus pipistrellus*) bat emerged from the northern gable of the barn ('B2').	• Common pipistrelle bats were recorded commuting and foraging around the property between 21:10 and 22:35. • Soprano pipistrelle bats were recorded commuting and foraging around the property between 22:15 and 22:35. • A noctule bat was recorded at 21:20 in the north commuting over the site. • Serotine bats were recorded commuting and foraging over the site between 21:10 and 22:35.
06/06/2023 – Dawn re-entry survey	• No bats were recorded emerging from / re-entering the buildings during the survey.	• Common pipistrelle bats were recorded between 03:50 and 04:22 commuting and foraging across the site. • A soprano pipistrelle bat was recorded but not seen at 03:42 in the east.

No bats were recorded emerging from/re-entering the flat/workshop ('B1') during the surveys; therefore, this building is considered to support assumed day roosts for low numbers of brown long-eared bat and whiskered bat based on internal dropping evidence only. It is not considered that this building supports hibernating bats within the loft space as no hibernating bats were physically seen during the PBRA by Elton Ecology (2023), however, the cavities between

the roof tiles and felt may hold limited potential for hibernating bats but it would not be possible to determine if a hibernation roost is present due to the sheer number of tiles and potential crevices present.

A maximum count of one common pipistrelle bat was recorded emerging from the barn ('B2') during any one survey. The barn ('B2') supports one day roost supporting an individual common pipistrelle bat, and a hibernation roost for an individual whiskered bat based on a torpid bat roosting at the ridge apex between the southern gable wall and wooden joist observed by Elton Ecology (2023). The species is considered to be whiskered based on the presence of whiskered bat droppings recorded within the adjacent building ('B1'). The whiskered bat is considered to utilise a crevice as opposed to a loft space for hibernation purposes due to the bat's location between the joist and southern gable wall. The buildings are not considered to support a maternity roost based on a lack of survey evidence.

The proposed two-storey extension on the southern gable of the flat/workshop ('B1') will result in the loss of access for the assumed whiskered and brown long-eared day roosts at the southern gable of the building as droppings were found at the southern end of the loft void and therefore the access is assumed to be at the southern gable. This will result in the permanent modification of the day roosts within this loft space.

The proposals for conversion of the barn ('B2') will also result in the loss of the whiskered hibernation roost through complete internal conversion of the barn, which will result in the loss of all roof space as the barn will feature a vaulted ceiling with roof lights, and the loss of the common pipistrelle day roost at the northern gable end.

As the proposed works will result in the loss and modification to the identified bat roosts, works will need to be carried out under a European Protected Species (EPS) licence from Natural England to allow works to proceed lawfully. The EPS licence can only be obtained once planning is granted. A bat mitigation, compensation and enhancement strategy is detailed in Section 5 overleaf which must be implemented under the approved licence.

Common pipistrelle, soprano pipistrelle, serotine, and noctule bats were recorded commuting and foraging across the general property. A lighting strategy is detailed in Section 5 to minimize lighting disturbance on roosting, commuting and foraging bats.

Nesting birds

Two active jackdaw (*Corvus monedula*) nests were recorded at the eaves on the northwest elevation of the barn ('B2') (see Figure 9 in Appendix 3). The conversion works will result in the likely loss of these nesting locations; a mitigation and compensation strategy for nesting birds is therefore provided in Section 5.

5. Bat mitigation and enhancement strategy

The property supports a hibernation roost for an individual whiskered bat and a day roost for an individual common pipistrelle bat both located within the barn ('B2'), and an assumed day roost for a low number of whiskered and brown long-eared bats within the loft space above the flat/workshop ('B1') based on dropping evidence only.

The proposed works will involve a two-storey rear extension to the southern gable of the flat/workshop ('B1'); the extension will feature a vaulted ceiling; however, these works will result in the loss of access for the day roosts at the southern gable end through tying-in of the two-storey extension to the existing roof and will therefore result in the permanent modification to these roosts. The workshop on the ground-floor will be converted to living accommodation, and the existing eastern flat-roofed extension will be replaced which will require disturbance to the existing roof above the flat/workshop ('B1') near the eastern eaves.

Additionally, the barn ('B2') will be fully converted to living accommodation and will involve full internalisation of the barn from ground-floor to roof level; these works will result in the loss of all roof space as the ceilings will be vaulted. These works will result in the loss of the hibernation roost for a whiskered bat between the joist and southern gable wall, and the loss of the common pipistrelle day roost at the northern gable of the barn.

A bat European Protected Species (EPS) licence will now be required to allow the works to proceed lawfully following approval of all planning consent(s), and the following mitigation and compensation strategy must be implemented under the bat licence following planning approval.

Bat mitigation, compensation, and enhancement strategy

In accordance with The Bat Mitigation Guidelines (Mitchell-Jones, A. J., 2004), the roosts are cumulatively of 'moderate conservation significance' (Wray *et al.,* 2010) due to the presence of small numbers of a 'rarer' species (whiskered bat) and 'common' species (brown long-eared and common pipistrelle bat). The level of mitigation and compensation required includes the provision of new bat roost facilities that need not be 'like-for-like' but should be suitable, based on the species roosting requirements. Timing and weather restrictions will apply due to the presence of a hibernation roost and post-monitoring will be required due to the presence of a 'rarer' species.

The following strategy is proposed to ensure the Favourable Conservation Status (FCS) of the species will be maintained, which must be implemented under a bat EPS licence from Natural England following planning approval (see Appendix 5 for bat mitigation plan):

Bat boxes (to be erected pre-works):

- To ensure temporary roosting provisions for common pipistrelle, whiskered and brown long-eared bats are present on site, prior to any works commencing, two 'Improved Cavity Bat Box' (https://www.nhbs.com/improved-cavity-bat-box) and one 'Improved Crevice Bat Box' (https://www.nhbs.com/improved-crevice-bat-box) (see Appendix 3) will be erected on suitable mature trees within the applicant's ownership. The boxes will be erected at a minimum height of 3.5m from ground level with no limbs/vegetation obstructing the entrances to the boxes.

Roofing/destructive works - weather restrictions and Ecological Clerk of Works (ECoW) for bats:

Timing and weather restrictions:

- Due to the presence of a hibernation roost within the barn ('B2'), and as it is possible that crevice-dwelling hibernating bats are present within the roof tile cavities of the flat/workshop ('B1'), no winter works will be permitted. **No destructive roof removal / tying-in works will be permitted over the winter period between mid-November and mid-March when bats could be hibernating.** Works will only commence following four consecutive days/nights when temperatures are consecutively at 8°C or above.
- The reroofing of the flat/workshop roof will also need to be completed in full with any tying-in works for the extensions completed before the start of the hibernation season which runs between mid-November and mid-March.

Ecological Clerk of Works (ECoW) for bats under bat licence:

- Prior to any works commencing on site, the licensed bat worker will provide a toolbox talk to all contractors on the site regarding the legal protection afforded to bats, bat biology, the contractor's responsibilities, measures of best practice and any conditions set out within the EPS bat licence and this report/any update report thereafter. The contractors will be continually aware of bats including the presence of the bat roosts on site and the potential for bats to be present during the works.

- A licensed bat worker will attend the site on the day of all roof/eaves/felt works etc. An internal survey will take place to look for any bats roosting within internally prior to any destructive works commencing. Should a bat be present within any area, the bat worker will capture the bat by hand wearing gloves or with a hand net and transport the bat to the bat box. Once the area is clear of bats/if no bats are present then works will continue.

- The bat licensed ecologist will supervise the 'soft' dismantling of any areas of roof tiles, eaves, felt, timbers, wall tops, beams, and mortar etc. Soft dismantling will be undertaken by hand and hand tools only, the tiles and features will be removed gently and lifted away from the roof/wall to avoid crushing bats and eaves removal will be undertaken by hand. Other features will be removed carefully and inspected for the presence of bats and/or bat evidence. Should any bats be present the licensed bat worker will remove the bat to the bat box following a health examination of the bat.

- Once all features suitable for supporting roosting bats have been carefully dismantled then works may continue unsupervised once the licensed bat worker is satisfied that all potential bat roosting areas have been dismantled. Should a bat be discovered at any other time then works will cease immediately and the licensed bat ecologist contacted for advice. ***All contractors are strictly forbidden from handling bats.***

- Any injured or underweight bats will be taken immediately into care (as directed by the Batworker's Manual, s. 7. 3, pp 64 – 66; 3rd ed. 2004 and in accordance with the Bat Conservation Trust's (BCT) Bat Care Guidelines: A Guide to bat care for rehabilitators 2nd ed 2016).

Permanent replacement bat roosting features:

- Before the start of the following hibernation season (mid-November), two hibernation bat boxes will be installed within the loft space above the flat/workshop ('B1') to ensure a hibernation roost is present on site for the whiskered hibernation roost. Two '2FE Schwegler Wall-Mounted Bat Shelter' (https://www.nhbs.com/2fe-schwegler-wall-mounted-bat-shelter-pack-of-2) or other agreed/approved hibernation bat boxes will be erected, one on each internal gable wall, within the loft space above the flat to compensate for the loss of the hibernation roost within the barn. Each box will be mounted as close to the apex as possible.

- To ensure whiskered and brown long-eared bats can access the loft space above the flat/workshop ('B1'), three 'bat ridge tiles' will also need to be

installed in the existing roof to permit bats access to the roof space and these will need to be installed before the start of the bat hibernation season (mid-November to mid-March). This will be created by the roofers by leaving out a 30mm x 100mm gap in the ridge mortar, and any infill mortar will be left out under this ridge tile. A 30mm x 100mm cut of bitumen felt will be removed from behind each tile to allow bats access into the roof space (see Appendix 5).

- To compensate for the loss of the common pipistrelle day roost at the northern gable of the barn, one Vivara Pro Build-in Woodstone Bat Box' (https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box) or similar built-in bat box /tube will be built into the eastern elevation of the replacement extension as close to roof level as possible. The tube is completely self-contained and maintenance-free once installed, the tube can be faced with a bespoke render/brick with only the small entrance visible from the outside. The materials directly below the entrance to the bat tube must not be slippery/shiny to ensure bats have grip.

- **The new extension roofs/any existing roofs to be re-felted will be exclusively lined with bituminous 1F type roofing felt ONLY;** Breathable Roofing Membranes (BRMs) are non-woven and are NOT suitable for roosting bats, this is due to loose fibres 'fluffing up' over time and resulting in entrapment/injury and eventual death of roosting bats (Waring *et al.,* 2010).

Post-monitoring visits:

- Two years of post-development monitoring are required during a suitable time of year will be required between 2-5 years following completion of the works. Each visit will involve an internal loft and bat box inspections.

External lighting:

In addition to the bat roosts within the property, the general site is used by high numbers of commuting and foraging bats. Bats are highly light-sensitive and will actively avoid lit areas, therefore a permanent change in site lighting may result in the abandonment of roosts and loss of foraging opportunities on site. The following lighting strategy based on current national guidance (BCT & ILP, 2018) and will apply if any additional lighting is required; this must be agreed with the project ecologist and will form part of the EPS licence from Natural England:

- Preferably, no additional lighting will be installed around the property.
- Where lighting is required for health and safety purposes only, any external lighting required as part of the scheme (e.g. security lighting)

will be motion-triggered, set on timers (1 minute or less) and directional towards the ground to avoid upward light spill.

- Any light spill must be directed away from the roofs and from surrounding tree canopies and vegetation.
- All luminaires used will lack UV elements when manufactured. Metal halide, fluorescent sources will not be used.
- LED luminaires will be used due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally <2700Kelvin) must be adopted to reduce blue light component.
- Luminaires must feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires within the new extensions/within the barn conversion will be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist low-level downward directional luminaires to reduce upwards lighting spill can be considered, however, must be used as a final resort.
- Only luminaires with an upward light ratio of 0% and with good optical control must be used.
- Luminaires will always be mounted on the horizontal, i.e., no upward tilt.
- 'Up and down' projector style light fixtures must not be used.
- No lighting will be permitted within 5m of the replacement bat access points and the bat tubes (see Appendix 5 for locations), including the enhancement bat tube detailed under 'Biodiversity enhancements' below.

Nesting birds

Two Jackdaw nests were recorded at the eaves of the barn on the northwest elevation. The following strategy will be applied to ensure protection of any nesting birds:

- Building works will inevitably take place between the 1st March and 31st August and within the nesting season due to winter works restrictions due to bats, therefore the bat ecologist will undertake a pre-works check for signs of nesting birds before works commence. If an active nest is encountered, all works will cease immediately, and the nest will be left undisturbed. The ecologist will instate a minimum 5m works exclusion buffer zone marked out with red/white hazard tape and a second site visit by the ecologist to check the status of the

nest will be required before works can continue in this area. Works may only continue when the nest is deemed to be unoccupied/no longer active by the ecologist.

- **If a bird's nest is encountered at any other unsupervised time, all works in the area must cease immediately the ecologist must be contacted immediately to provide further advice.**

- As compensation for the loss of the nesting location, two 'Manthorpe Swift Bricks' (https://www.nhbs.com/manthorpe-swift-brick) or similar agreed built-in bird bricks will be installed in the northern elevation of the replacement extension as close to the soffits/eaves as possible (see Appendix 5). The bricks/boxes should be sited with shade / eaves protection.

Biodiversity enhancements:

To ensure the proposed development is compliant with the National Planning Policy Framework (NPPF) and local planning policy, the following biodiversity enhancements for roosting bats and nesting birds will be included as part of the proposed works (see Appendix 5 for locations and specifications):

- One additional 'Vivara Pro Build-in Woodstone Bat Box' (https://www.nhbs.com/vivara-pro-build-in-woodstone-bat-box) or similar built-in bat box will be built into the eastern elevation of the replacement extension as close to roof level as possible. The tube is completely self-contained and maintenance-free once installed, the tube can be faced with a bespoke render/brick with only the small entrance visible from the outside. The materials directly below the entrance to the bat tube must not be slippery/shiny to ensure bats have grip.

- One 'Manthorpe Swift Brick' (https://www.nhbs.com/manthorpe-swift-brick) or similar agreed built-in swift brick will be installed in the northern elevation of the replacement extension as close to the soffits/eaves as possible. The brick should be sited with shade / eaves protection.

European Protected Species (EPS) licence application

An EPS licence can only be sought from Natural England after Planning Permission has been granted. The licence must be approved by Natural England before any works start on site which would otherwise constitute an

offence. **Natural England requires a minimum of 4 weeks to process and issue a licence application.**

Update bat survey(s) will be required to inform a Natural England bat licence application; an update survey is required within 3 months of a licence application and bat activity survey data must be from the then 'current' bat survey season. Therefore, the bat activity survey (dusk/dawn) data in this report is considered valid until 30th April 2024 for a Natural England bat licence application; if the application is applied for after the 30th April 2024, a minimum of one update dusk emergence survey will be required between May and August 2024 as this is a licensing requirement. In all events, an update building inspection will be required within 3 months of the licence application.

Licences will only be issued where the application has considered the three following tests and met the following requirements:

- The development is in the interests of public health and safety or is required for other imperative reasons of overriding public interest.
- There is no satisfactory alternative to the development.
- The development will not be detrimental to the maintenance of the bat populations concerned at a favourable conservation status in their natural range.

The three tests above must be explored at the planning stage (as noted in the R (Vivienne Morge) v Hampshire County Council 2011 case). The tests have been considered below:

Imperative reasons of overriding public interest

The extensions and conversion are required by the family to provide increased living accommodation and improved facilities. The family are currently lacking living space, and additional bedroom and living space is required. The family do not own an alternative home and the extensions and conversion is required to meet the needs of the family.

No satisfactory alternative

The family do not own an alternative property and wish to make the property their home for the foreseeable future. The 'do nothing' option has been discounted as the family require additional living space. Full demolition and rebuild of the property was not considered a viable alternative as this would not be economically viable and would result in the full destruction of all identified bat roosts within the property. Extensions and conversion of the

property has been judged as the most satisfactory method for ensuring the needs of the family are met, whilst enhancing the intrinsic character of the site and the preservation of the bat population.

Favourable conservation status of the bat population

The above mitigation strategy is presented with a view to ensure the bat population is retained and enhanced within the site.

6. References

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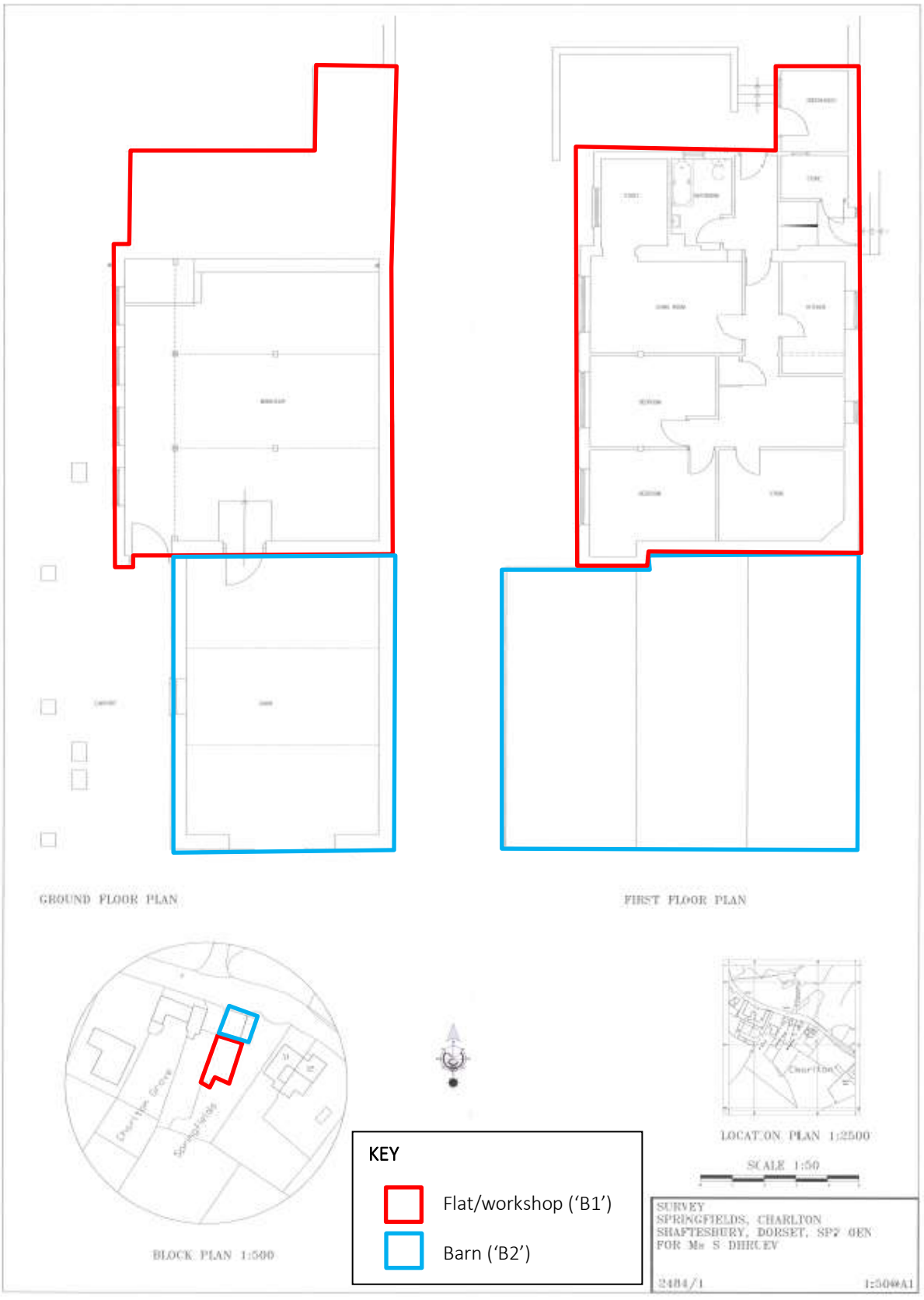
Appendix 1: Existing plans




GROUND FLOOR PLAN
FIRST FLOOR PLAN
BLOCK PLAN 1:500
LOCATION PLAN 1:2500
SCALE 1:50
KEY
Flat/workshop ('B1')
Barn ('B2')
SURVEY
SPRINGFIELDS, CHARLTON
SHAFTESBURY, DORSET, SP7 0EN
FOR Ms S DHRUV
2484/1
1:500@A1

Appendix 2: Proposed plans



Appendix 3: Photographs



Figure 1: Internal loft void above the flat/workshop ('B1').



Figure 2: Rear southern elevation of the flat/workshop ('B1').



Figure 3: Internal area within the workshop below the flat ('B1').



Figure 4: East elevation of the flat/workshop ('B1') (left) and the barn ('B2') (right).



Figure 5: Internal area of the barn ('B2') looking towards southern gable wall.



Figure 6: Eastern elevation of the barn ('B2') showing the lean-to structure.



Figure 7: Northern gable of the barn ('B2').



Figure 8: Western elevation of the barn ('B2') (front) and flat/workshop ('B1') (rear).



Figure 9: Jackdaw nests within eaves on the northwest side of the barn ('B2').

Appendix 4: Bat activity survey results

Bat activity survey						
Date: 02/05/2023	**Sunset:** 20:31	**Weather conditions:** Mild and dry	**Location:** Springfields, Charlton			
Temp: Start: 14°C End: 10°C	**Wind Force (Bft):** 0/12	**Equipment:** EchoMeter Touch 2 + tablets x 3, one Sony AX33 camcorder & two IR floodlights (in the northwest)	**Cloud cover (Oktas):** 1/8	**Start Time:** 20:15	**End Time:** 22:16	**Surveyors and locations:** Russell Hoyle in the northwest, Chris Payne in the east & Kieran Mullany in the south.
Time	**Sp. if ID'd**	**Number**	**Comments**			
20:10	Soprano pipistrelle	1	Commuted west to south in the south.			
20:39	Soprano pipistrelle	1	Heard not seen in northwest.			
20:41	Common pipistrelle	1	Commuted southwest to northeast in the northwest.			
20:43-END	Common& soprano pipistrelle	1, 1	Foraging in the north by road and trees.			
20:58	Soprano pipistrelle	1	Heard not seen in the east.			
21:09-END	Serotine	1-2	Foraging in the north by road and trees.			
21:20	Serotine	1	Commuted west to south in the south.			



Plate 1: View from the Sony AX33 camera at the darkest point of the night

Bat activity survey						
Date: 18/05/2023	**Sunset:** 20:55	**Weather conditions:** Cool	**Location:** Springfields, Charlton			
Temp: Start: 14°C End: 12°C	**Wind Force (Bft):** 1/12	**Equipment:** EchoMeter Touch 2 + tablets x 3 & Nightfox Whisker infrared device in the northwest	**Cloud cover (Oktas):** 5/8	**Start Time:** 20:40	**End Time:** 22:35	**Surveyors and locations:** Russell Hoyle in the northwest, Chris Payne in the northeast, and Louis Matthews in the south

Time	Sp. if ID'd	Number	Comments
21:05	*Common pipistrelle*	*1*	*Emerged from the north facing gable end at the wall top of the barn (see red circled area in Plate 2 below).*
21:10-END	Common pipistrelle, serotine	1-3	Foraging in the northern trees.
21:20	Noctule	1	Heard not seen in the north.
21:28	Common pipistrelle	1	Commuted northeast to the southwest in the south.
21:42	Serotine	1	Heard not seen in the south.
22:05	Common pipistrelle	1	Commuted west to east over the house.
22:15-END	Soprano pipistrelle	2	Foraging in the south garden.
22:21	Common pipistrelle	1	Foraging in the south garden.



Plate 2: Common pipistrelle emergence point from the barn ('B2')



Plate 3: View from the Nightfox Whisker at the darkest point of the night

Bat activity survey						
Date: 06/06/2023	**Sunrise:** 04:56	**Weather conditions:** Cool and dry	**Location:** Springfields, Charlton			
Temp: Start: 9°C End: 8 °C	**Wind Force (Bft):** 0-1/12	**Equipment:** EchoMeter Touch 2 + tablets x 3	**Cloud cover (Oktas):** 0/8	**Start Time:** 03:20	**End Time**: 05:15	**Surveyors and locations**: Georgia Linter in the east, Louis Fraser in the northwest and Kieran Mullany in the south.
Time	**Sp. if ID'd**	**Number**	**Comments**			
03:50-04:30	Common pipistrelle	2	Heard but not seen in the east with frequent passes.			
03:42	Soprano pipistrelle	1	Heard but not seen in the east.			
03:44	Common pipistrelle	1	Commuted east to west over the northern extension.			
03:45	Common pipistrelle	1	Commuted north to south over the driveway.			
03:51	Common pipistrelle	2	Commuted east to west over the northern extension.			
04:18-04:22	Common pipistrelle	2	Heard but not seen in the east.			

Appendix 5: Bat and nesting birds mitigation and enhancement plan

Bat boxes to be erected prior to works commencing:

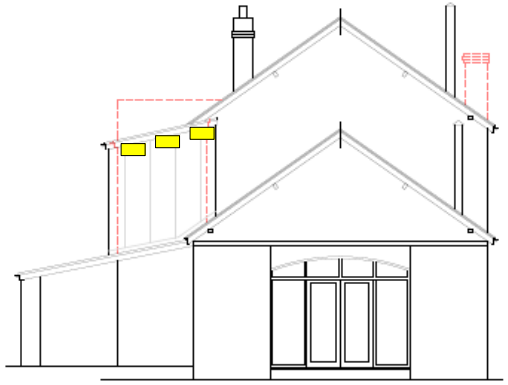


Improved Cavity Bat Box x 2



Improved Crevice Bat Box x 1

Permanent replacement bat roosting and bird nesting features and biodiversity enhancements:



North Elevation



East Elevation

KEY

New extension roofs (and any existing roofs to be re-felted) to be lined exclusively with bitumen 1F type felt only.

'Bat ridge access tile' x 3 within ridgeline (see Image 1 overleaf for specifications) to allow brown long-eared and whiskered bats access to the loft space.

'Vivara Pro Build-in Woodstone Bat Box' x 2 to be built into the eastern elevation of the replacement extension (one as compensation for loss of common pipistrelle roost and one as an enhancement (see Image 2 overleaf).

'Manthorpe Swift Brick' x 3 to be installed in the northern elevation of the new extension (two as compensation and one as an enhancement) (see Image 3 overleaf).

Before the start of the following hibernation season (mid-November), two hibernation bat boxes will be installed within the loft space above the flat/workshop ('B1') to ensure a hibernation roost is present on site for the whiskered hibernation roost. Two '2FE Schwegler Wall-Mounted Bat Shelter' or other agreed/approved hibernation bat boxes will be erected, one on each internal gable wall, within the loft space above the flat to compensate for the loss of the hibernation roost within the barn. Each box will be mounted as close to the apex as possible (see Image 4 overleaf).

Image 1: Bat ridge tile

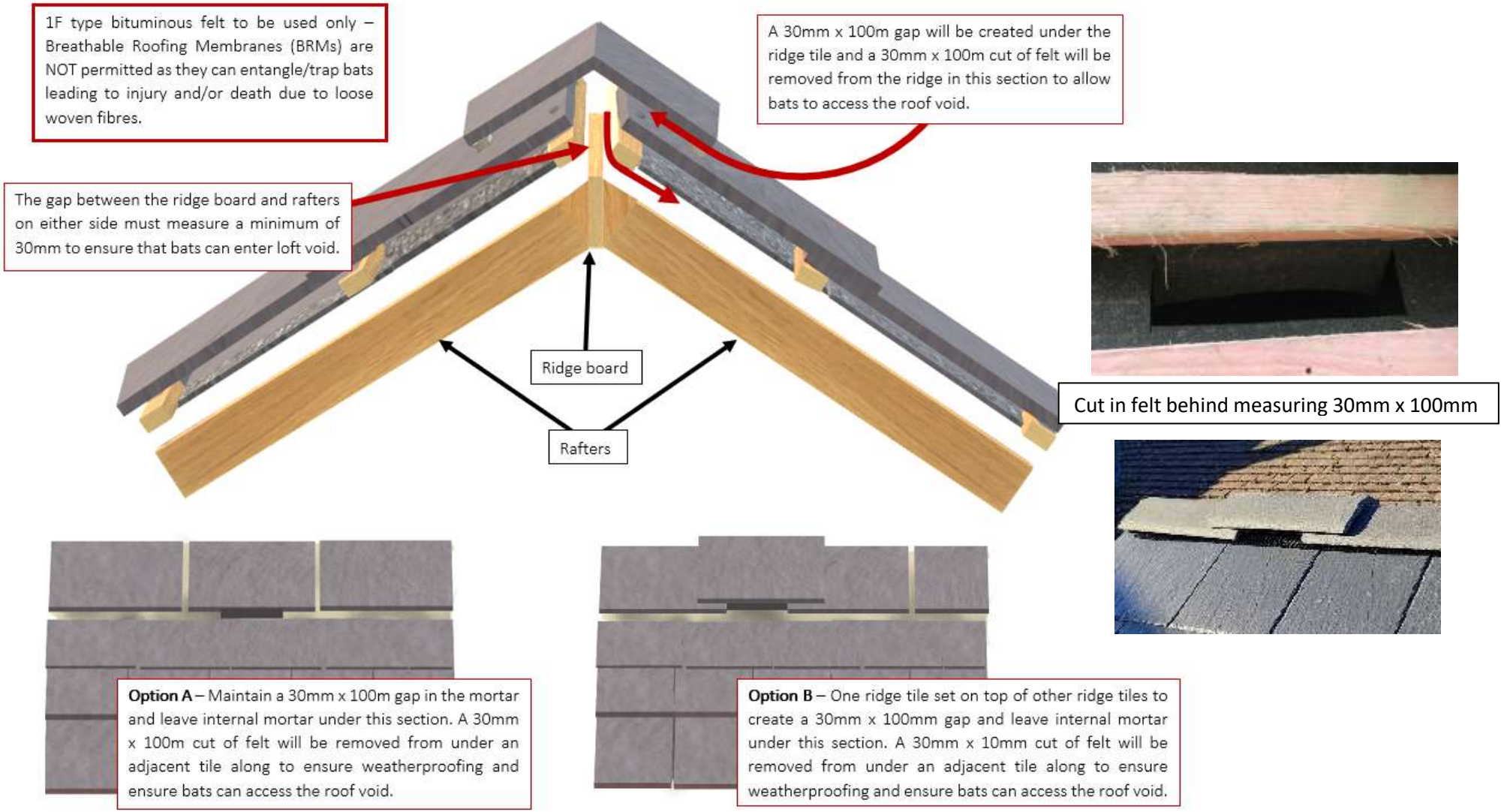


Image 2: Vivara Pro Build-in Woodstone Bat Box







Image 3: Manthorpe Swift Brick





Image 4: 2FE Schwegler Wall-Mounted Bat Shelter



