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Ecological Impact Assessment

The Mill Cottage
Liphook Road
Haslemere
GU27 3QE

November 2022

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QUALITY CONTROL		
The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct.		
Prepared by	Gen Labram Ecologist BSc (Hons), MSc	19th October 2022
Approved by	Sophie Higgins Senior Ecologist BSc (Hons), MSc, ACIEEM	15th November 2022
This report remains valid for 18 months from date of issue.		

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Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living creatures are capable of migration and whilst protected species may not have been located during the survey duration, their presence may be found on site at a later date.

The views and opinions contained within the document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to works.

1. EXECUTIVE SUMMARY

- 1.1. Darwin Ecology Ltd was commissioned by Amy Manos to undertake an EcIA of proposals for the building(s) at The Mill Cottage, Liphook Road, Haslemere, GU27 3QE. The assessment was required to support a planning application for the extension of the cottage. This assessment was informed by a desk study and internal / external building inspection.
- 1.2. During the internal / external building inspection, undertaken by the Ecology Co-op in April 2022, the building was classified as being of **high** potential to support roosting bats. Therefore, in line with the Bat Conservation Trust (2016) Guidelines, two emergence and a single dawn re-entry survey was carried out.
- 1.3. During the surveys no bats were recorded emerging or re-entering Mill Cottage.
- 1.4. The proposed works will not result in the destruction of a bat roost.
- 1.5. **In the unlikely event that a bat is discovered during the works, all works must cease and a bat licensed ecologist contacted for advice.**
- 1.6. Recommendations for enhancements include integrated and tree mounted bat boxes.

2. INTRODUCTION AND BACKGROUND

- 2.1. Darwin Ecology Ltd was commissioned by Amy Manos to undertake an EclA of proposals for the building(s) at The Mill Cottage, Liphook Road, Haslemere, GU27 3QE. The assessment was required to support a planning application for the extension of the cottage. This assessment was informed by a desk study and internal / external building inspection.
- 2.2. The proposed drawings on which this assessment is based are provided at **Appendix 1, Proposed Plans**.
- 2.3. The internal / external building inspection followed the Bat Conservation Trust (BCT) Good Practice Guidelines (2016).
- 2.4. The subsequent Ecological Impact Assessment (EclA) follows the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (2018).
- 2.5. The Ecology Co-op carried out a Bat Scoping Report and Preliminary ecological Appraisal at The Mill in April 2022. The initial bat scoping survey confirmed that the building was of **high** suitability to support roosting bats.

Site Overview

- 2.6. The site is located in a semi-urban area to the south-west of Haslemere. The immediate area comprises of residential dwellings to the east, north-east and north-west. Deciduous woodland lie 67m east and 140m west of the site (see **Figure 1**).
- 2.7. The wider landscape comprises of urban development to the north and south-east with large areas of deciduous woodland to east, west and south of the site (see **Figure 2**). The immediate and wider area provides optimal habitat for foraging and commuting bats.

Scope of Assessment

- 2.8. The process of EclA aims to identify, quantify and evaluate the potential effects of development-related or other proposed actions on habitats, species and ecosystems.
- 2.9. Potential effects on the following ecologically sensitive receptors have been considered during the EclA of The Mill:
 - Statutory and non-statutory designated sites; and
 - Features of potential importance (such as loft voids or external crevice features).



Figure 1: Site location within the local landscape (Copyright Google Earth Pro, 2021)



Figure 2: Site location within the wider landscape (Copyright Google Earth Pro, 2021)

3. LEGISLATION & POLICY

General Wildlife Legislation

- 3.1. Wildlife in the United Kingdom (UK) is protected through European and national legislation, supported by national and local policy and guidance. Development can contribute to conservation and enhancement goals outlined by these various legislation and policy by retaining and protecting the most valuable ecological features within a site and incorporating enhancements to provide biodiversity net gain.
- 3.2. This section provides a brief summary of the principle legalisation and policy that triggers the requirement for preliminary and further ecological assessments in the UK. The presence of protected species within a site are a material consideration during the planning process. Preliminary and any necessary further ecological assessments provide an ecological baseline for a site and evaluation of the potential impact of proposals.
- 3.3. It is the responsibility of those involved with development works to ensure that the relevant legislation is complied with at every stage of a project. Such legislation applies even in the absence of related planning conditions or projects outside the scope of the usual planning process (i.e. permitted development projects or projects requiring Listed Building Consent only).

Bat Legislation

- 3.1. In England and Wales, all bat species and their roosts are legally protected under the European *Habitats Directive (1992)*; the *Conservation of Habitats and Species Regulations (2017)*; the *Wildlife and Countryside Act (1981) (as amended)*; the *Countryside and Rights of Way Act, 2000*; and the *Natural Environment and Rural Communities Act (NERC, 2006)*.
- 3.2. Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), greater horseshoe (*Rhinolophus ferrumequinum*), lesser horseshoe (*Rhinolophus hipposideros*), brown long-eared (*Plecotus auritus*), soprano pipistrelle (*Pipistrellus pygmaeus*), and noctule (*Nyctalus noctula*) bats are all species of principal importance in England under *Section 41* of the *Natural Environment and Rural Communities Act 2006*.
- 3.3. You will be committing a criminal offence if you:
 - Deliberately capture, injure or kill a bat;
 - Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
 - Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
 - Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; or
 - Intentionally or recklessly obstruct access to a bat roost.

- 3.4. The government's statutory conservation advisory organisation, Natural England, is responsible for administering EPS licenses that permit activities that would otherwise lead to an offence.
- 3.5. A licence can be obtained if the following three tests have been met:
- Regulation 53(9)(a) - there is "no satisfactory alternative" to the derogation, and;
 - Regulation 53(9)(b) - the derogation "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range" and;
 - Regulation 53(2)(e) - the derogation is for the purposes of "preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment".

National Planning Policy

- 3.1. The *National Planning Policy Framework (2021)* aims to minimise impacts on biodiversity and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. Chapter 15 'Conserving and enhancing the natural environment' details what local planning policies should seek to consider with regard to planning applications.
- 3.2. Planning policies and decisions should contribute to and enhance the natural and local environment by:
- 174 a) Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
 - 174 b) Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
 - 174 d) Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
 - 175) Plans should: distinguish between the hierarchy of international, national and local designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement

of natural capital at a catchment or landscape scale across local authority boundaries;

176) Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural beauty which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and Broads. The scale and extent of development within all these designated areas should be limited, while development within their settings should be sensitively located and designed to avoid or minimize adverse impacts on the designated area.

4. Specific policies regarding habitats and biodiversity comprise:

179) To protect and enhance biodiversity and geodiversity, plans should:

- a) identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation and
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measurable net gains for biodiversity.

180) When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- b) development on land within or outside of Sites of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the feature of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around development should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Local Planning Policy

4.1. The local planning policy for the site is the Local Plan of Waverley Borough Council, which aims to deliver the Spatial Vision for Waverley by 2032 by following identified key objectives. Relevant objectives in regards to bat species and general ecological concerns are included below:

(7) To maintain and protect all those areas of the Green Belt that fulfil the purposes of the designation.

(8) To protect the countryside for its intrinsic character and beauty and as a recreational asset, including its visitor facilities and, where appropriate, promote its continued recreational use.

(9) To provide appropriate protection to the hierarchy of national and local landscape designations in Waverley, including the Surrey Hills Area of Outstanding Natural Beauty.

(11) To ensure that adequate provision is made for new or improved social, physical and green infrastructure to meet the needs of the increased population and additional demands arising from employment-related development.

(16) To meet the leisure, recreation and cultural needs of the community.

(19) To protect and enhance Waverley's biodiversity, including its wildlife species and their habitats, both on designated sites such as the Thames Basin Heaths and Wealden Heaths (Phases 1 and 2) Special Protection Areas, and undesignated sites.

(20) To reduce the emissions that contribute to climate change and minimise the risks resulting from the impact of climate change.

(21) To ensure that new development is located and designed to manage and reduce its risk from flooding.

4.2. Relevant policies within the plan include:

Policy RE2: The Metropolitan Green Belt as shown on the Adopted Policies Map will continue to be protected against inappropriate development in accordance with the

NPPF. In accordance with national planning policy, new development will be considered to be inappropriate and will not be permitted unless very special circumstances can be demonstrated.

Policy NE1: Within and adjacent to the Biodiversity Opportunity Areas (BOAs), the new development will, where appropriate, be required to contribute to the protection, management and enhancement of biodiversity. This may include the restoration and creation of Priority habitats and the recovery of priority species populations.

Policy NE2 Green and Blue Infrastructure: The Council will seek to protect and enhance benefits to the existing river corridor and canal network, including landscaping, water quality and habitat creation. In addition to the measures mentioned in NE1, new development should make a positive contribution to biodiversity by creating or reinforcing habitat linkages between designated sites, to achieve a connected local and regional ecological network of wildlife corridors and green infrastructure.

Policy NE3: New residential development which is likely to have a significant adverse effect on the ecological integrity of Thames Basin Heaths Special Protection Area (SPA) will be required to demonstrate that adequate measures are put in place to avoid or mitigate any potential adverse effects. Within the 400m 'exclusion zone' of the SPA boundary, no net new residential development will be permitted, as mitigation measures are unlikely to be capable of protecting the integrity of the SPA.

4.3. The Farnham Neighbourhood Plan (FNP) is also relevant to this site. and forms part of the Development Plan for applications within the Farnham Neighbourhood Plan area. A partial review of the FNP has taken place and the amended plan was made on 3 April 2020. Relevant policies comprise:

- Environment Section 5; Neighbourhood Plan Policies:
 - To protect and enhance the landscape around the town including the Surrey Hills AONB; areas of high landscape value and sensitivity; Farnham Park and its historic setting and the well-wooded arcadian character of south Farnham.
 - To protect, enhance and improve connectivity between important green spaces of the whole town, including the strategically important Farnham Park, the Bishop's Meadow and the Wey corridor.
 - To maintain the integrity of all SPAs and SSSIs.
 - To retain and extend the diversity of wildlife and habitats throughout the Neighbourhood Plan area.
- *Policy FNP12;* Thames Basin Heaths SPA: Within 400m of the SPA boundary, no net new residential development will be permitted, as mitigation measures are unlikely to be capable of protecting the integrity of the SPA. New residential development which is likely to have a significant adverse effect on the SPA beyond 400m and within 5km of the SPA boundary (in a straight line) must provide:

- I. Appropriate contributions towards the provision of Suitable Alternative Natural Greenspace (SANG) at Farnham Park; or
 - II. A bespoke solution to provide adequate mitigation measures to avoid any potential adverse effects; and
 - III. A financial contribution towards wider Strategic Access Management and Monitoring (SAMM).
- Such mitigation measures shall be agreed with Natural England and be provided prior to occupation of the development and in perpetuity. Developments of fewer than 10 dwellings should not be required to be within a specified distance of SANG land provided it is ensured that a sufficient quantity of SANG land is in place to cater for the consequent increase in residents prior to occupation of the dwellings.
- 4.4. The local biodiversity action plan relevant to the site is Surrey Biodiversity Action Plan. It aims to set out a long-term strategy for biodiversity conservation within Surrey and provide a series of objectives and actions for achieving successful conservation of habitats and species across the county.

Surrey Biodiversity Action Plan

- 4.5. The Surrey Biodiversity Action Plan (BAP) was published in 1999 by the Surrey Biodiversity Partnership and provided a useful framework for locally protected or important species between 1999 to 2010. The UK BAP was superseded by the Post-2010 Biodiversity Framework, published by the U.K. government as a response to the International Convention on Biological Diversity in order to maintain national coordination within the period 2011-2020. Locally strategies to protect and enhance Surrey's biodiversity are now co-ordinated by the Surrey Nature Partnership in conjunction with DEFRA's current Biodiversity 2020 strategy.

5. METHODOLOGY

Desk Study

- 5.1. A desk study was undertaken for designated sites, European Protected Species (EPS) licences and habitat records within 2 km of the site:
- The MagicMap website was reviewed, to obtain information on any designated sites of nature conservation interest and details of any EPS licences issued within 2 km;
 - The Waverley Borough Council Planning Portal was searched for past and pending planning applications that may have associated ecological documents detailing results of bat surveys; and
 - Google Maps and Ordnance Survey (OS) Leisure Maps was utilised to view aerial photographs and maps to assess the ecological context of the site within the wider landscape.

Emergence / Re-Entry Surveys

- 5.2. Three dusk emergence surveys were conducted during the 2022 survey season. Surveys were undertaken in line with BCT Good Practice Guidelines (2016), with any limitations outlined below.
- 5.3. The surveyors who conducted each survey are listed in **Table 1** below.
- 5.4. Surveyors were positioned strategically around the building(s) in order to provide adequate coverage of all elevations. Surveyors focused on any features identified during the Preliminary Roost Assessment (PRA) as having potential to be used as bat access points. The location of the surveyors and building numbers / names are shown on **Figure 3, Bat Survey Results**.
- 5.5. Dusk surveys began 15 minutes prior to sunset and lasted 1.5 hours after sunset. Dawn surveys began 1.5 hours before sunrise. Surveyors recorded bat activity using hand-held Echometer Touch detectors connected to Android or iPhone devices. Analysis of recordings was undertaken after the surveys to confirm species identification. Observations recorded during surveys included bat access points, bat species, time, and type of activity (e.g. emergence, re-entry, commuting, foraging, etc.). Incidental records of bats within the vicinity of the building (but not necessarily roosting) were also recorded.
- 5.6. A Canon AX20 video camera and Black Sun 2 B502 infra-red illuminator were also used to film bat activity at a fixed position, covering an aspect of the building not visible to the surveyors. The video footage was reviewed following the survey to identify any bat activity captured and any significant activity patterns and access points were identified and recorded.
- 5.7. A summary of the survey dates and weather conditions are provided in **Table 1**.

Table 1: Emergence and re-entry survey dates and weather conditions

Date	Survey type	Sunset / sunrise Time	Start weather conditions	End weather conditions	Surveyors
22.08.2022	Dusk	20:10	Rain: 1 Wind: 3 Cloud cover: 100% Temperature: 18.2°C	Rain: 1 Wind: 1 Cloud cover: 100% Temperature: 18°C	Jenny Denny Joe Denny George Ridgeway
09.09.2022	Dawn	06:28	Rain: 0 Wind: 0 Cloud cover: 60% Temperature: 15.6°C	Rain: 0 Wind: 0 Cloud cover: 100% Temperature: 14.8°C	Jenny Denny Joe Denny George Ridgeway
26.09.2022	Dusk	18:53	Rain: 0 Wind: 2 Cloud cover: 100% Temperature: 13.1°C	Rain: 0 Wind: 2 Cloud cover: 100% Temperature: 12.5°C	Jenny Denny Joe Denny George Ridgeway

Limitations

- 5.8. No limitations were encountered during the survey.
- 5.9. The surveys were undertaken in accordance with the best practice guidelines within the peak bat activity period (May to September inclusive). The results are therefore considered to be an accurate representation of the general use of the building(s) by roosting bats.
- 5.10. Nevertheless, bats may use roosting features intermittently throughout the year and may be present in larger or smaller numbers depending on their breeding cycle, weather conditions and in response to disturbance. Bats may be present at other times of the year and the results in this report should therefore be viewed in the context intended.
- 5.11. The desk study does not include data from the local environmental records centre (LERC). However, following CIEEM guidelines (2017) it is possible to conduct a robust assessment without the need of LERC data, for example for small-scale projects or on sites such as;
- a field in active arable cultivation where there is no impact on any hedges, trees or water bodies;
 - small areas of cultivated garden/amenity grassland, as above; or
 - small urban sites comprising mostly asphalt or compacted hardstanding.
- 5.12. The proposed plans are low impact and are restricted to the building and hardstanding on site, therefore the lack of LERC data is not considered a limitation to the ecological assessment of the site.
- 5.13. During the first emergence survey, light drizzle was encountered at the beginning and end of the survey. Bats were recorded foraging during these times and therefore this is not considered a constrain to the results.

6. SURVEY RESULTS

Desk Study

- 6.1. A Local nature Reserve (LNR), two Special Sites of Scientific Interest (SSSI) and a single SAC site are present within 2km of the site. Details of these are shown within the Preliminary Ecological Appraisal report.
- 6.2. The following EPS licences for bats were identified within a 2km radius of the site:
 - 731m north-east: 2016-24164-EPS-MIT allowed the damage and destruction of a resting place for common pipistrelle (*Pipistrellus pipistrelles*) bats.
 - 765m south-west: 2018-37509-EPS allowed the destruction of a breeding site for common pipistrelle bats.
 - 992m north: 2018-34330-EPS-MIT allowed the damage and destruction of a breeding and resting place for brown long-eared, common pipistrelle and soprano pipistrelle bats.
 - 1,445m south-west: 2018-35609-EPS-MIT allowed the destruction of a resting place for common pipistrelle bats.
 - 1,562m north-east: 2019-39908-EPS-MIT allowed the destruction of a resting place for common pipistrelle bats and brown long-eared bats.
 - 1,178m north-east: 2015-8173-EPS-MIT allowed the destruction of a resting place for brown long-eared and common pipistrelle bats.
- 6.3. A search of the Waverley Borough Council planning portal found no previous ecological reports for the site or for conversion/extensions from dwellings near the site.
- 6.4. Priority habitats within the immediate area include deciduous woodland, good quality semi-improved grassland, coastal and floodplain and lowland heathland.
- 6.5. There are numerous parcels of ancient and semi-natural woodlands and ancient replanted woodland within all directions from the site. The nearest being 240m south-west of the site.

Emergence / Re-Entry Survey Results

Survey 1

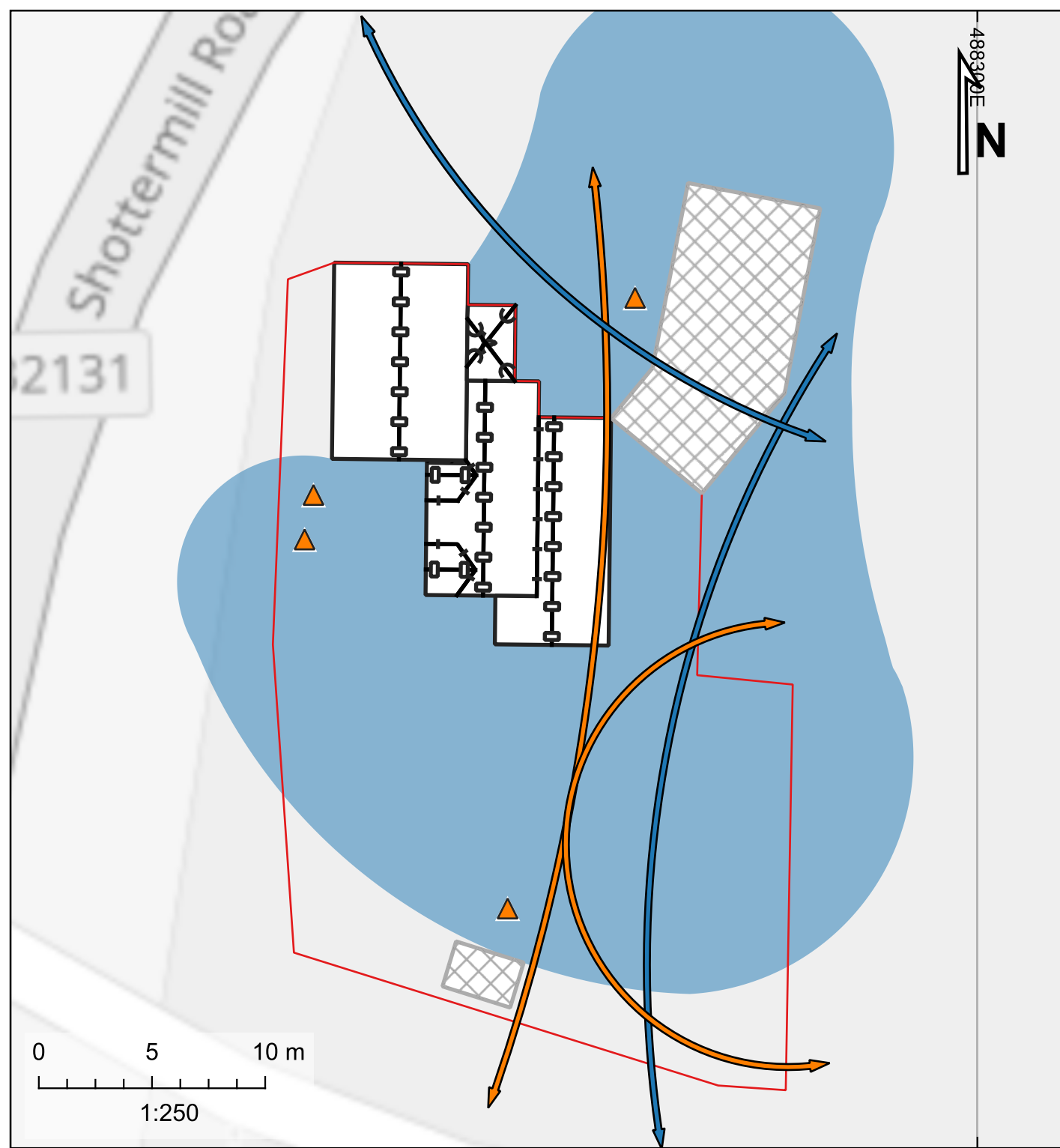
- 6.6. During the dusk emergence survey on the 22nd of August 2022, no bats were recorded emerging from the building. Foraging was recorded from common pipistrelle and soprano pipistrelle bats along the road to the west of the site and to the east of the site.

Survey 2









- 6.7. During the dawn emergence survey on the 09th September 2022, no bats were recorded re-entering the building. Low activity was recorded from common pipistrelle, noctule and a single serotine and brown long-eared pass.

Survey 3



- 6.8. During the dusk emergence survey on the 26th September 2022, no bats were recorded emerging from the building. Low activity was recorded from common pipistrelle and soprano pipistrelle bats.





Legend

-  Approximate site boundary
-  Area of pitched roof
-  Area of flat roof
-  Not surveyed
-  Roof ridge line
-  Roof valley
-  Roof verge
-  Surveyor location

Bat activity

-  Area of bat foraging (coloured by species)
-  Bat flight line (coloured by species)

Bat species identified during survey

-  Common pipistrelle
-  Soprano pipistrelle



Project: Mill Cottage, Haslemere

Figure 3: Phase 2 emergence/re-entry bat survey results

Info@darwin-ecology.co.uk
www.darwin-ecology.co.uk

Date: 15/11/2022

Contains OS data © Crown copyright (2022) **NOTE:** Areas are indicative and are not shown to exact scale.

7. IMPACT ASSESSMENT

Designated Sites

- 7.1. The proposals to extend the property will have no direct impact on statutory designated sites.

Status of Bats on Site

- 7.2. The surveys have confirmed that Mill Cottage does not support a bat roost.
- 7.3. The proposed works will not result in the destruction of a bat roost.
- 7.4. In the unlikely event that a bat is discovered during the works, all works must cease and a bat licensed ecologist contacted for advice.**

8. ENHANCEMENT RECOMMENDATIONS

- 8.1. National planning policy states that all developments should seek to enhance onsite biodiversity whether impacts on protected species are recorded or not. Incorporating enhancement features into new or renovated buildings should be carefully considered. These features can be simple and inexpensive, please see below for specific recommendations.

Bats

- 8.2. *Integrated Roosting Features:* The proposed extension works will result in a loss of hanging tile areas. Therefore, it is recommended that to compensate for this loss of potential roosting features, integrated roosting features should be included in the construction of the new building. These features could be lifted roof tiles or ridge tiles which are an adaptable and inexpensive method of creating potential bat roosting features suitable for a range of bat species.
- 8.3. *Bat Boxes:* Bat boxes can be integrated into the proposed building to provide new roosting opportunities for bats (Refer to **Appendix 2** for further details). In addition, an external bat box (such as a Schwegler 2F or similar as available) could be installed on a mature tree on site to provide further roosting opportunities. The locations in which the bat box would be installed will be determined by a licensed bat ecologist to ensure likelihood of usage is increased.

9. REFERENCES

CIEEM (2012) Guidelines for Preliminary Ecological Appraisal. *Technical Guidance Series*.

Collins, J. (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Edition)* The Bat Conservation Trust, London.

Mitchell-Jones, A.J., (2002). *Bat Mitigation Guidelines*. English Nature, Peterborough.

Mitchell-Jones, A. J. & McLeish, A. P. (2004). *Bat Workers' Manual (3rd Edition)*. JNCC, Peterborough.

Ordnance Survey Maps [online] www.osmaps.ordnancesurvey.co.uk [Jan 2021].

Schofield, H. W. & Mitchell-Jones, A.J. (2004). *The Bats of Britain and Ireland*. Vincent Wildlife Trust, Ledbury.

UK Government's Countryside Geographic Information Website [online] www.magic.gov.uk [Oct 2022].

Legislation and Policy

Council of the European Communities (1992) *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (EN)*. Official Journal of the European Communities [online] www.eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:1992:206:TOC [Oct 2022]

Council of the European Communities (2009) *Council Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (EN)*. Official Journal of the European Union [online] eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:020:0007:0025:EN:PDF [Oct 2022]

Department for Environment, Food and Rural Affairs (2011) *Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services* [online] www.gov.uk/government/uploads/system/uploads/attachment_data/file/69446/pb13583-biodiversity-strategy-2020-111111.pdf [Oct 2022]

Ministry of Housing, Communities & Local Governments (2019) National Planning Policy [online] www.assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/

NPPF_Feb_2019_revised.pdf [Aug 2020] Natural Environment and Rural Communities Act 2006 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/ukpga/2006/16/contents [Oct 2022]

Office of the Deputy Prime Minister Circular (2005) *Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their*

Impact within the Planning System [online] www.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf [Oct 2022]

The Conservation of Habitats and Species (Amendment) Regulations 2017 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/uksi/2017/1927/contents/made [Oct 2022]

The Hunting Act (2004) The National Archives [online] www.legislation.gov.uk/uksi/2012/1927/contents/made [Oct 2022]

The Wildlife and Countryside Act 1981 (England and Wales) (Amendment) Regulations 2004 (UK Parliament). *The National Archives* [online] www.legislation.gov.uk/ukpga/1991/39/contents *Countryside and Rights of Way Act, 2000* [Oct 2022]

APPENDIX 1 - PROPOSED PLANS

Existing South Elevation



SCALE BAR 1:50

The Mill Cottage
Liphook Road
West Sussex
GU27 3QE

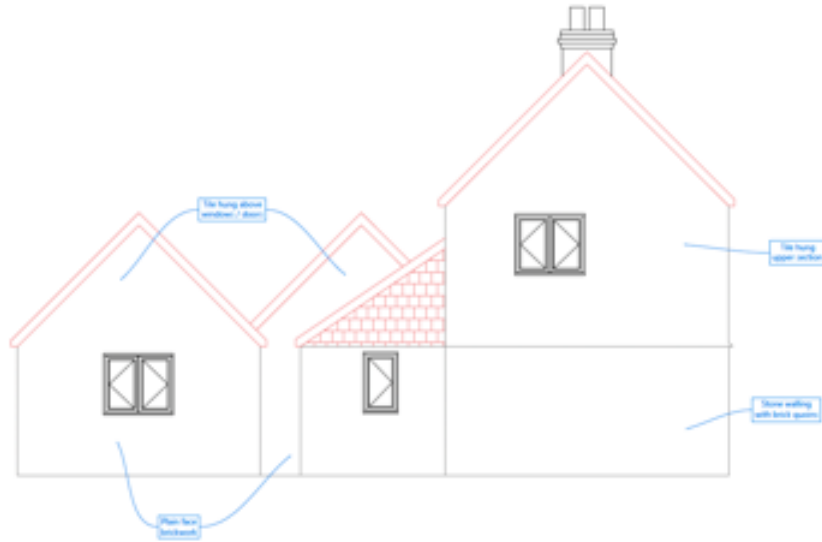
Planning Ref:
Pre-app

Elevation from Boundary
Existing

Scale @ A3
1:50

Drawn
08/01/2022

NOTE:
ALL DIMENSIONS TO BE CHECKED ON-SITE
AND RECORDED FOR THE PLAN



Proposed South Elevation



SCALE BAR 1:50

The Mill Cottage
Liphook Road
West Sussex
GU27 3QE

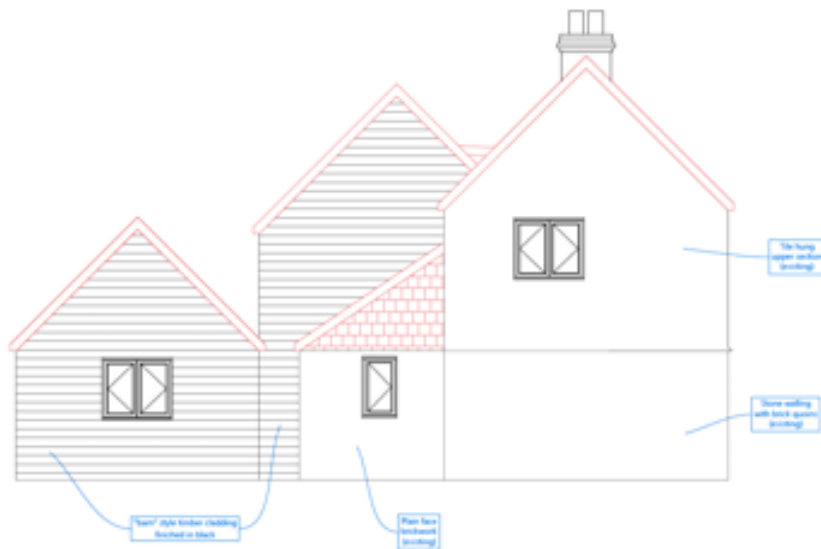
Planning Ref:
Pre-app

Elevation from Boundary
Proposed

Scale @ A3
1:50

Drawn
08/01/2022

NOTE:
ALL DIMENSIONS TO BE CHECKED ON-SITE
AND RECORDED FOR THE PLAN



Existing East Elevation



SCALE BAR 1:50



Proposed East Elevation



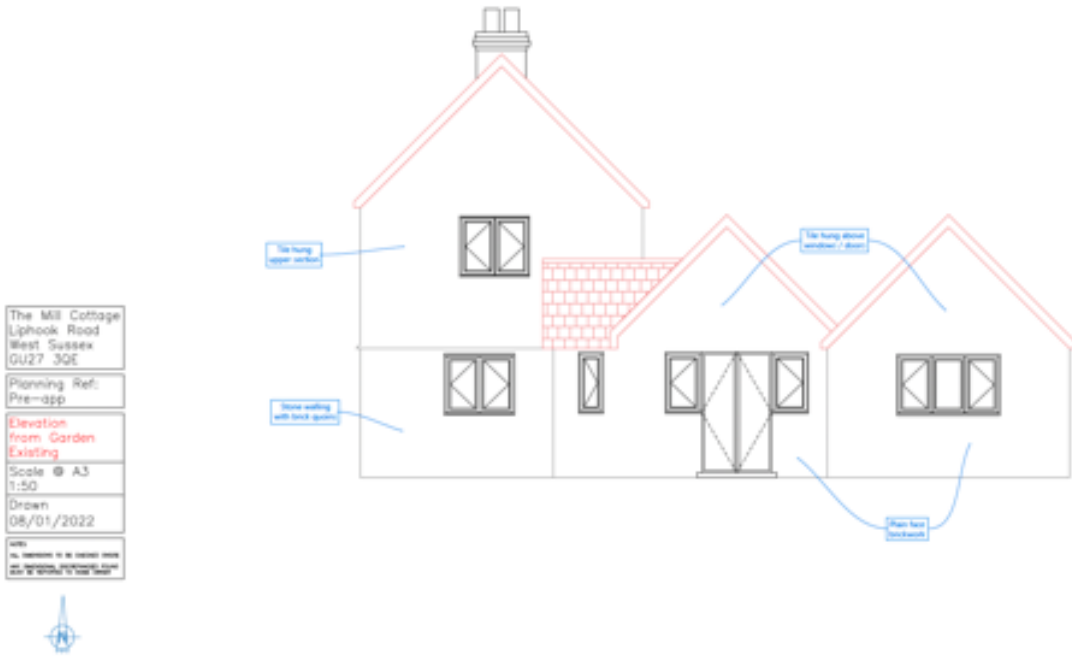
SCALE BAR 1:50



Existing North Elevation



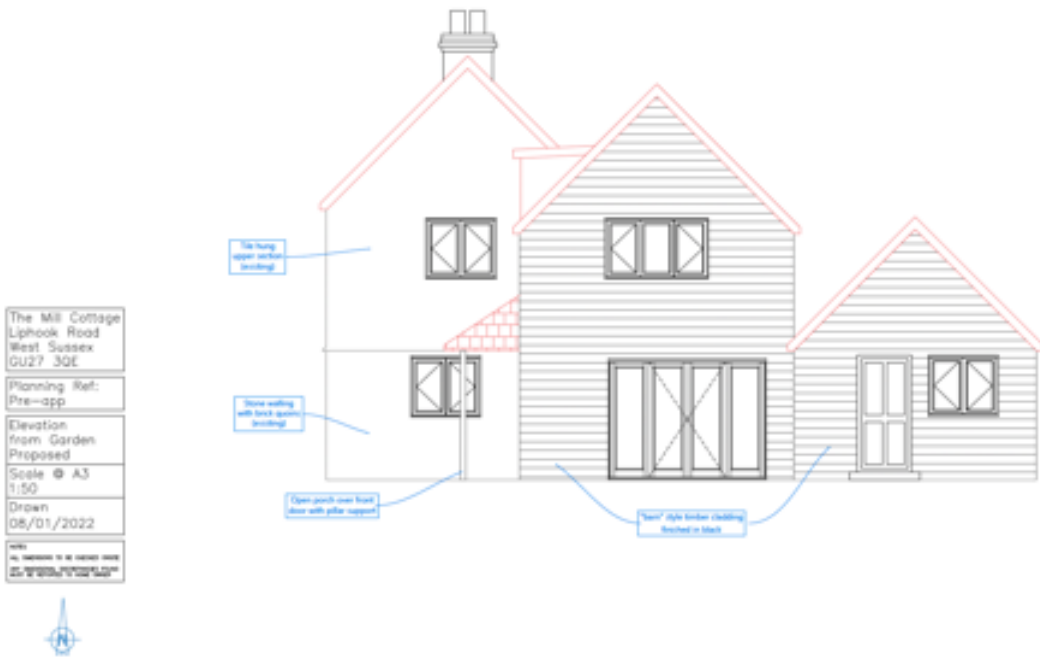
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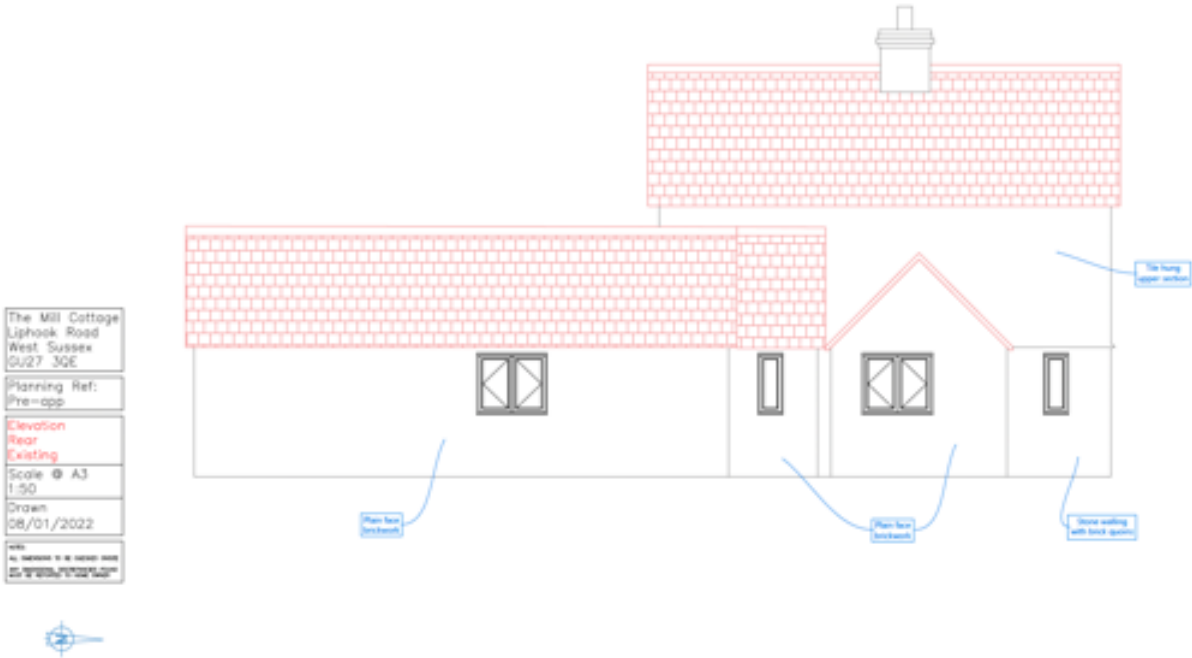
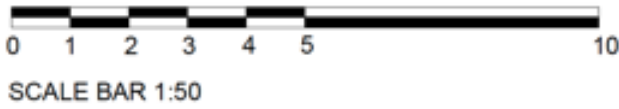
Proposed North Elevation



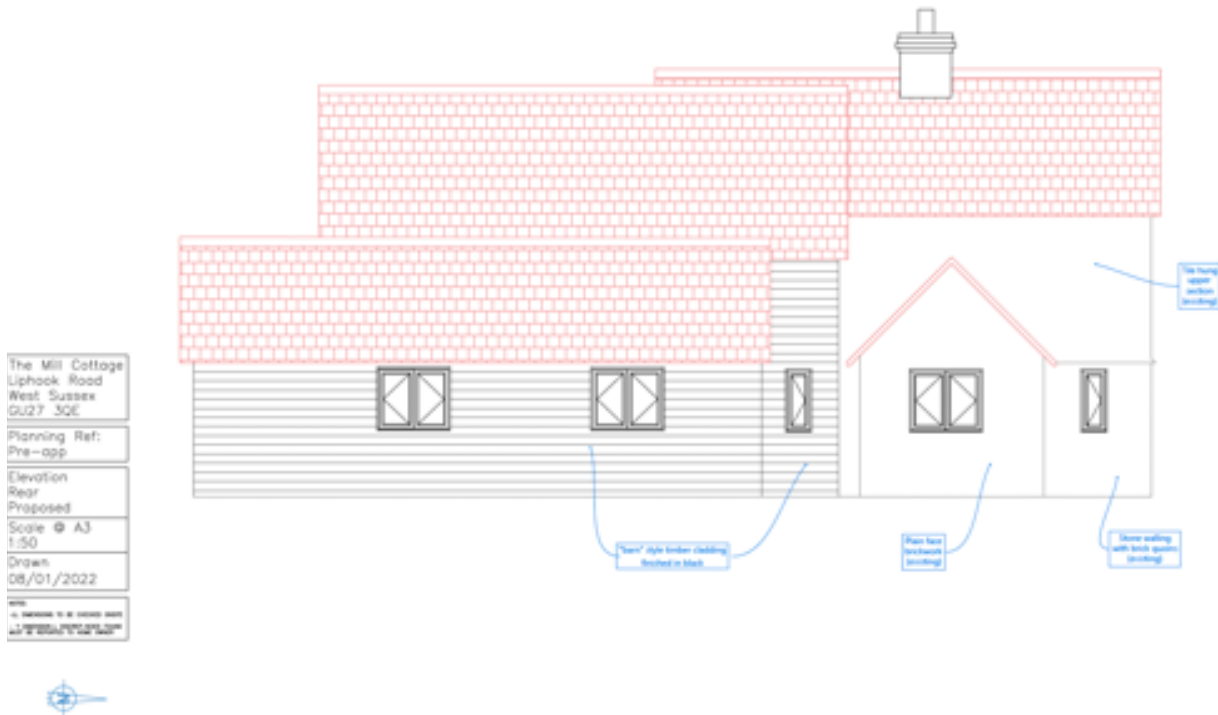
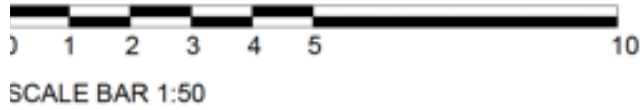
SCALE BAR 1:50



Existing West Elevation



Proposed West Elevation



Existing Roof Plan



SCALE BAR 1:50

The Mill Cottage
Liphook Road
West Sussex
GU27 3QE

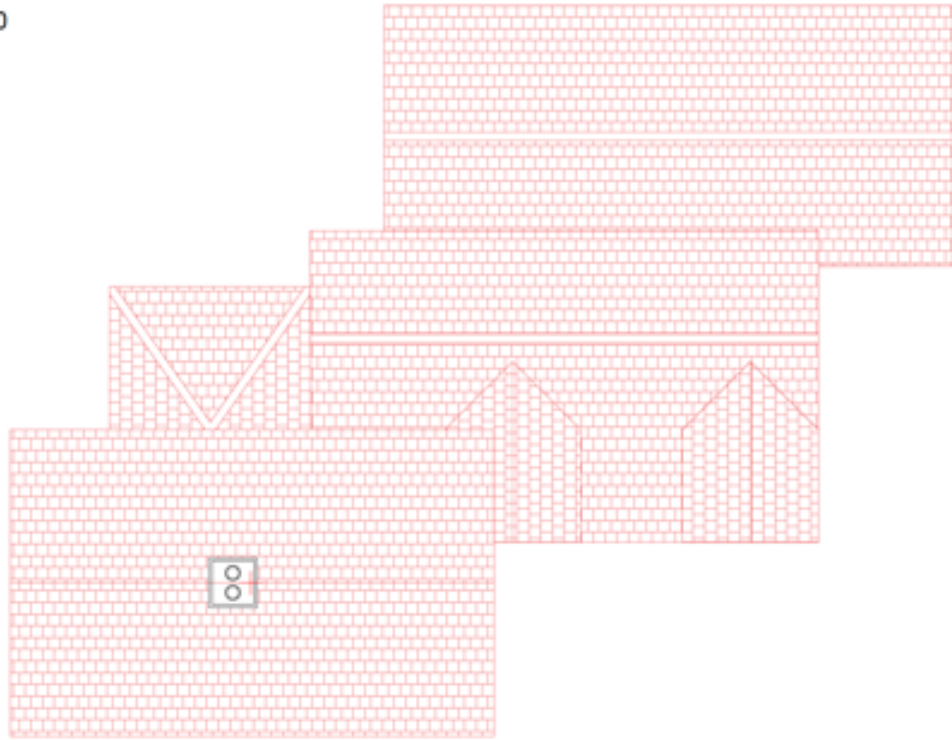
Planning Ref:
Pre-app

Roof Plan
Existing

Scale @ A3
1:50

Drawn
08/01/2022

NOTES
ALL DIMENSIONS TO BE CHECKED ON-SITE
AND APPROVED PROFESSIONAL SIGNATURE
AND SEAL REQUIRED TO VALIDATE THIS DRAWING



Proposed Roof Plan



SCALE BAR 1:50

The Mill Cottage
Liphook Road
West Sussex
GU27 3QE

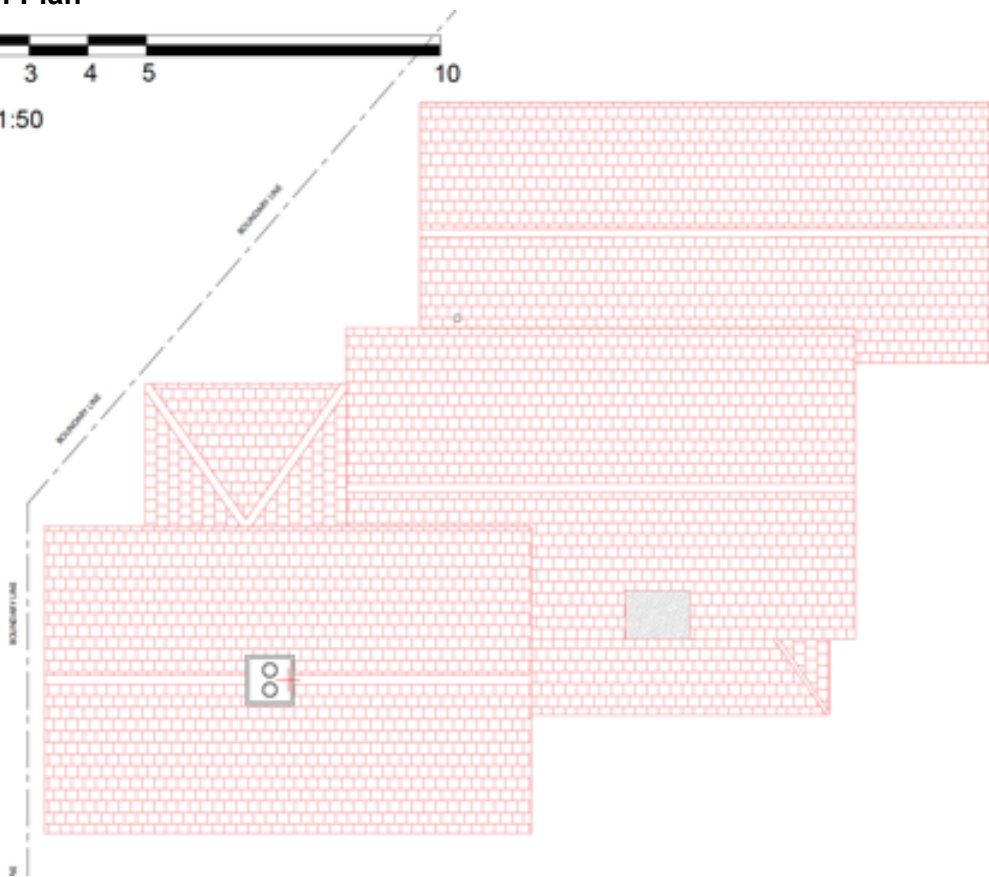
Planning Ref:
Pre-app

Roof Plan
Proposed

Scale @ A3
1:50

Drawn
08/01/2022

NOTES
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How to Install

Integrated Bat Boxes



Integrated bat boxes can be installed into the brickwork of buildings to provide a roosting spot for bat species.

Being embedded in the masonry of a building, they do not impact the exterior seal of structure and are commonly integrated in new builds.

With some modification or bespoke design, integrated bat boxes can be installed in such a way that it does not interfere with a building's exterior facade.

The 1FR bat tube has a 45 degree angle for bats to land on and crawl upwards into the bat tube. It has been designed to be installed within or adjacent to the the external skin of the block work or brickwork.

For a rendered finish, the 1FR bat tube can be built into the external skin of breeze blocks (acting as a block) and be rendered over (ensuring the access point is left clear). Ridges should be created in the render immediately below the access point, which will aid the bats when crawling into the bat tube.

For a brickwork finish, the 1FR bat tube should be installed within the brickwork, set back slightly to allow the front to either be rendered over or for a continuity of brick slips to be mortared over the top of the tube. The upper brick slip should overlap the access point and the lower brick slip should be in line with the 45 degree angle of the bat tube.

Alternatively, **Habibat** bat tubes can be purchased that are designed for brickwork design and can be custom made.





TYPES OF BAT BOXES



Schwegler 2F Double Front Panel

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for pipistrelle and Myotis species
- A second inner wooden panel is fitted adjacent to the front panel imitating a cavity wall



Schwegler 1FD Double Front Panel

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for pipistrelle and Myotis species
- A second inner wooden panel is fitted adjacent to the front panel imitating a cavity wall
- Small entrance hole discourages birds from using the box



Vincent Pro Bat Box

- Manufactured from timber and recycled plastic
- The front and the top of the box is black, which helps heat absorption
- Suitable for a range of species including pipistrelle species, Myotis species, and brown long-eared bats.
- No maintenance required



Schwegler 2FN

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for pipistrelle species, Myotis species, serotine, brown long-eared, noctule and Leisler's bats
- Dual entrance
- Birds and dormice have also been found using this box
- A newer model is now available, Schwegler 3FN, designed with smaller entrance holes which discourage birds and dormice



Schwegler 1FS Large Colony Box

- Manufactured from long-lasting woodcrete
- Lifetime - 20-25 years
- Suitable for a range of bats including pipistrelle species, Myotis species, Noctule, and brown long-eared bats
- Three grooved inner wooden panels are connected to the front panel, which are ideal for bats to cling to.
- Accommodates large summer colonies



Schwegler 2FE Wall-Mounted Bat Shelters

- Can be used in the summer if mounted on a wall facing south or east, and for winter use, install them in a location free from ice and frost such as damp cellars (paintable).
- Lifetime - 20-25 years
- Suitable for crevice roosting bats including Pipistrelle, Whiskered and Barbastelle bats.
- No maintenance required



Bark Boxes Large Twin Crevice Bat Box

- Suitable for range of bat species providing roosting opportunities similar to naturally formed tree roosts.
- Thermal mass suitable for spring and autumn roosts.
- Natural and discreet appearance for hanging on trees.
- No maintenance required.
- Made from over 50% recycled materials./