

Bat Survey Report

The Mill, Gurney Slade



October 2021

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Report Produced for

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Project: **ETH21-126**

EXECUTIVE SUMMARY

<p>Introduction</p>	<ul style="list-style-type: none"> • The site is located within the LKAB Quarry in Gurney Slade in Somerset. • The proposals include the demolition of the disused bungalows, stables, and outbuildings. • The report includes information regarding the impact of the proposals on protected species such as bats and birds.
<p>Surveys undertaken</p>	<ul style="list-style-type: none"> • An initial structures inspection of all buildings within the red line boundary was undertaken on the 8th of June 2021. • Habitats on site and within the wider area were assessed for suitability for bats. • Three dusk emergence surveys were undertaken on three occasions between June – August 2021. • Pre emergence structure inspections were carried out prior to each emergence survey. • A static detector was deployed within the loft of B1 to inform the assessment. • Trees to the rear of B4 were inspected for features with potential to support bats. • Surveys of the buildings and trees included searches for any evidence of nesting birds.
<p>Key Results</p>	<ul style="list-style-type: none"> • The site and wider area provided suitable foraging and commuting habitat for bats. • B1 was confirmed to support a LHS horseshoe day roost (up to three bats) and a day roost for common pipistrelle bats (up to two bats). • B4A was confirmed as a LHS horseshoe day roost (up to one bat). • No evidence of current or recent use of birds nesting in the buildings was found.
<p>Recommendations</p>	<ul style="list-style-type: none"> • A protected species licence will be required for the lawful destruction of three low conservation bat roosts in B1 and B4(A). • B2, B3, B4(B-H) and B5 had no evidence of bat roosts and can be demolished without the need for a licence. • A compensatory roost provision will be provided for bats in retained habitat on site. • A sensitive lighting plan is recommended to minimise any light spill onto the replacement roost provision and retained bat habitat. • Precautionary working measures during construction have been recommended for bats, birds and other wildlife that may disperse through the site. • Habitat enhancements include the planting an orchard in the grassland to the south of the structures on site to provide a net gain in terms of biodiversity.

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1.0 INTRODUCTION

Ethos Environmental Planning (Ethos) have undertaken this Bat Survey Report of Land within the LKAB Quarry, Gurney Slade, hereafter referred to as the 'site' and shown in Figure 1.

The buildings surveyed included two dwellings, a modular structure, a stable block, and a row of garages. This report was commissioned to assess the impact of the redevelopment of the site on protected species, in particular bats and birds.

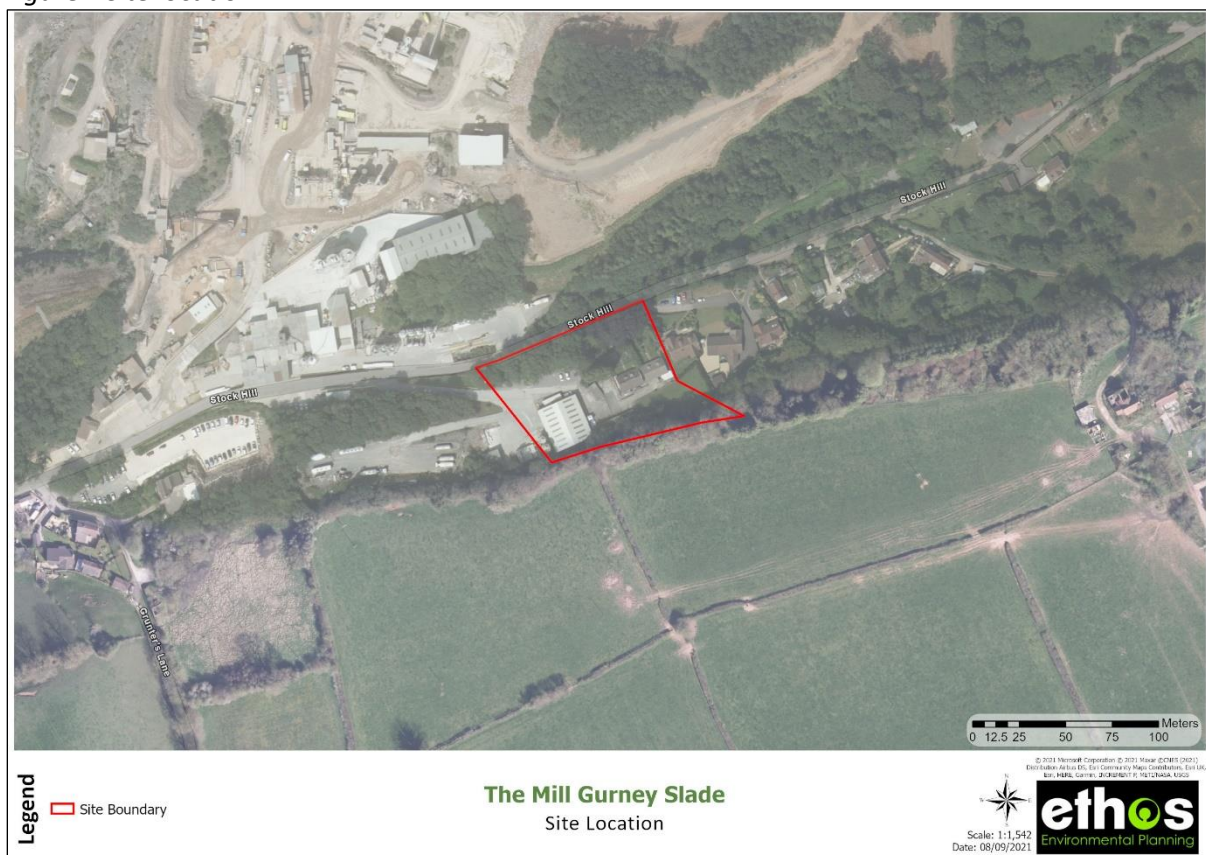
1.1 Site Location

The site is located at The Mill, Gurney Slade, Mendips, within the planning authority of Somerset Council, Central Grid Reference ST 62860 49290.

The site is located within an active quarry. The wider environment is comprised of agricultural land which is dominated by permanent pasture with associated hedgerows and copses to the south and the quarry to the north.

The site is located outside of the North Somerset bat Special Area of Conservation (SAC) and is not within or adjacent to a designated site.

Figure 1 Site location



1.2 Structure of the Report

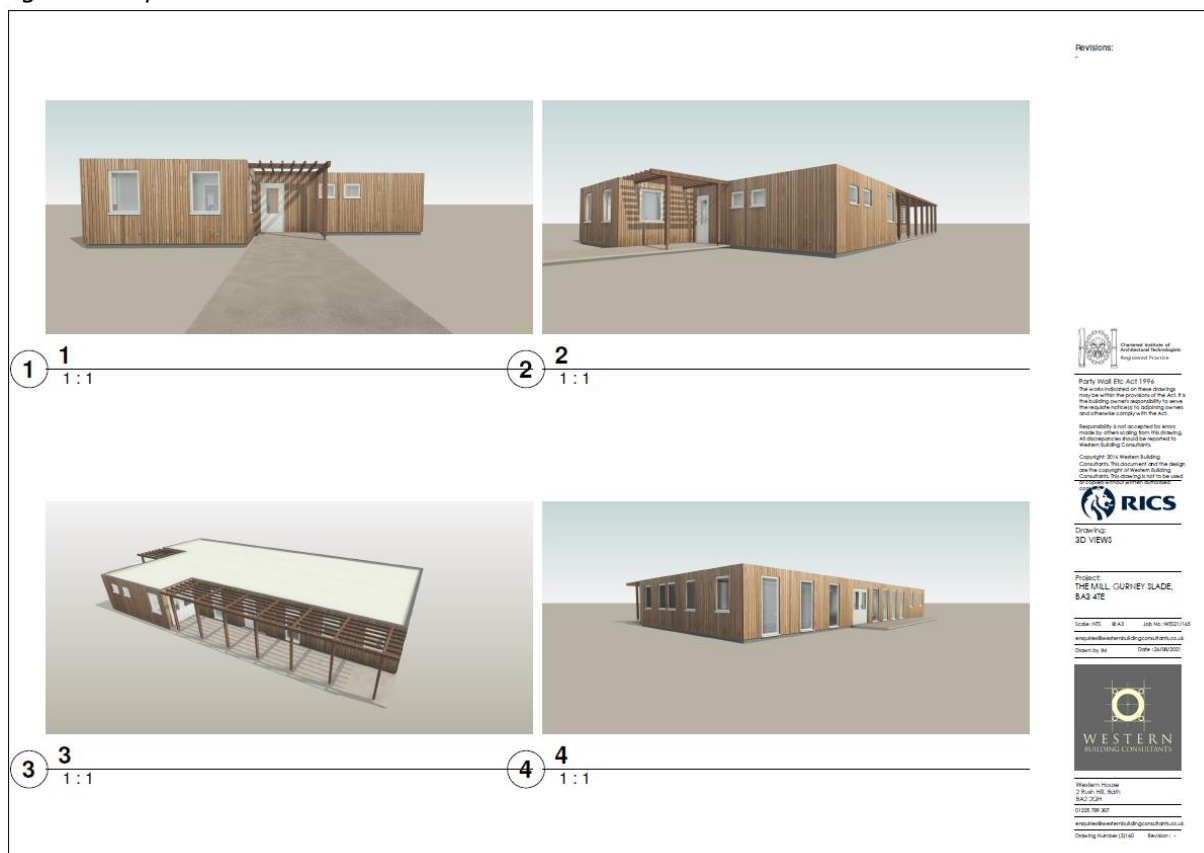
The following sections are included within this report:

- Legislative and planning context
- Methodology
- Background data review
- Protected species assessment
- Discussion
- Recommendations
- Conclusions.

1.3 Development Proposals

The development proposals comprise the removal of the existing dwellings, stables, and garages for the creation of a modular office building. This structure will be formed of separate modular structures that will be built off site and then linked together to form one building. Associated works will include the creation of a new car parking area. The proposals will require the demolition of buildings 1-4 and the pruning of several trees to the rear of B4 to facilitate the works. The proposals are provided within Figure 2 and 3 below.

Figure 2 Proposals



Revisions:



Party Wall Etc. Act 1996
The architect or other design professional must be within the provisions of the Act, it is the building owner's responsibility to ensure the requisite notices to adjoining owners and others are copied with the Act.

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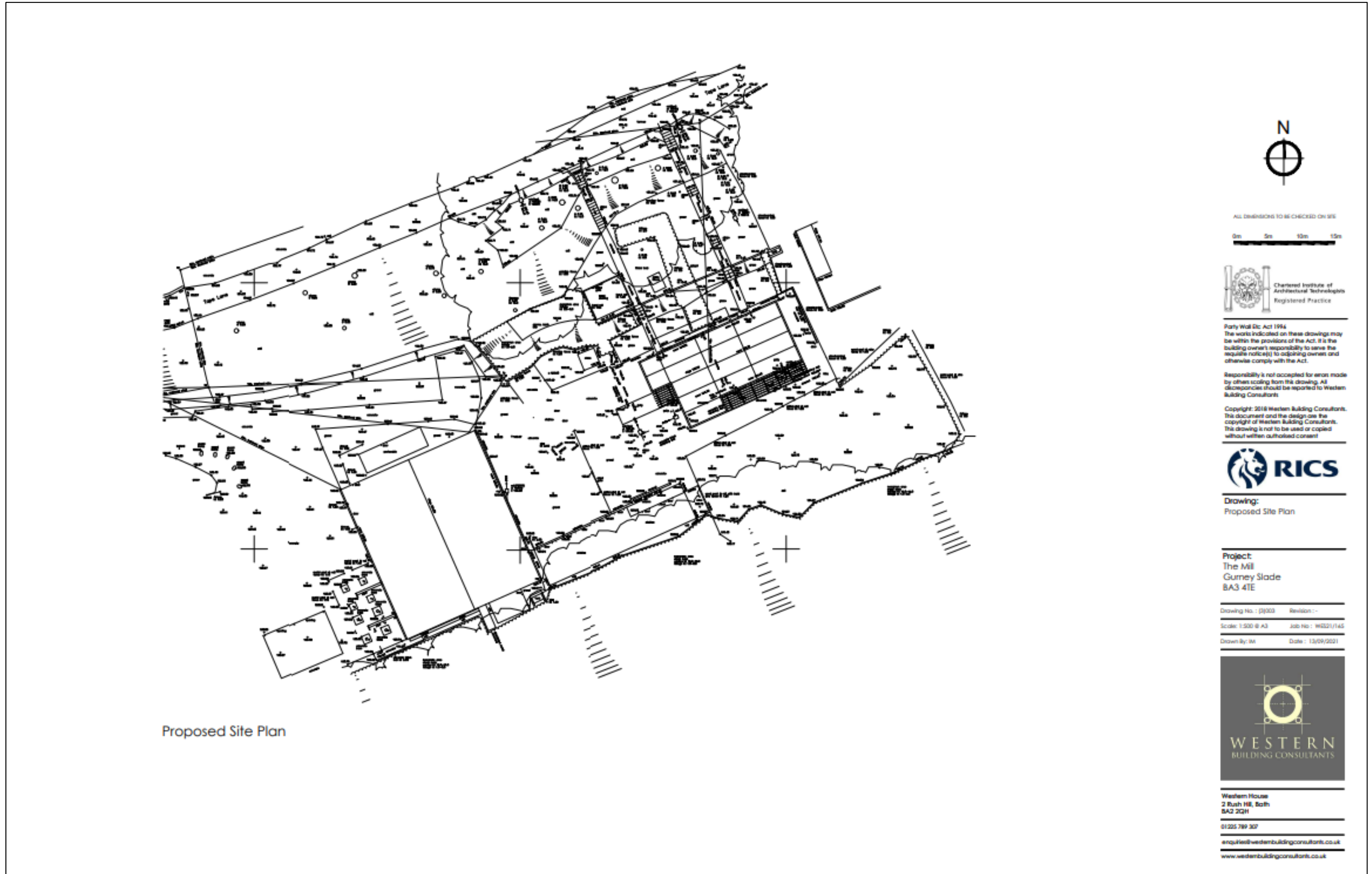
Project:
THE MILL, GURNEY SLADE,
B43 4TE

Scale: 1:1
Date: 04/06/2021



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Figure 3 Proposed Site Plan



2.0 LEGISLATIVE AND POLICY CONTEXT

This section provides a summary of the legislative and planning context which has been used to inform the ecological assessment and subsequent recommendations made in this report. Appendix 1 sets out further details in relation to the most relevant legislation and policy.

2.1 Summary of Legislation

The Habitats Directive (together with the Birds Directive) forms the cornerstone of Europe's nature conservation policy. It is built around two pillars: the Natura 2000 network of protected sites and the strict system of species protection. All in all, the directive protects over 1,000 animals and plant species and over 200 "habitat types" (e.g. special types of forests, meadows, wetlands, etc.), which are of European importance. The habitats Directive and parts of the Birds Directive are transposed into legislation by the **Conservation of Species and Habitat Regulations 2017 (as amended)**.

Since the UK has left the EU, these regulations have been amended (in operation terms) to retain the legal powers of the regulations to the UK. Natural England has reiterated that as the UK leaves the EU:

- The UK government is committed to maintaining environmental standards, and will continue to uphold international obligations;
- All European protected sites and species retain the same level of protection once the UK leaves the European Union;
- The environmental assessment regimes that inform planning decisions (SEA/EIA/HRA) continue to apply post EU exit;
- All permits and licences issued by UK regulatory bodies continue to apply;
- The legal framework for enforcing environmental regulations through regulatory bodies and the courts is unaffected by leaving the EU and continues to apply.

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

2.2 Policy

The **National Planning Policy Framework (NPPF)** 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, including the establishment of coherent ecological networks more resilient to current and future pressures.

The historic UK Biodiversity Action Plan (UK BAP) set out a programme for conserving the UK's biodiversity. It led to the production of 436 action plans between 1995 and 1999 to help many

of the UK's most threatened species and habitats to recover. A review of the UK BAP Priority list in 2007 identified 1,150 species and 65 habitats that met the UK BAP criteria. Since, as a result of new drivers and requirements the **UK Post-2010 Biodiversity Frameworks (2012)** has replaced the UK BAP Action Plan. The BAP process has been devolved to local level with each county deciding its own way forward.

2.2.1 Local Policy

Relevant policies taken from the Mendip District Local Plan 2006 – 2029 adopted 2014.

Development Policy 5: Biodiversity and Ecological Networks

Somerset's Ecological Network is a plan of existing and potential strategically important ecological infrastructure located across the county. It identifies existing as well as new opportunities for biodiversity, and the linkages required to ensure connectivity between these elements. It is the basic infrastructure that will aid the recovery of biodiversity from recent declines and deliver socially and economically important ecosystem services. Somerset's Ecological Network does not aim to identify all resources of importance to the conservation of the natural environment, and therefore the protection of specific sites remains important.

- 1) Core Areas are existing areas, features, or resources of importance for biodiversity, often made up of existing designated sites.
- 2) Corridors are existing linear features providing structural connectivity between Core Areas and into the wider landscape. Types may include linear corridors (e.g. substantial well-established hedgerows) landscape corridors (e.g. scarped unproductive land) or steppingstones (e.g. copses within a wider area of arable land that provide stop over points in transit between core areas).
- 3) Restoration Areas are areas, features or resources with the potential to become future Core Areas, or to improve connectivity, if they are enhanced or restored. All of these components are either enclosed by a Buffer Zone (Core Areas) or have a buffered element included within them (Corridors and Steppingstone) which reduces the potential for indirect disturbance.

Lighting Pollution

Many villages in Mendip do not have street lighting, which contributes to part of their character, whilst remoter rural areas, particularly the Areas of Outstanding Natural Beauty (AONBs) still also possess dark night skies. Lighting can also have effects on the activities and foraging patterns of nocturnal species, notably bats. Development proposals in a rural setting and especially those in designated Areas of Outstanding Natural Beauty (AONBs), should make all reasonable efforts to minimise noise and light pollution impacts.

3.0 METHODOLOGY

3.1 Background Data Search

A background data search was received from the Somerset Environmental Records Centre (SERC) on the 10th of September 2021. The data search included a search for all bats and birds associated with buildings within 1km of central grid reference ST 62860 49290.

An additional search for statutory designated sites within 1km of the development site and granted European Protected Species (EPS) licences within 1km of the site boundary was undertaken using publicly available information (DEFRA Magic map).

3.2 Bats

The methodology for the bat survey has been informed by the Bat Conservation Trust *Bat Surveys Good Practice Guidelines 2016*. The habitats on site were assessed for their suitability for foraging and commuting bats and the potential for roosting bats.

3.2.1 Preliminary Roost Inspection

All structures within the red line area provided were surveyed for bats, as shown in figure 4 below.

The physical search includes a search for live animals and a search for other signs that give an indication of past or present occupancy as outlined below. In the case of bats, typical indicators include droppings (which are characteristic and can often be speciated or at least be indicative of species type), signs of staining, urine splashing, characteristic odours, and accumulations of discarded prey remains.

Equipment included a Rigid micro-CA-350 Inspection Camera with micro 6mm extension, camera, laser measure, and binoculars. Approximately 2 hours survey effort was expended on the structures.

Figure 4 Structures surveyed



3.2.2 Pre-survey structure inspections

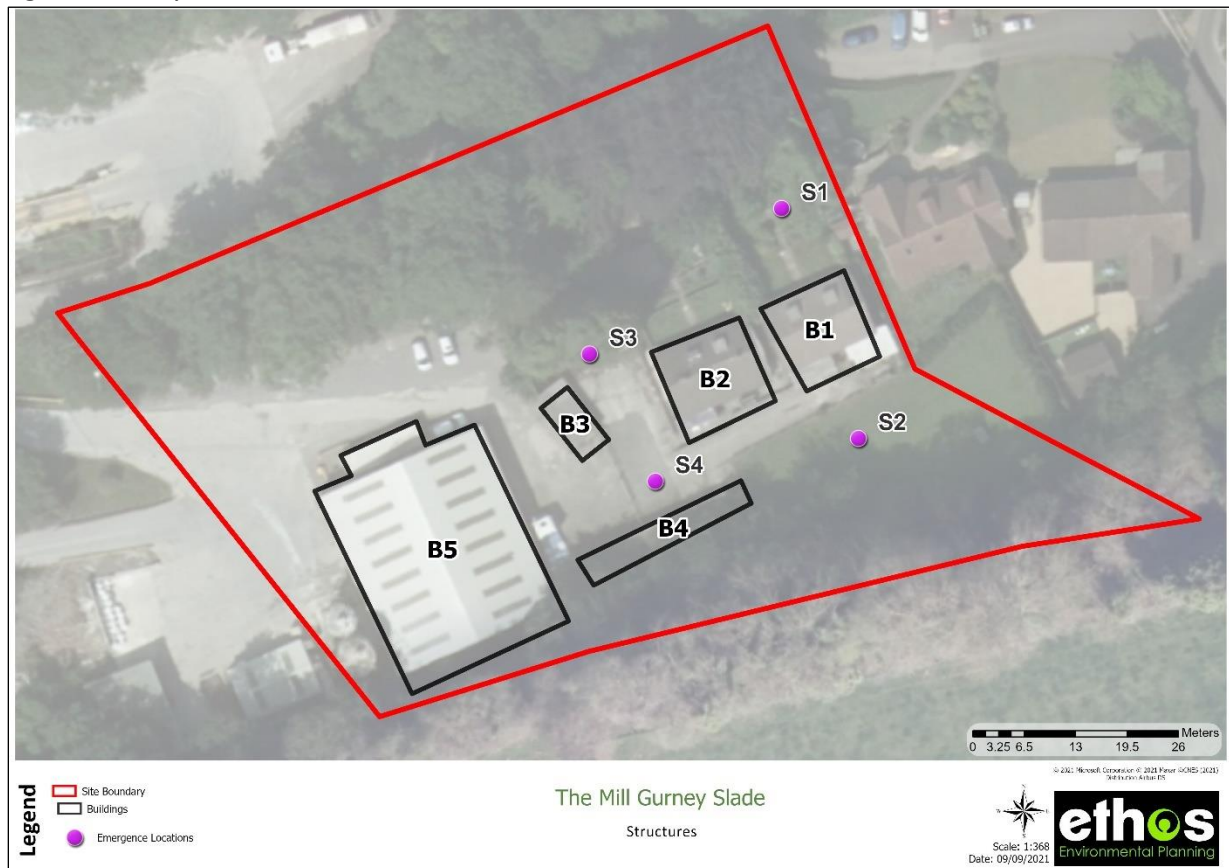
Prior to each dusk emergence survey an internal inspection of the buildings B1, B2, B3, B4A was undertaken. This included a search for live animals and other signs including droppings, staining, urine splashing, characteristic odours, and accumulations of discarded prey remains.

3.2.3 Emergence surveys

Three emergence surveys were undertaken on B1 (positions 1 and 2), two emergence surveys on B4 (position 4), and a single emergence survey was undertaken on B3 (position 3). The surveyor positions are provided within figure 4 below.

The emergence surveys commenced 15 minutes before sunset and finished approximately an hour and a half after sunset. Echo Meter Touch (EMT) bat detectors were used for all the surveys. All calls recorded were analysed using the Echo Meter Touch app software. All calls recorded were cross referenced to a call reference collection library of known bat species to confirm species presence.

Figure 5 Surveyor Positions



3.2.4 Static Surveys

A static detector was deployed within the loft of B1 on two recording periods. The first, in July, and the second recording period in August.

A single Wildlife Acoustic Mini detector was deployed within the loft of B1. The calls were processed and analysed using the BTO Pipeline. This software provides a confidence score for each species returned and highlights rare species returned within the area. Results with a low confidence <50% probability were excluded from the analysis. This data was used to assess the type of roost (day or night roost) within the B1 and provided information on the species composition within the wider area.

3.2.5 Preliminary ground roost level assessment

The trees immediately to the rear of B4 were subject to a ground-level roost assessment on 8th June 2021 to assess their potential to support bat roosts. Surveyors used close-focusing binoculars and a high-powered torch to view areas inaccessible from the ground. The methodology draws upon guidance within Collins (2016) and the Bat Tree Habitat Key (2018).

Potential roosting features (PRFs) on trees were identified as any feature within a tree that could provide shelter for a roosting bat. These features result from the following three mechanisms.

- Disease and Decay;
- Damage; and,
- Associations.

Trees with no potential roost features were assessed as having ‘negligible’ potential for roosting bats and no further surveys were carried out. Trees with features suitable for roosting bats were assessed as having ‘low’, ‘moderate’ or ‘high’ potential for bats. Trees with ‘low’ potential for roosting bats were not subject to additional survey, in line with BCT survey Guidelines. Justification is provided, in the form of a detailed description and photographic evidence, to demonstrate how the classification of ‘low potential’ had been made. Recommendations will be made as necessary if any trees with low potential are to be impacted.

3.3 Birds

The preliminary roost inspection included a search for any evidence of nesting birds. This included evidence such as bird nests, birds displaying nesting behaviours, droppings, and active nests.

3.4 Personnel

The surveyors on site are included within Table 1. The survey team have worked together on numerous similar projects and have a complimentary range of skills and experience which are considered to have provided a robust ecological appraisal of the site.

Table 1 surveyors on site

Ecologist	Position	Qualifications/ Licences	Experience
Jim Philips	Managing Director	MSc BSc (Hons), MCIEEM Class 2 Bat Licence Class 1 GCN Licence	Jim’s experience in ecology covers a wide range of projects and clients and his focus is on interpreting relevant policy and legislation to ensure projects are delivered efficiently and meet the needs of the client. He holds survey licenses for bats and great crested newts in England and Wales and is a registered consultant on Natural England’s Bat Low Impact Class License (BLICL)
Sarah Forsyth	Principal Ecologist	MSc BSc (Hons), ACIEEM Class 1 GCN Licence	Sarah has over 15 years’ experience in environmental planning and ecological management and assessment, both in consultancy and the public sector. Sarah has experience in a broad range of development projects and is responsible for leading on projects, mentoring, planning fieldwork and overseeing ecological assessments through various stages of planning and implementation.
Rachel Fayers	Principal Ecologist	BSc (Hons), ACIEEM Class 2 Bat Licence (NE) Class 1 GCN Licence (NE)	Rachel is a practised ecologist and conservationist with over 9 years’ experience in the field and is a licensed bat worker. Rachel is responsible for managing ecology surveys, appraisals and projects through various stages of planning and implementation.

Ecologist	Position	Qualifications/ Licences	Experience
Martin Smith	Senior Ecologist	BSc (Hons), Grad CIEEM Class 2 Bat Licence (NE) Class 1 dormouse licence (NE) Class 1 GCN Licence	Martin is a qualified tree climber, bat worker, and also holds licences for dormouse and GCN. Martin leads on designing the bird surveys for the Ethos team. Martin manages several projects for ethos and is experienced at providing suitable mitigation for various projects
Sarah Roberts	Assistant Ecologist	MSc, BA, Qualifying CIEEM Class licence WML-CL29 To survey for barn owl	Sarah has over two years' of consultancy and biodiversity project management experience. Sarah assists with fieldwork and report-writing for habitats and protected species. She specialises in ornithology and integrated ecological provisions for urban developments.
Ellie Shearn	Seasonal Ecologist	BSc (Hons)	Ellie is a seasonal ecologist at Ethos with relevant experience in ecological field survey. Ellie assists senior ecologists on site with protected species surveys including bat surveys and assessment.
Becky Morris	Ecologist	PhD, DIC, MSc, BSc MCIEEM	Becky has 16 years' experience working as an Ecological Consultant, specialising in botanical surveys. She holds a great crested newt survey licence.

3.5 Limitations

The cliff to the south of the site was inaccessible. Therefore, the majority trees and vegetation on the quarry cliff could not be fully assessed. However, it was considered that this habitat will be mainly retained and protected within the development. Because of this, it was considered that the lack of access to the cliff was not a significant limitation regarding the assessment.

Biological data searches rely on data held by the local record centre and cannot be seen as a complete list of every species which may be found within the search radius. As such it is possible that other species are present within the local landscape and are not assessed within the desk study. Despite this limitation, it is unlikely that the possibility of missed species through the desk study process would have any major impacts to the conclusions of this report as the assessment focuses on the suitability of habitat on site to support protected species.

Two of the garages within B4 could not be opened or were locked therefore an internal search of these garages could not be undertaken. However, there were windows to the rear of the structure which provided some visibility into the inside of the garage. It could be seen that the garage was of a similar construction to the other garages and provided poor conditions for bats. The lack of access to these two units was not considered a significant limitation.

The static detector deployed within the structure may have recorded echolocation of bats outside of the structure. Therefore, the data received may not be entirely indicative of what bats are roosting within the structure. This was not considered a significant limitation as the main aim of deploying the static was to provide information on the type of LHS horseshoe roost present within the structure.

4.0 BACKGROUND DATA REVIEW

4.1 Designated Sites

There were several Local Wildlife Sites (LWS) and two Local Geological Sites within 1km of the site. None of these sites were within the boundary of adjacent to the site. The LWS are detailed within table 2 below and are displayed within Figure 6.

There were two sections Ancient Semi-Natural Woodland (ASNW) within 1km of the site boundary. This included Ardington Woods and Crocks Bottom Wood. These woodlands are displayed within figure 7. No other statutory sites are located within 1km of the site boundary.

Table 2 Non statutory sites

Name	Code	Description
Gurney Slade Bottom	ST64/026	Ancient Broadleaved semi-natural woodland with conifer brocks, meadow and clear-felled areas.
Moons Bottom	ST64/027	An irregular shaped area of semi-natural broadleaved woodland, mixed plantation, and unimproved grassland.
Moorswood Quarry	ST64/043	Disused quarry with herb-rich, unimproved calcareous grassland and areas of broadleaved woodland.
Binegar Quarry	ST64/055	Secondary woodland, scrub, and remnant of herb-rich calcareous grassland supporting diverse invertebrate and avian fauna.
T'other Side the Hill	ST64/159	Marshy grassland and semi-improved grassland.
Penny Mill Farm	ST64/182	semi-improved pasture.
Crock's Bottom	ST65/007	Species-rich broadleaved woodland, calcareous grassland, and marshy grassland in stream valley.
Moor's Wood	ST65/038	Species-rich, broadleaved ancient woodland.

Figure 6 Non-Statutory Sites

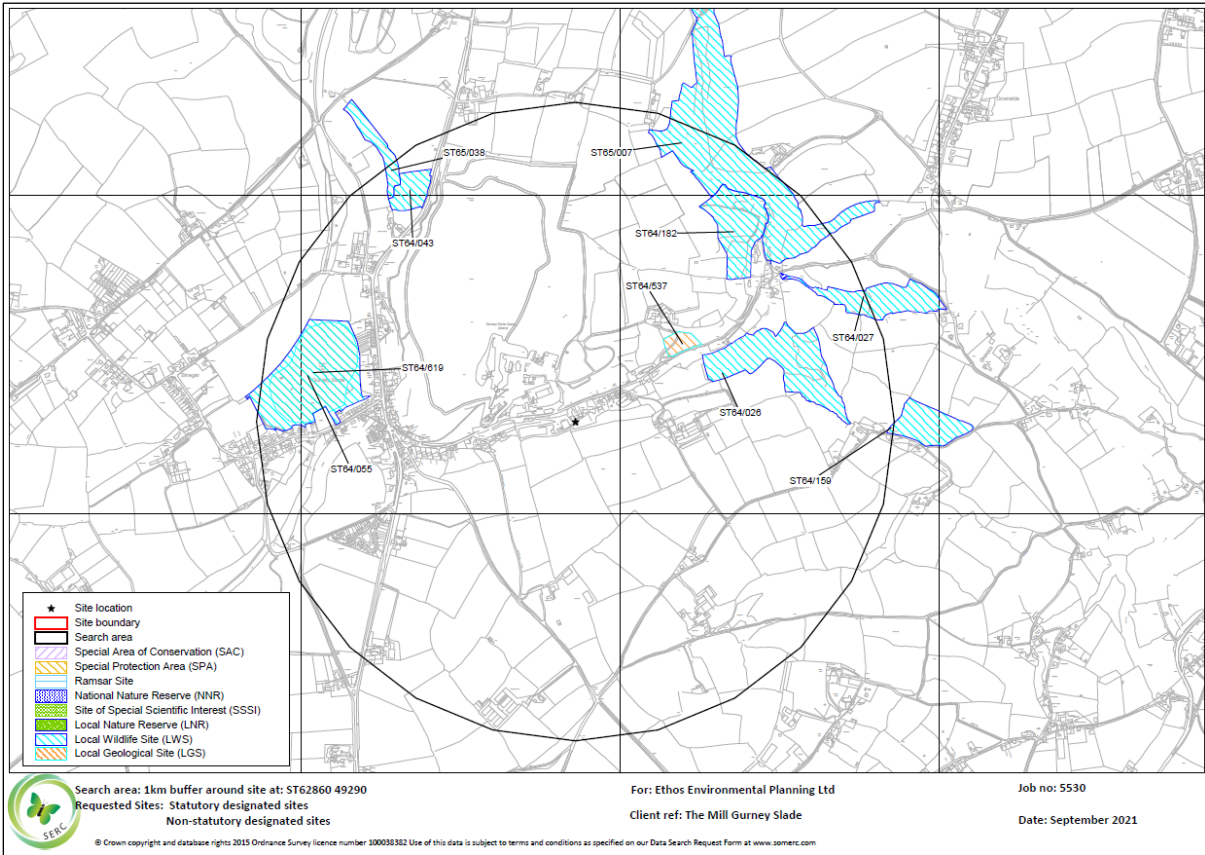
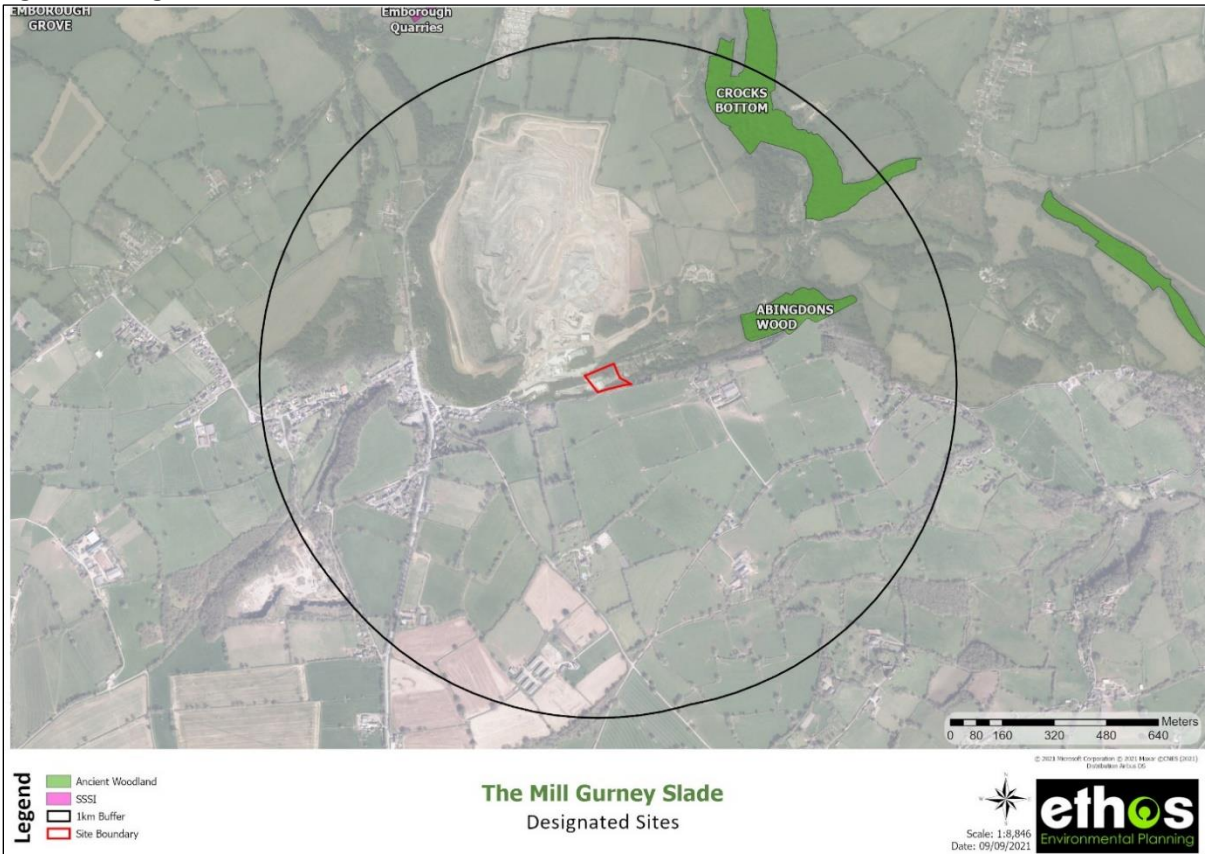


Figure 7 Designated Sites



4.2 Bats

The data search returned six records of bats. These included records of pipistrelle (*Pipistrellus spp*) greater horseshoe bat (*Rhinolophus ferrumequinum*), and serotine (*Eptesicus serotinus*). The bat records from the data search are provided within table 3 below.

Table 3 Bat records

Species	Abundance	Location	Date	Distance from Site
<i>Pipistrellus pipistrellus</i>	N/A	N/A	13/09/1988	803 northeast
<i>Rhinolophus ferrumequinum</i>	Adult count 8	Fairy Slatts	25/11/2002	869 northeast
<i>Pipistrellus pipistrellus</i>	Droppings 1	Gurney Slade Bottom	13/09/1988	803 northeast
<i>Eptesicus serotinus</i>	Adults count 18	Bedstock	21/06/2008	900m southwest
<i>Eptesicus serotinus</i>	Adults count 22	Bedstock	20/06/2009	900m southwest
<i>Pipistrellus pipistrellus</i>	Adults count 70	N/A	03/05/1995	906m west

4.3 Birds

There were 62 birds returned within the data search which included 25 species. Birds associated with structures included house martin (*Delichon urbicum*), house sparrow (*Passer domesticus*), wren (*Troglodytes troglodytes*), and little owl (*Athene noctua*).

4.4 Granted EPS Licences

There were no granted EPS licences within 1km of the site boundary.

5.0 RESULTS

5.1 Habitat Assessment

The site is located within the south-eastern section of an active quarry. The site comprised buildings, hardstanding, grassland (photo 1), and section of woodland to the north of the site and woodland-belt and cliff to the south (photo 2). The western section of the site includes a large workshop (B5) with hardstanding curtilages with parking area and forms part of the active quarry. There are several dwellings (B1-B2), a stable (B3), and stable/garage block (B4).

The habitats on site are well connected to the wider environment with the wooded cliff providing east/west connectivity and the woodland to the north providing arboreal connectivity to the north-east of the site. There was a section of grassland to the south of the bungalow and woodland edge habitat which both provide good foraging opportunities for bats.

Overall, the site was assessed to contain suitable foraging and potential commuting features for bats and was assessed to be well connected to the wide environment.



Photo 1 grassland to the south-east of B1 and B2



Photo 2 woodland belt to rear of B4

5.2 Preliminary Structures Inspection and Assessment

5.2.1 Building 1 (B1)

Building (B1) was a disused chalet bungalow with dormers and a small lean-to porch, adjacent to the east boundary of the site. The bungalow was constructed of rendered block work with composite tile roof which was in a good overall condition.

Fascia board and soffits present on the southern and northern aspects. There was one hole in the soffit on the northern elevation of the structure, but a search of this feature identified that the feature was exposed and provided negligible potential for roosting bats.

The tiles and ridge tiles (Photo 3) were all tight and in a good structural condition providing no potential roosting features (PRFs) and the chimney and vents were all tight, were lined with led, which was flush with the tiles providing no opportunities for bats.

The dormers were located on the northern aspect of the chalet bungalow. These were comprised of blockwork, fitted wooden windows, and a flat felt roof. The dormers were assessed to be in a good structural condition providing no features for bats.

The porch (photo 4) located to the south contained multiple access points and was assessed to be freely accessible for bats. The lean-too structure was constructed of timber and corrugated PVC resulting in the lean-to be light and exposed, thus providing poor conditions for bats.



Photo 3 gable end and roof of B1



Photo 4 southern aspect and lean-to structure of B1

The loft void (photo 5) within the structure was mainly built into for additional living space. Accessed from a storage room at the east gable, was access to attic voids on the northern and southern aspects of the dwelling. These attic voids were constructed from wooden purlins, rafters', and fabric sarking. There were a few gaps present where roof meets external wall. But generally, the attic voids were dark with minimal light ingress. There were abundant cobwebs within the attic voids and rat droppings and a dead rat was located within the roof.

There were <5 droppings located on a shelf of the storage room that led to the north and southern attic voids. A further <5 droppings were found in the southern loft void (Photo 6). The droppings were assessed to be relatively fresh and were indicative of LHS horseshoe bats droppings.

The building was in a good structural condition, most of the features were boarded up, and the building was assessed to be well-sealed, limiting access into the structure for bats. However, it was noted that the door on the southern elevation was ajar, providing potential access to the structure.

Overall, due to presence of fresh droppings, the building assessed to hold high potential for bats.



Photo 5 attic void in B1

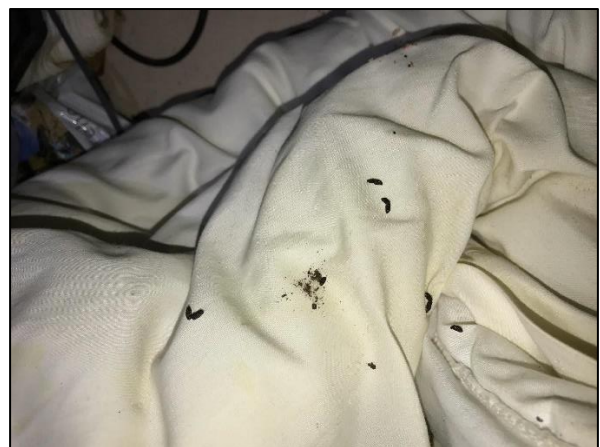


Photo 6 Droppings in southern attic void of B1

5.2.2 Building 2 (B2)

Building 2 (B2) was a chalet bungalow to the west of B1, constructed of rendered blockwork, with composite tiles, two chimneys, and two dormers of the northern elevation (photo 5). The building was in a good structural condition with no visible external PRF's for bats.

Most of the loft void within this structure has been built into for additional living space. However, there were exposed timbers within the unconverted void area under the eaves, including rafters, purlins, and ridge beam (photo 6). There was bitumen felt sarking present between the tiles and beams which was in a good condition. The loft was dark and there was no light ingress into the loft. The soffits between the external walls and the roof space were all in a good structural condition providing limited potential for bats.

Overall, there was no evidence of bats within the loft such as droppings or live specimens and the building was assessed to be in a good structural condition. Therefore, it was considered that B2 provided negligible potential for bats.



Photo 5 northern elevation of B2



Photo 6 attic void in B2

Building 3 (B3)

Building 3 was a low stable unit, of block construction with timber and iron frame supporting a corrugated asbestos roof. The building is open and freely accessible for bats.

The internal inspection identified a single dropping in the open stables (photo 7) and approximately 5 droppings within the dog kennel (photo 8). The droppings were found under the timbers and although partially disintegrated, were indicative of LHS horseshoe bats.

Whilst the building was assessed to have had limited roosting features, however with presence of therefore B3 was assessed to hold low potential for bats.



Photo 7 Stables B3



Photo 8 Droppings within dog hutch area of B3

5.2.3 Building 4 (B4)

Building 4 (B4) was located along the southern boundary of the site and was bordered by the woodland belt. This elongated building, used for storage, had adjoining units in the form of a series of adjoined garages (metal doors) at the western end and two units with stable doors at the eastern end. The structure walls comprised rendered breeze blocks with timber beam corrugated asbestos roofing. The subunits of B4 are described below:

B4A: unit with stable door, that contained old tyres and general waste. The door was wedged ajar. A single dropping was identified on a white plastic chair and approximately 30 droppings were identified on a roll of disused carpet.

B4B: unit with stable door and was also used for storage. The door was noted to be closed and roofing was tight with limited PRF's identified. There was no evidence of bats.

B4C: unit with double wooden doors. There was a gap present between the external walls and the roof on the northern aspect of the structure. This room was used to store oil and chemicals. There was no evidence of bats.

B4D: unit with double wooden doors, which was of a similar condition to B4C. There was also a gap between the external wall and the roof on the northern aspect. However, no evidence of bats was identified within this structure

B4E: Garage with metal door, was locked and was inaccessible.

B4F: Garage with metal door was jammed and was inaccessible.

B4G: Garage with metal door. Accessible, use to store vintage car. There were gaps between walls and roof blocked with foam. There was plastic sheeting on car. However, there no droppings were identified following a full search on ground, on the plastic sheeting, and on the bonnet of the car.

B4H: Garage with metal door. Accessible, was in a similar condition to the other garages. There was a gap between the northern wall and the roof. However, no evidence was identified within the structure.



Photo 9 Garages B4D – B4H



Photo 10 rear of garages B4D – B4H



Photo 11 Stables B4A – B4C



Photo 12 Internal B4B

Overall, the stables to the east of the structure, B4A to C, were assessed to hold moderate potential to support roosting bats whereas the garages to the south, B4D to H were assessed to provide negligible potential for bats.

5.2.4 Building 5 (B5)

Building 5 (B5) was in active use as a warehouse and was used for storing materials for the quarry. The structure was constructed of iron framework, corrugated metal sheeting, and block work.

There were skylights present within the roof of the structure resulting in high light levels within the structure. This alongside high levels of the disturbance provided the assessment that B5 provided poor conditions for bats and as such was assessed to provide negligible potential for bats.



Photo 13 B5 external



Photo 14 Internal B5

Figure 8 Structures and their potential to support bats



5.3 Pre survey structures inspections

The results of the pre survey structures inspection are provided in table 4.

Table 4

Building Ref.	Structures inspection	Pre-emergence 1	Pre-emergence 2	Pre emergence survey 3
	8 th June 2021	30 th June 2021	14 th July 2021	3 rd August 2021
B1	<10 droppings in attic. Included fresh droppings.	1 LHS. <15 droppings in attic. Scattering of droppings kitchen.	3 LHS. <100 droppings. Additional accumulation of scattered droppings in kitchen. New cluster of droppings, <10 under lampshade in hallway	3 LHS. No new locations of accumulations of droppings.
B2	No evidence.	No evidence.	No evidence.	No evidence.
B3	<5 droppings. No fresh droppings.	No change. No fresh droppings.	No change. No fresh droppings.	No change. No fresh droppings.
B4A	<30 droppings.	No change. No fresh droppings.	No change. No fresh droppings.	No change. No fresh droppings.
B4B	No evidence.	No evidence.	No evidence.	No evidence.
B4C	No evidence.	No evidence.	No evidence.	No evidence.

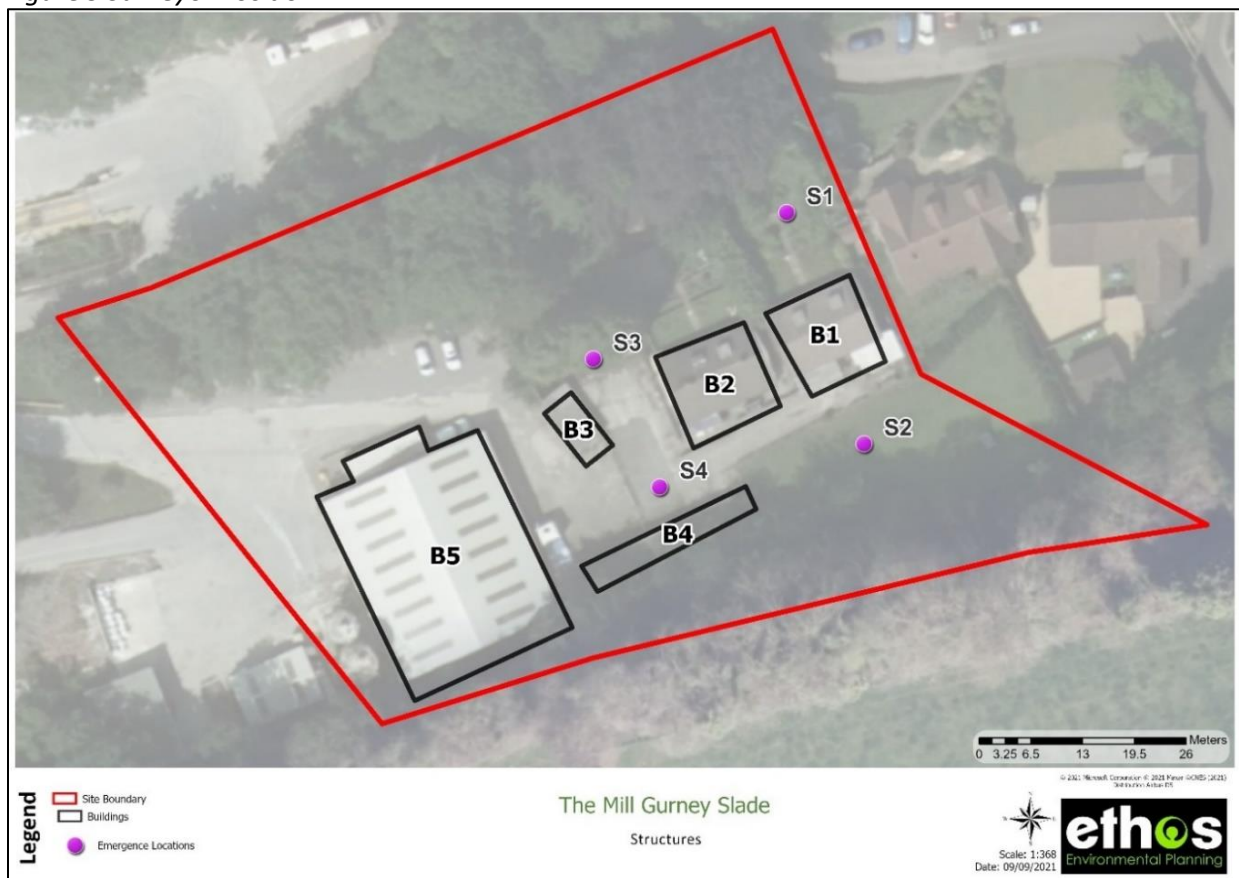
5.4 Emergence/re-entry surveys

The emergence surveys undertaken comprised:

- 3 dusk surveys of B1
- 1 dusk survey of B3
- 2 dusk surveys of B4.

Surveyors were positioned as shown in Figure 9 and a summary of the emergence data is provided within this section and the full results are provided within appendix II of this report. The environmental variables from each survey is provided within table 4 and the species codes are within table 5.

Figure 9 Surveyor Position



5.4.1 Environmental Variables and Species Nomenclature

Table 5 Variables prior and post survey

Variable	Start/End	Temperature (°C)	Relative Humidity (%)	Cloud cover (oktas)	Precipitation	Average wind speed (mps)
30 th June 2021 Sunset: 21:29	Start: 21:25	18	78	2	None	0.6
	End: 22:59	17	79	6		0.3
14 th July 2021 Sunset: 21:23	Start: 21:05	20	74	1	None	1.3
	End: 23:08	16.1	76	1		3.1
3 rd August 2021 Sunset: 20:53	Start: 20:39	18.6	78.8	1	None	0.0
	End: 22:30	12.2	89.3	0		0.0

Table 6 Relevant Species Codes

Species	Scientific name	Species code
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	CP
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	SP
Lesser horseshoe	<i>Rhinolophus hipposideros</i>	LHS
Greater horseshoe	<i>Rhinolophus ferrumequinum</i>	GHS
Daubenton's bat	<i>Myotis daubentonii</i>	DAUB
Noctule	<i>Nyctalus noctula</i>	NOC
Serotine	<i>Eptesicus serotinus</i>	SER
Brown long-eared bat	<i>Plecotus auritus</i>	BLE
Natterer's bat	<i>Myotis nattereri</i>	NATT
Myotis bat	<i>Myotis</i>	MYO

5.4.2 Summary of Emergence survey 1 – 30th June 2021

Surveyors were positioned at locations 1 to 4 (refer to figure 9). A LHS horseshoe bat was recorded emerging from the front door of B1 (Photo 15) and a single horseshoe was recorded emerging from the stable door of the eastern unit of B4 (B4B) (photo 16). Both emergences were around 30 minutes after sunset.

Several bat species were recorded foraging and commuting through the site - pipistrelle bats, brown long eared bats, and serotine. Most of the bat activity was along the southern woodland belt.

5.4.3 Summary of Emergence 2 – 14th July 2021

The surveyors were positioned at locations 1 to 3 (refer to figure 9). Three LHS horseshoes were recorded light sampling within the lean-to structure on the south elevation of B1 and emerging approximately 20 to 30 minutes after sunset, commuting towards the woodland belt to the south. A single LHS horseshoe was recorded re-entering the structure towards the end of the survey at around 10pm.

5.4.4 Summary of emergence 3 – 3rd August 2021

Surveyor were positioned at locations 1 and 2 (ref to figure 9). Three LHS horseshoes were recorded light sampling and emerging from the front door of B1. It was assessed that there was a maximum of three bats recorded emerging from the structure from around 20 minutes after sunset. There were also high levels of common pipistrelle activity on the eastern gable of the structure and two common pipistrelles were recorded emerging, then later re-entering the eastern gable of the house where tiles had been removed (due to asbestos removal works).



Photo 15 Light sampling and LHS emergence/re-entry from lean-to porch of B1 - 30th June, 14th July and 3rd August 2021



Photo 16 Light sampling and LHS emergence from B4, 30th June 2021



Photo 17x CP emerged/re-entered from removed tiles, 3rd August 2021

5.5 Static detector surveys

A single static detector was deployed within the loft of B1 on two separate survey periods. The first period was conducted between the 30th of June and the 14th of July 2021 and the second period was undertaken between the 3rd and 18th of August 2021. The majority of the recordings within B1 were of LHS horseshoe bats within the dwelling and calls were returned throughout the static recording period with no peak in night activity indicative of a night roost suggesting that B1 is a day roost for horseshoe bats (see figures 10 and 11).

Figure 10 Species composition

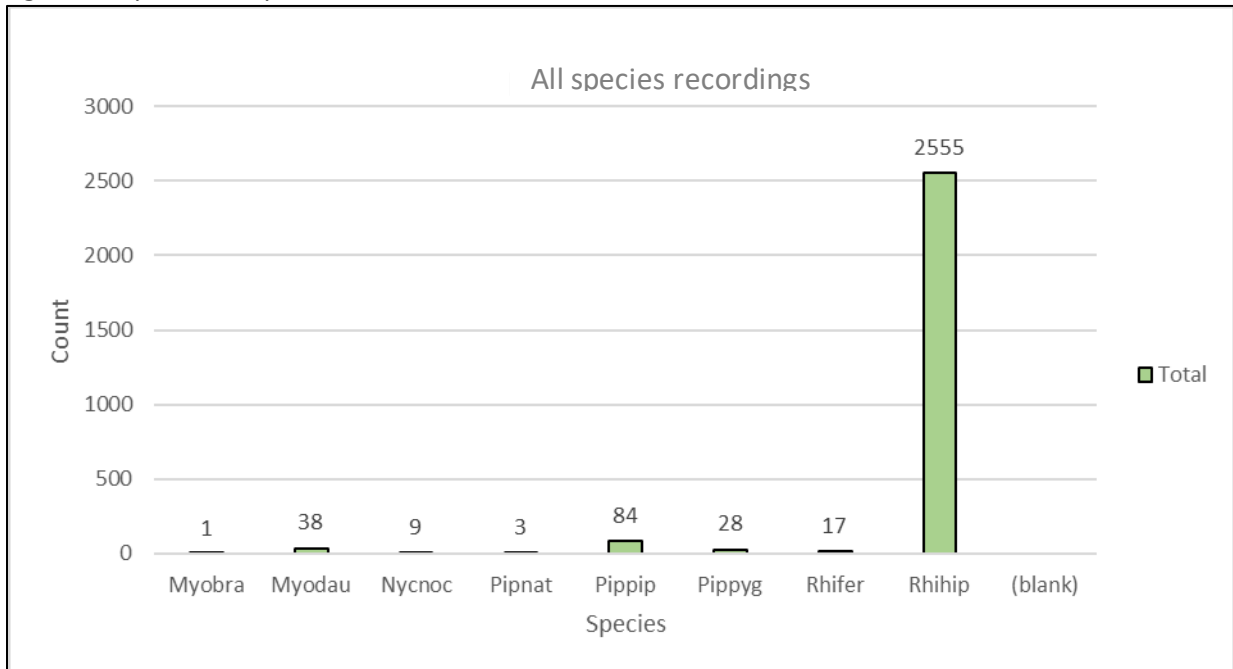
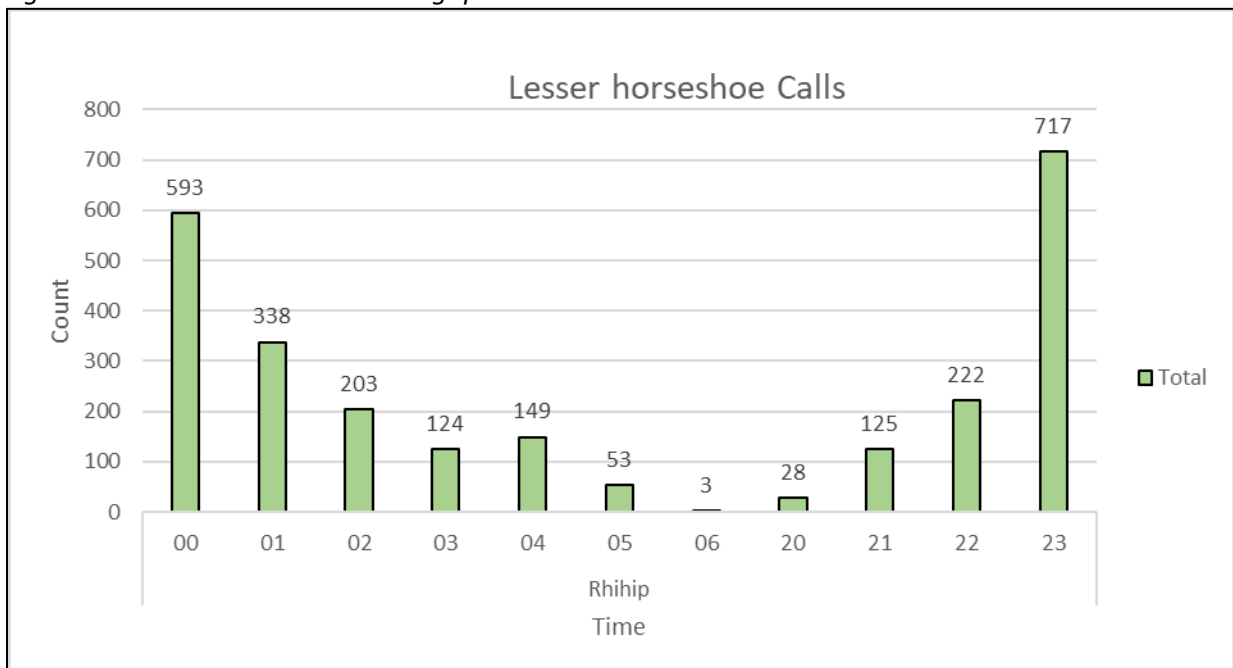


Figure 11 Lesser horseshoe recordings per hour



5.6 Trees

The trees to the rear of B4 were checked for their potential to support roosting bats. The trees within this section were comprised of multi stemmed hazel, were young, were in a good condition with no visible features for bats.



Photo 17 overhanging hazel



Photo 18 hazel stools rear of B4

5.7 Birds

A bird nest was observed within a garage within B4 (B4G). However, the nest was assessed as being old and disused. This garage was well sealed, and gaps had been filled with foam which limits the current access into the structure for birds.

In general, the buildings on site offer potential nesting opportunities for birds, therefore mitigation is provided within section 7.3 to avoid potential impacts.

6.0 DISCUSSION

The proposals include the demolition of structures B1 – B4 for the creation of a new modular office and associated parking area. This section includes the discussion of the impacts of the proposals on protected species.

6.1 Habitat and wider Environment

The habitats on site to be directly impacted by the proposals are comprised of hardstanding and amenity grassland of low ecological value. It was assessed that the loss of these habitats would not have a significant negative impact on these sites and therefore are not discussed further within this report.

The key habitat features of ecological value are the woodland belt and the grassland to the south-east of the site, which are being retained.

It is anticipated that there will be light pruning works required to the trees to the rear of B4 to facilitate the works. These trees were comprised of young multi-stemmed hazel with no PRF's suitable for bats. The trees do provide suitable nesting habitat for birds, therefore recommendations to avoid impacts on breeding birds are provided in Section 7.3.

The emergence survey recorded moderate activity in the vicinity of the buildings, in particular to the south. There were seven species of bat recorded - common pipistrelle, soprano pipistrelle, brown long-eared, serotine, myotis spp., noctule, daubenton's and LHS horseshoe. Bats were recorded commuting over the site and foraging over the grassland habitat and woodland area to the south. Recommendations for sensitive lighting are provided in section 7.4.

6.2 Structures

Two of the five structures were assessed to support bat roosts, the roost locations are shown in figure 12 in the summary section 6.5. The buildings that support bat roosts, B1 and B4A, are discussed below by species under sections 6.3 and 6.4.

Historic bat droppings were recorded within B3 during the initial roost inspection of B3. However, no bats were recorded emerging or re-entering the structure during the emergence survey on the 30th of June and no bats or evidence of fresh droppings were observed in the structure prior to the other surveys being undertaken. Due to no evidence of recent use by bats, this structure is not assessed to support a bat roost.

Structures B2, B4B-H, and B5 were all assessed as negligible (or low) potential. No evidence was found during the pre-survey inspections, or the dusk emergence survey (B4) and therefore they do not support bat roosts.

No further actions are required regarding these buildings and they can be demolished without the requirement of a Natural England licence.

6.3 Lesser horseshoe

Lesser horseshoe bat roosts were confirmed in two buildings on site:

1. B1 attic void.
2. B4A, subunit A.

6.3.1 Building 1

The increasing accumulation of fresh dropping noted during the pre-survey inspections and lack of presence of any older dropping from previous season(s) use provided evidence that the usage of the structure by bats was recent and opportunistic, by a low number of bats.

The static within B1 recorded 2555 LHS horseshoe records over a 30-day period. The static detector recorded 30m before sunset and 30m after dawn. The recordings were spread across the recording period between 8pm to 6am. If the bats were using the structure as a night roost, the recordings would be anticipated to be in short durations/peaks in the night, with absence of calls soon after sunset and just before dawn. It was therefore concluded that B1 is a day roost of small number of LHS horseshoe bats. The peak count from the pre-survey inspections and the dusk emergence surveys was three.

6.3.2 Building 4, subunit A

The subunit with stable doors, furthest to the east, B4A, contained approximately 30 droppings indicative of LHS horseshoe. No bats were observed during pre-survey inspections; however, a single LHS horseshoe bat was recorded emerging from B4A during the first emergence survey, 30th of June, approximately 30 minutes after sunset.

It was assessed that B4A supported a day roost for low numbers of LHS horseshoe bats (up to one).

6.3.3 Summary

The demolition of structures B1 and B4A will result in the loss of two LHS horseshoe day roosts for a low number of bats and, therefore, a protected species licence and mitigation measures will be required.

The two LHS horseshoe day roosts were assessed to have **Low to moderate** conservation significance in line with the Bat Mitigation Guidelines (ref. figure 4, 2004) as shown in figure 12 below.

Somerset is within the Annex D area of the low Impact licence CL21 which allows the damage and destruction of low conservation significance day and transitional LHS horseshoe bat roosts (no more than three roosts). It also allows the licence holder to disturb and capture LHS horseshoe bats in appropriate small numbers. Because of this a Low impact licence will be sought once planning has been granted for the redevelopment of the site.

The method statement will include necessary mitigation measures to minimise potential impacts through a precautionary working method statement, as detailed in section 7.

Figure 12 Guidelines for proportionate mitigation/compensation

Low	Roost status	Mitigation/compensation requirement (depending on impact)
Conservation significance ↓ High	Feeding perches of common/rarer species	Flexibility over provision of bat-boxes, access to new buildings etc. No conditions about timing or monitoring
	Individual bats of common species	
	Small numbers of common species. Not a maternity site	
	Feeding perches of Annex II species	Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements
	Small numbers of rarer species. Not a maternity site	
	Hibernation sites for small numbers of common/rarer species	Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.
	Maternity sites of common species	
	Maternity sites of rarer species	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years.
	Significant hibernation sites for rarer/rarest species or all species assemblages	
	Sites meeting SSSI guidelines	Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.
Maternity sites of rarest species		

Although, LHS horseshoe bats are relatively common within local area, they are a rarer species and as such a provision of new compensatory roost is recommended to replace the loss of the roost within B1. A suitable location for the new roost provision is within the south-eastern corner of the site, adjacent to the woodland belt, and sheltered from light spill and disturbance. Recommendations regarding the location and construction of the roost is provided within section 7 of this report.

6.4 Common pipistrelle

Two common pipistrelle bats were recorded emerging and re-entering the eastern gable end of B1 on the third emergence survey. The pipistrelle bats had emerged from where the tiles on the gable ends had been removed due to investigative works. This was assessed to be indicative of opportunistic usage by bats and not synonymous of a historic/established roost of pipistrelle bats.

It was assessed that B1 supported a roost for small numbers of common pipistrelle, up to two bats. The demolition of the structure will result in the loss of the common pipistrelle day roost for a low number of bats and, therefore, a protected species licence and mitigation measures will be required.

The common pipistrelle day roost was assessed to have **Low** conservation significance in line with the Bat Mitigation Guidelines (ref. figure 4, 2004) as shown in figure 13 below; and common pipistrelle are listed in Annex B as a common and /or widespread species, which when present in low numbers can be covered by a low impact licence. The method statement will include necessary mitigation measures to minimise potential impacts through a precautionary working method statement, as detailed in section 7.

The use of a low impact licence for the damage/destruction of roosts for species under Annex B (which includes common and soprano pipistrelle bats and covers all counties in England), does not require compensation to be provided if the roost cannot be maintained in situ. As enhancement a roost provision will be provided within the compensation roost for LHS horseshoes.

Figure 13 Guidelines for proportionate mitigation/compensation

Low	Roost status	Mitigation/compensation requirement (depending on impact)
Conservation significance ↓ High	Feeding perches of common/rarer species	Flexibility over provision of bat-boxes, access to new buildings etc. No conditions about timing or monitoring
	Individual bats of common species	
	Small numbers of common species. Not a maternity site	
	Feeding perches of Annex II species	Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements
	Small numbers of rarer species. Not a maternity site	
	Hibernation sites for small numbers of common/rarer species	Timing constraints. More or less like-for-like replacement. Bats not to be left without a roost and must be given time to find the replacement. Monitoring for 2 years preferred.
	Maternity sites of common species	
	Maternity sites of rarer species	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years.
	Significant hibernation sites for rarer/rarest species or all species assemblages	
	Sites meeting SSSI guidelines	Oppose interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.
Maternity sites of rarest species		

6.5 Summary of Roosts

A summary of the roosts identified on site is shown below in table 10 and locations are shown in figure 12. Overall, it was assessed that mitigation measures will protect lesser horseshoe and common pipistrelle bats during demolition of the structure through a precautionary working method statement.

Table 10: Roost summary

Species	Peak count of bats	Roost type	Conservation significance	Roost location
Lesser horseshoe	3	Day	Low to moderate	Attic voids of B1 Exit/re-entry via ground floor door on southern elevation. Access to voids via storage cupboard/room eastern end of the converted roof area.
Lesser horseshoe	1	Day	Low to moderate	Stable unit A, east end of B4 Exit/re-entry via stable door.
Common Pipistrelle	2	Day	Low	Hanging tiles on east gable of B1

Compensation and enhancement measures will provide replacement roosting opportunities for LHS horseshoe and common pipistrelle bats. This will maintain a favourable conservation status of the bat species roosting on site.

Figure 12 Location of bat roosts



7.0 RECOMMENDATIONS

7.1 Licensing

The site supports three day roosts of two common bat species; localised to the attic voids of B1; gap in hanging tiles on east gable of B1; and the eastern subunit of B4 (B4A). The proposed demolition of building 1 and building 4 – unit A, will require a Low impact Class Licence from Natural England prior to any works commencing on these buildings at the site.

As part of a licence application, the applicant must demonstrate that the development meets the three statutory licensing tests under the habitat regulations:

- a) Preserving public health or public safety or other imperative reasons of overriding public interest (IROPI);
- b) There is no satisfactory alternative; and
- c) The action will not be detrimental to maintaining the population of the species concerned at a favourable conservation status in its natural range.

It is understood that points 'a' and 'b' will be addressed in the Design and Access Statement for the site. Section 6 of this report discussed how the favourable population status of the bat species on site will be maintained, which addressed point 'c'.

7.1 Method Statement – Bats

The bat surveys identified B1 as supporting two day roosts for a low number of LHS horseshoe and common pipistrelle bats; and B4A supporting one day roost for a low number of LHS horseshoe bats (three roosts in total on site) and will therefore works will be undertaken under a Low Impact Class Licence from Natural England and supervised by the named Registered Consultant. The Licence can only be applied for once demolition permission has been granted. The following method statement will be followed:

- A bat box will be installed onto a nearby suitable tree, the location and specification as advised by the Registered Consultant (this will initially provide temporary roost location should any bat be found during the works).
- A pre-commencement survey of the built structures on site will be made by the Registered Consultant 24 hours before works commence.
- Before any works commencing, the Registered Consultant will brief any site contractors on the presence of bat species, the legal implications of their presence, measures that will be used to protect bats, good working practices, the licenced activities, and what to do if bats are found.
- A controlled 'soft-strip' of the identified bat roost areas of the structure will be undertaken by the roofing contractor under direct supervision of the bat expert. The roof tiles, windows and soffits of the southern gable end will be removed by hand in areas of bat interest (gently levered, lifted vertically and undersides inspected).

- Mechanical demolition (in the area of bat interest) must only take place once the Registered Consultant has confirmed a structure to be free of bats.
- If any bats (species covered under the licence) are encountered during the supervised soft strip, the Registered Consultant will either relocate the bat(s) to an alternative suitable roost (bat box erected on near by building); or they will be held them in accordance with the Bat Workers Manual (2004) a suitable handling box for release into adjacent suitable foraging/commuting habitat in the evening.
- When bats are found in unexpected numbers of are of a species or roost type not covered by the licence, then guidance under Appendix II of the low impact licence will be followed. The Registered Consultant will assess if works can continue under WML-CL21 or if the authorised site registration form needs to be updated or whether an individual licence application will need to be applied for.
- If bats are found during the remainder of construction works then works will cease and the contractors will consult the Registered Consultant who will advise on the appropriate course of action.

7.2 Method Statement – General Precautionary Working

The following recommendations will be followed to avoid impacts on local wildlife during the construction phase of the project:

- B1, B3, B4 – demolition of these structures to be undertaken outside of the main breeding season for birds (March – September) to avoid impacting birds, or subject to a pre-works check by a suitably qualified ecologist. Should any active nest be confirmed by pre-works checks, works within a specified buffer around the nest cannot take place until the chicks have fledged and left.
- Any work to trees to be undertaken outside of the breeding bird season; or subject to a pre-works check by a suitably qualified ecologist. Should any active nest be confirmed by pre-works checks, works within a specified buffer around the nest cannot take place until the chicks have fledged and left.
- All trenches should be covered at night or contain a ramp (for example wooden plank) to provide a means of escape, should nocturnal mammals become trapped in them overnight.
- Any temporary external lighting used during construction working hours will be switched off at night to avoid disturbing nocturnal mammals.
- Any necessary piling of materials will be kept on pallets (i.e., off the ground) to avoid creating refugia for species such as hedgehog, which could be injured or killed when the materials are moved.

7.3 Compensatory Roost

A compensatory roost will be created for LHS horseshoe and common pipistrelle bats. Recommendations to create a roost suitable for LHS horseshoe bats are provided following guidance from the LHS Horseshoe Conservation handbook (Shofield, 2008).

- The bat house is to be located in the southeast corner of the site adjacent to the woodland belt and on a south-westerly aspect as shown in figure 9
- The bat house should be positioned to be away from proposed lighting of the development, but not too shaded by the woodland canopy
- Consideration should be given to an L shaped building to maximise the microclimates within the structure; or alternatively internal turnback should be created to reduce ingress of light into the building
- The building will be created from rendered block work or natural stone, with exposed timber work in the roof
- The building will be single storey with a ceiling throughout; access will be provided into the loft void through a hole in the ceiling
- Ideally a hot box will be created within the loft box, providing temperature variation in the void
- A doorway partially grated (for example stable door half solid/half grated) will be installed on the west elevation. This will also provide a means of entry into the building for maintenance and monitoring
- An additional access hole 200mm (h) x 300mm (w) should be created, at height, on the east elevation will lead to an internal baffle to exclude light which is suitable access for lesser horseshoe; and it should be grated to mitigate predation
- Internal features will be created for bats, including simple roost features, created from chipboard, on internal walls for crevice dwelling species
- A bat tube will be installed within the external wall to provide a roost provision for pipistrelle bats
- It is recommended to plant scrub adjacent to the roost to provide flight lines into the roost and to shelter the roost from the adjacent development.

Example sketches to achieve the above bat house design principles for lesser horseshoe bats (and other bats species) are provided in appendix 2

Figure 10 Roost Location and approximate size



7.4 Lighting

There may be potential for indirect impacts of lighting associated with the new office and car parking. The site supports day roost of LHS horseshoe bats which are particularly sensitive to lighting are listed on Annex II of the Habitats Directive, meaning that they are legally protected from impacts which may impact their local distribution. The southern woodland area of the site has been identified as forging habitat and a commuting corridor for this species (and other light sensitive species) and therefore successful mitigation will require retaining dark corridors (<0.5 lux) around the compensatory roost provision area, and connective habitat from the roost provision to the southern woodland. To demonstrate this, it is recommended to provide a sensitive lighting plan, which can be secured by an appropriate planning condition.

Measures to reduce impact of lighting on bats (and other nocturnal species) could include the following:

- Ensuring the use of controlled light distribution, optimised optics (flat glass - controlled light distribution below the horizontal), shielding accessories and careful luminaire positioning / minimal heights are employed in the scheme design;
- Adopting a light quality of colour rendering in excess of Ra60 allows a notable reduction in light levels due to increased visual acuity. The scheme design should consider the use of high colour rendering lamp sources (warm white light) to minimise design criteria, energy usage and reduce resultant impacts;

- Adopting a light quality that minimises disruption to existing ecological systems. Possibly in the form of 'LED' light sources which emit minimal UV light.
- Adopting an appropriate control strategy for the operational lighting so that, when not required and subject to Health and Safety assessment, non-essential lighting is dimmed or switched off in order to further reduce the impact; and,
- Column and luminaires to be of a colour and finish to 'blend' into the daytime landscape view.

7.5 Habitat Enhancements

It is recommended to plant eight local variety M25 apple trees within the grassland section. This would provide suitable habitat for invertebrates and species that feed upon them, such as bats and birds and to provide a potential gain in terms of biodiversity. Recommendations to plant and maintain the apple trees and associated grassland are provided below and are displayed within figure 9.

- Trees should be planted in a grid at 10m spacing
- Biodegradable tree guards will be used and fencing and three 3m posts with chicken wire will be installed around the tree to prevent deer damage
- The base of the trees should be covered with plastic sheeting or weeded and mulched regularly
- The trees should be sourced from a reputable supplier such as <https://www.adamsappletrees.co.uk/> and should be between 1 and 2 years of age
- The trees may need to be watered to aid establishment
- The trees should be planted in the late autumn early winter to allow them to take root before the growing season spring/summer
- The grassland in this section should be cut, removed, and composted in a designated area within the grassland section annually, preferably in the late summer, in dry conditions.

8.0 CONCLUSIONS

This report has assessed the impacts of the proposed redevelopment of the disused chalet bungalows and outbuildings at LKAB Quarry in Gurney Slade, Somerset. Ethos have undertaken surveys which have confirmed the presence of three bat roosts in two buildings on site. The surveys undertaken comprised a structures inspection, pre-survey inspections, static detector survey, and presence/absence surveys in order to identify the species of bat and types of roost present.

The results identified three day roosts of two low conservation species (common pipistrelle and LHS horseshoe). A Low Impact Class Licence will be required from Natural England in order to for the demolition works to building 1 and sub-unit A of building 4, be able to proceed legally. The bat mitigation method statement will protect bats from accidental injury/ killing during demolition of the structure.

The proposals include provision of a compensatory roost and recommendation for a sensitive lighting plan and habitat enhancement. If the roost provision and associated recommendations are implemented, it is considered that the redevelopment of the site will not have a negative impact on the favourable conservation on the local population of bats.

Recommendations have been provided within this report to apply for a low impact licence to destroy the roosts and to provide a compensatory roost provision with sensitive lighting plan.

Recommendations have also been included to create an orchard on site and a compensatory roost for horseshoe bats within the grassland field to the south of the site. It was considered that if the recommendations are followed within this report impacts on protected species will be mitigated and there will be a net gain in terms of biodiversity.

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APPENDIX 1 LEGISLATION

This section outlines the key legislation related to the habitats and species considered within this survey report.

Bats

All British bats are fully protected under Section 9 Schedule 5 of the Wildlife and Countryside Act 1981 and amendments. Agreement, and are fully protected under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In addition, they are protected under the Berne Convention; they are given migratory species protection within the Bonn Convention.

Regulation 43 (1) of The Conservation of Habitats and Species Regulation 2017 makes it an offence to:

- deliberately capture, injure or kill any species of bat;
- deliberately disturb any species of bat;
- damage or destroy a breeding site or resting place of any species of bat.

It is an offence to disturb any bat roosting site, whether the bats are there or not. Under Regulations 43 (2) disturbance includes in particular any disturbance which is likely:

- To impair their ability
 - to survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of a hibernating or migratory species, to hibernate or migrate; or
- To significantly affect the local distribution or abundance of the species to which they belong.

Presence of bats does not necessarily mean that development cannot go ahead, but that with suitable, approved mitigation, exemptions can be granted from the protection afforded to bats under regulation 43 by means of a licence. Natural England (NE) is the appropriate authority for determining licence applications for works associated with developments affecting bats, including demolition of their roost sites. In cases where licences are required, certain conditions have to be met to satisfy Natural England. Before the Statutory Nature Conservation Organisation (SNCO), in this case NE, can issue a licence to permit otherwise prohibited acts three tests have to be satisfied under the requirement of Regulation 55. These are:

1. Imperative Reasons of Overriding Public Interest [Reg 55(2)(e)];
2. No Satisfactory Alternative [Reg 55(9)(a)];
3. Maintenance of Favourable Conservation Status [Reg 55(9)(b)].

In order to meet the tests, SNCO usually expects the planning position to be fully resolved as this is necessary to satisfy tests 1 and 2. Full planning permission, if applicable, will need to have been granted and any conditions relating to bats fully discharged. ahead of any licence application to the SNCO. The LPA have a legal duty under The Conservation of Habitats and Species Regulations 2017, to assess whether the application is likely to meet the Three Tests

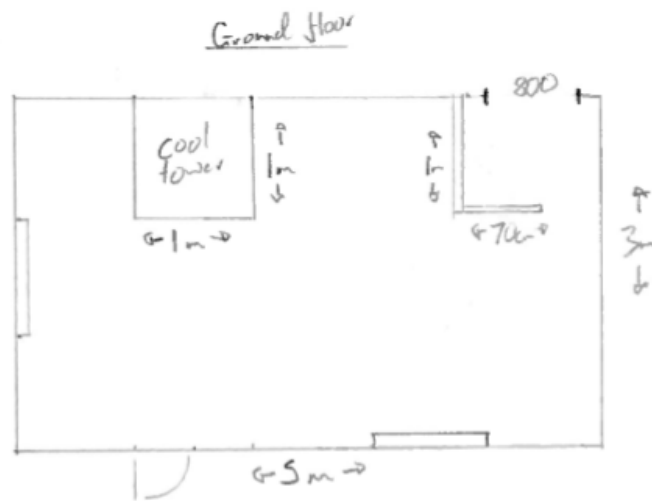
and therefore the requirements for Natural England licensing, prior to determination of an application The Licence application process may take two months before a licence is issued. Planning Permission and granting of a bat licence are separate legal functions. Therefore, receiving planning permission from the Local Authority is no guarantee that the SNCO will issue a derogation licence.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended) and cannot be killed or taken, their nests and eggs taken, damaged or destroyed while their nest is in use or being built. It also prohibits or controls certain methods of killing or taking except under licence. Other activities that are prohibited include possession and sale. Activities such as killing or taking birds (including relocating) which would otherwise be illegal can be carried out under licence where there is suitable justification, and the issue cannot be resolved by alternative means.

Specially protected or Schedule 1 birds receive full protection under the Wildlife and Countryside Act 1981 (as amended). Part I birds are protected at all times, Part II during the close season only. In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest.

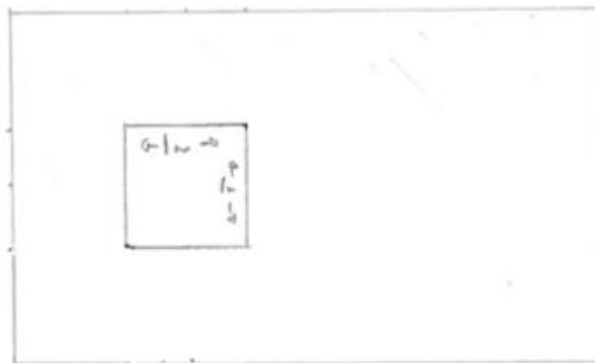
APPENDIX 2 EXAMPLE BAT HOUSE DESIGN



Ground floor design:

- Turnback to reduce light into building
- Cool tower for bats
- Simple roosts on walls for crevice dwelling bats
- Open and un-cluttered on ground floor

Ceiling level



Gap for flight lines into loft void.
Loft floor to be insulated and boarded

Side view of bat house

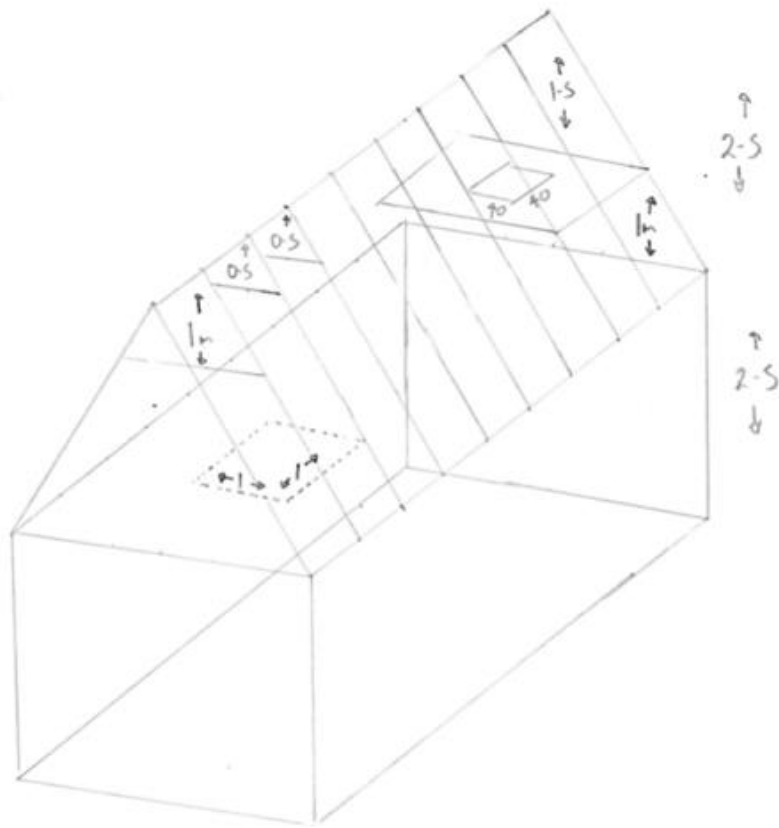


Location of hot box in loft

Location of boards within loft

Bat entrance and turn back located in north east corner of building

Cool tower – Simple construction of breeze blocks, sand and timber sheeting.



Hotbox design

