



Bat Emergence and Re-entry Surveys

Stileways, West Hill, Wraxall, North Somerset, BS48 1PH

Nick Smythe

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Industry Guidelines and Standards

This report has been written with due consideration to:

- Chartered Institute of Ecology and Environmental Management (2017). Guidelines for Preliminary Ecological Appraisal. 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2018). Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2017). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.
- Chartered Institute of Ecology and Environmental Management (2020). Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK. 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.
- British Standard 42020 (2013). Biodiversity – Code of Practice for Planning and Development.
- British Standard 8683:2021 (2021). Process for Designing and Implementing Biodiversity Net Gain.

Proportionality

The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Consequently, the decision-maker should only request supporting information and conservation measures that are relevant, necessary and material to the application in question. Similarly, the decision-maker and their consultees should ensure that any comments and advice made over an application are also proportionate. The desk studies and field surveys undertaken to provide a Preliminary Ecological Appraisal (PEA) might in some cases be all that is necessary.

(BS 42020, 2013)

Executive Summary

Arbtech Consulting Ltd was instructed by Nick Smythe to undertake Bat Emergence and Re-entry Surveys (BERS) at Stileways, West Hill, Wraxall, North Somerset, BS48 1PH (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the garage (B1) and the construction of a new residential dwelling with associated parking and access (hereafter referred to as “the proposed development”).

Building	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ¹
Building B1	<p>The building was found to be a confirmed roost of lesser horseshoe bats (confirmed by DNA analysis) with six LHS droppings found inside the roof void during the PEA (Clarkson & Woods, May 2023).</p> <p>It was considered likely that the building is used by a single horseshoe bat as an occasional night roost.</p> <p>No further bat roosts were identified during the BERS.</p> <p>No additional bat droppings were present at the time of the static detector deployment/collection</p>	<p>The proposed demolition of B1 will destroy the occasional roost of one lesser horseshoe bat. Any bats present at the time of the works may be injured or killed.</p>	<p>An EPSL application to Natural England will be required to legally permit the proposed works. The EPSL application requires that surveys have been undertaken within the most recent active bat season (optimal May to August, suboptimal September). Planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission, where possible to do so.</p> <p>A Material Changes Check will be required within three months of the EPSL submission, if no survey work has been undertaken within that period.</p> <p>The EPSL will detail any mitigation and compensation measures that will be required for the proposed development to comply with the standing advice and will be designed to reduce any impacts to an acceptably low level so as to maintain (or enhance) the Favourable Conservation Status (FCS) of the local bat population.</p> <p>The EPSL will include the following measures:</p> <ul style="list-style-type: none"> A standalone bat roost will need to be built to provide replacement roosting habitat for lesser horseshoe bats. Please see Appendix 7. This will need to be in place prior to any works commencing on site and will act as a receptor for any bats that are found during the works, as well as permanent post-development compensation. 	<p>The installation of a small wildlife pond would provide additional foraging value for bats including lesser horseshoe bats, whose favoured food source is Nematocera (a suborder of flies including mosquitos, which lay eggs in and around wet habitats).</p>

¹ The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

	<p>and the internal inspection undertaken during the BERS.</p> <p>Static detector analysis is included in Appendix 4.</p>		<ul style="list-style-type: none"> • The provision of a toolbox talk to contractors, by the Named Ecologist or an Accredited Agent, to inform them of the presence of bat roosts. • A pre-commencement inspection of any roost features by the Named Ecologist or an Accredited Agent using a torch and an endoscope (this may be via ladders, scaffolding or a mobile elevated platform). • The removal of bat roost features by hand under the supervision of the Named Ecologist or an Accredited Agent (where it is not possible conclude absence of bats during the pre-commencement inspection). • Avoiding the use of unnecessary lighting, particularly at night, or implementing a low impact lighting strategy to avoid illumination of retained or newly created roosts or roost features. • Avoiding excessive noise or vibration disturbance e.g. from power tools or radios, within close proximity of retained or newly created roosts or roost features. • Post-development monitoring in year 2 post development. This will include a single BERS plus a check of the condition and suitability of the replacement roost. 	
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1.0 Introduction and Context

1.1 Background

Arbtech Consulting Limited was instructed by Nick Smythe to undertake Bat Emergence and Re-entry Surveys (BERS) at Stileways, West Hill, Wraxall, North Somerset, BS48 1PH (hereafter referred to as “the site”). The survey was required to inform a planning application for the demolition of the garage (B1) and the construction of a new residential dwelling with associated parking and access (hereafter referred to as “the proposed development”). A plan showing the proposed development is provided in Appendix 1.

The aim of the BERS was to determine the presence or likely absence of roosting bats and to characterise any roosts present. This has been undertaken with due consideration to the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016).

The BERS have been informed by a Preliminary Ecological Appraisal (“PEA”; Clarkson & Woods, May 2023) which was completed by Clarkson and Woods Ecological Consultants on 14th March 2023. The PRA results (in relation to bats and birds) are summarised below in Table 1.

Table 1: Results of the PEA in relation to bats and birds (Clarkson & Woods, May 2023)

Feature	Foreseen impacts	Recommendations <i>Measures required to adhere to guidance, legislation and planning policies.</i>
Roosting bats – building B1	<p>The building was found to be a confirmed roost, with six droppings associated with lesser horseshoe bat[s] found inside the roof void. It was considered likely that the building is used by a single horseshoe bat as an occasional night roost.</p> <p>Horseshoe bats were thought to be accessing the building via a large gap in the brickwork on the northern aspect, which lead straight into the loft void. The roof void was accessible from an open doorway to the exterior and was well-lit with fluctuating internal conditions, reducing its suitability as a bat roost. There was unimpeded access between the loft void and the storage room below via an open loft hatch.</p>	

	<p>Features were also present that would provide habitat value to crevice-dwelling bats, namely missing/slipped Roman tiles and open ridge. However, the open ridge allowed access for water to run through the tiles and the felt below, and lichen and moss growth was evident, reducing the suitability of this building for crevice-dwelling bats.</p>	
<p>Foraging and commuting bats</p>	<p>The mature trees to the north and west of the garage likely provide a commuting corridor for bats within the local landscape and provide connectivity to the west and south of the Site. The Site is well connected to woodland parcels in the surrounding area which are of high quality for bats. The grassland and trees are likely to provide suitable foraging opportunities for bats commuting through the landscape, although they are relatively small in extent and only likely to form a part of a wider network of foraging and commuting habitat. As such foraging and commuting bats are considered to be of Site ecological importance within the Site</p>	<p>A pre-works check for nesting birds [is] recommended to be carried out no more than 48hrs prior to demolition of the building and vegetation clearance in order to ensure no nesting birds are disturbed (if works take place March – August inclusive). If any active nests are found to be present, the demolition works will need to be delayed until all young have fledged. [No trees will be removed to facilitate the development]</p>

1.2 Site Location and Landscape Context

The site is located at National Grid Reference ST 48247 72437 and has an area of approximately 0.1ha comprising of a single storey garage, located in the rear of the main house and a grassland field adjacent to the west of the garden. Six mature trees are located within the garden and adjacent field. It is surrounded by other large residential dwellings, arable fields and woodlands. To the south is the town of Nailsea and to the north is the M5 and the River Severn. A site location plan is provided in Appendix 2.

1.3 Scope of the Report

This report provides a description of the bat activity observed and recorded during the BERS and the static detector survey. The aim of the surveys was to determine the presence or likely absence of bats and to characterise any roosts present including species, number of individuals, number and location of roost access points, and to gain an understanding of how bats use the site. The report provides information on possible constraints to the proposed development as a result of bats and summarises the requirements for any mitigation proposals, including a European Protected Species Licence (EPSL), where appropriate, to achieve planning or other statutory consent and to comply with wildlife legislation.

To achieve this, the following steps have been taken:

- BERS of built structures has been undertaken to determine the presence or likely absence of bat roosts.

Bat Emergence and Re-entry Surveys

- A static detector survey has been undertaken to provide further evidence on the presence or likely absence of bat roosts.
- An outline of potential impacts on any confirmed or unidentified roosts has been provided, based on the proposed development.
- Recommendations for mitigation have been made, along with advice on the requirements for a European Protected Species Licence (EPSL) application if appropriate.
- Opportunities for the enhancement of the site for roosting, foraging and commuting bats have been set out.

2.0 Methodology

2.1 BERS

Three BERS, comprising of three dusk emergence and re-entry surveys, were undertaken of building B1. The PEA (Clarkson & Woods, May 2023) recommended that two dusk emergence or dawn re-entry surveys (BERS) are undertaken, along with a static detector survey. However, three BERS have been undertaken, in line with best practice guidelines, namely the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016). This is considered to augment, not limit, the strength of the survey effort and will ensure that sufficient information has been gathered to inform a European Protected Species Mitigation Licence (EPSML).

The surveys involved surveyors positioned around the building ensuring that all elevations and roof sections of the tree with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the building identified as providing suitable access points to bat roosts. Each surveyor was assigned an area of the building to observe for the duration of the survey.

Surveyors used heterodyne and frequency division bat detectors, and Echo Meter Touch detectors connected to iPads or Android tablets. Bat echolocation calls recorded during the surveys were analysed using Wildlife Acoustics sound analysis software Kaleidoscope V3.1.7 when required. The Echo Meter Touch includes an auto ID function for bat species, however this is not 100% accurate and further post-survey sound analysis is often required to confirm species that could not be identified by the auto ID software during the survey. Surveyors also used head torches, survey record sheets and pens/pencils for recording all activity observed during the surveys. Each surveyor was also provided with a handheld radio for communication between surveyors to assist with confirming ambiguous bat activity e.g. a bat emergence or a bat passing over the building.

One infrared recording kit was set up to monitor the building during the first and third BERS. This comprised Nightfox Red Goggles set up on a tripod with two separate infrared lamps on a second tripod to provide additional illumination. Analysis of the footage was subsequently undertaken to detect roosting activity.

Dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility.

Surveys were completed during optimal weather conditions i.e., when temperatures were above 10°C, with no rain or strong winds (greater than 5m/s), as these adverse weather conditions can impact upon bat emergence and foraging behaviour. Periods of high moon illuminance (>80%) were also avoided insofar as possible as this can reduce bat activity.

A Song Meter Mini static detector was left inside B1 for a total of seven nights between Friday 21st July and Friday 28th July. The static detector was placed in the loft void for the first five nights and was then moved to the storage building below for the following two nights, to help to gain a full picture of how bats are using the building.

2.2 Surveyors

The surveys were overseen by Nicole Gullan, Natural England Bat Licence Number 2022-10752_CL17_BAT. Two surveyors were used to cover building B1 for survey one and two and three surveyors were used to cover building B1 for Survey three. The name, bat licence details or level of bat survey experience and the designated position of each surveyor during each survey is detailed in the tables in Section 3.1 below and shown on the plan in Appendix 3.

2.3 Bat Roost Characterisation

When bat roosts are present, the bat surveys undertaken at a site facilitate the characterisation of the roost type. This allows for appropriate mitigation and compensation to be designed to inform a European Protected Species Licence (EPSL) application to Natural England.

The definitions of bat roost types are provided below, taken from the *Bat Mitigation Guidelines* (English Nature, 2004) and the Bat Conservation Trust (BCT) publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, 2016).

Day roost: a place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.

Night roost: a place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.

Feeding roost: a place where individual bats or a few individuals rest or feed during the night but are rarely present by day.

Transitional / occasional roost: used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.

Swarming site: where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites

Mating sites: sites where mating takes place from later summer and can continue through winter.

Maternity roost: where female bats give birth and raise their young to independence.

Hibernation roost: where bats may be found individually or together during winter. They have a constant cool temperature and high humidity. Sites where hibernating bats have been confirmed by appropriate survey effort should be classed as 'hibernation confirmed'.

Satellite roost: an alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Other: roost types are interchangeable and not always easy to classify according to the nuances of certain species.

2.4 Limitations

These surveys follow best practice guidance to confirm presence or likely absence of roosting bats and where present, characterise the roost. However, this information is collected at finite dates and times, and provides an indication of the conditions on site only. The use of the building and the site as a whole by bats, at all times cannot be established based on this information. Bats are highly mobile creatures that switch roosts regularly and therefore the usage of a site by bats can change over a short period of time.

- The PEA (Clarkson & Woods, May 2023) recommended that two dusk emergence or dawn re-entry surveys (BERS) are undertaken, along with a static detector survey. However, three BERS have been undertaken, in line with best practice guidelines, namely the “Bat Surveys for Professional Ecologists —Good Practice Guidelines” publication (Collins, 2016). This is considered to augment, not limit, the strength of the survey effort and will ensure that sufficient information has been gathered to inform a European Protected Species Mitigation Licence (EPSML).

3.0 Results and Evaluation

3.1 Survey Results

The results of each survey are provided in the tables below and shown on the plan in Appendix 3.

Table 1: Survey results (first visit)

Date		12/06/2023		
Start and end times		21:10 – 23:55 Sunset: 21:25		
Weather conditions		<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Start: Temp: 18°C Relative Humidity: 86% Cloud Cover: 50% Wind: 1 Rain: None Moon illuminance: 10% </td> <td style="width: 50%; vertical-align: top;"> End: Temp: 18°C Relative Humidity: 86% Cloud Cover: 70% Wind: 1 Rain: None Moon illuminance: 10% </td> </tr> </table>	Start: Temp: 18°C Relative Humidity: 86% Cloud Cover: 50% Wind: 1 Rain: None Moon illuminance: 10%	End: Temp: 18°C Relative Humidity: 86% Cloud Cover: 70% Wind: 1 Rain: None Moon illuminance: 10%
Start: Temp: 18°C Relative Humidity: 86% Cloud Cover: 50% Wind: 1 Rain: None Moon illuminance: 10%	End: Temp: 18°C Relative Humidity: 86% Cloud Cover: 70% Wind: 1 Rain: None Moon illuminance: 10%			
Surveyor (position) As shown in Appendix 3		Nicky Hunt: Three years' bat survey experience. Position 1: observing the southern and western elevations and roof structures of B1. Ezra Joy: Two years' bat survey experience. Position 2: observing the northern and eastern elevations and roof structures of B1.		
IR position As shown in Appendix 3		Position IR-1: observing the northern elevation and roof structure of B1		
Building reference	Surveyor position	Notes/observations:		
B1	1	No emergencies or re-entries observed. Near-constant common and soprano pipistrelle activity was heard, and occasionally seen, between 21:42 and 22:17. A distant pass by a myotis bat was heard (not seen) at 22:12. Distant passes by noctules were heard (not seen) at 22:17 and 22:23. Distant passes by brown long-eared bats were heard (not seen) at 22:29 and 22:46.		
B1	2	No emergencies or re-entries observed. Bat activity started at 22:00 with a common pipistrelle seen foraging in back of garden beyond B1. 3 noctules seen commuting well above the site N to S between 21:17 and 21:21 and 1 heard not seen at 22:34. Between 22:26 – 22:28 soprano pipistrelle heard not seen. Between 23:41 and 22:46 occasional brown long-eared bat activity heard not seen. Also had a very brief, faint lesser horseshoe call heard not seen at 22:48.		
Building reference	IR position	Notes/observations:		


B1	IR - 1	<p>No emergence or re-entries observed. Occasional commuting and foraging activity seen by pipistrelles (22:09, 22:22 and 22:46).</p>  <p><i>Photo 1: IR view at darkest point of survey</i></p>
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Table 2: Survey results (second visit)

Date		26/06/2023	
Start and end times		21:15 – 23:00 Sunset: 21:31	
Weather conditions		Start: Temp: 17°C Relative Humidity: 68% Cloud Cover: 90% Wind: 3 Rain: None Moon illuminance: 10%	End: Temp: 17°C Relative Humidity: 68% Cloud Cover: 95% Wind: 1 Rain: None Moon illuminance: 10%
Surveyor (position) As shown in Appendix 3		Alice Thorne: four years' bat survey experience. Position 1: observing the southern and western elevations and roof structures of B1. Ezra Joy: two years' bat survey experience. Position 2: observing the northern and eastern elevations and roof structures of B1.	
Building reference	Surveyor position	Notes/observations:	
B1	2	No emergencies or re-entries observed. Very quiet survey, one common pipistrelle observed over the field at 22:04. Five heard but not seen, by common pipistrelle and noctule.	
B1	3	No emergencies or re-entries observed. Very quiet survey, two common pipistrelle and one noctule heard not seen. Brown long eared seen commuting south to north at 22:51.	

Table 3: Survey results (third visit)

Date		20/07/2023		
Building inspection prior to survey		The roost features identified during the PRA were subject to an inspection prior to the BERS to check for evidence of roosting bats. An internal inspection of the loft void was also completed. Plenty of entry points into B1 were noted, with gaps between the roof and loft floor, and the northern elevation was completely open. The southern elevation had many gaps in the cladding. There were feeding remains found (moth wings) but no other evidence of roosting.		
Start and end times		21:01 – 23:01 Sunset: 22:52		
Weather conditions		<table border="0"> <tr> <td>Start: Temp: 16°C Relative Humidity: 50% Cloud Cover: 70% Wind: 5mph Rain: None</td> <td>End: Temp: 15°C Relative Humidity: 30% Cloud Cover: 72% Wind: 2mph Rain: None</td> </tr> </table>	Start: Temp: 16°C Relative Humidity: 50% Cloud Cover: 70% Wind: 5mph Rain: None	End: Temp: 15°C Relative Humidity: 30% Cloud Cover: 72% Wind: 2mph Rain: None
Start: Temp: 16°C Relative Humidity: 50% Cloud Cover: 70% Wind: 5mph Rain: None	End: Temp: 15°C Relative Humidity: 30% Cloud Cover: 72% Wind: 2mph Rain: None			
Surveyor (position) As shown in Appendix 3		Adora Thabdah: 10 years' bat survey experience, Accredited Agent to Natural England Bat Licence No. 2022-10752_CL17. Position 1: observing the southern and western elevations and roof structures of B1. Emily Hill: One year's bat survey experience. Position 2: observing the northern and eastern elevations and roof structures of B1. Assisted by Alexie Jenkins (one year's bat survey experience).		
IR position As shown in Appendix 3		Position IR-2: observing the western elevation and roof structure of B1.		
Building/Tre e reference	Surveyor position	Notes/observations:		
B1	1	No emergence or re-entries recorded. A common pipistrelle was first heard but not seen at 21:23 and last heard at 22:50. From 21:34 to 21:58 common and soprano pipistrelle were seen passing north to south and back to the trees on the northwest side of building B1. At 22:03 a barbastelle was heard but not seen and at 22:12 and 22:14 a brown long eared bat was heard but not seen. At 22:17 a Myotis was seen pass across the western elevation from the south and into the trees. At 22:30 a serotine was heard but not seen and at 22:34 a Leisler's bat was heard but not seen and a noctule was last heard at 22:42.		
B1	2	No emergence or re-entries recorded. A soprano pipistrelle was first heard at 21:24 and last heard at 22:03. It was observed flying across B1 east to west and then back at 22:32. Five common pipistrelles were heard, and one was seen flying along the north side of the building at 21:23. Two whiskered bats, two brown long eared bats, three serotine and one Leisler's bats were heard but not seen. Most of the bats were recorded to have been passing from west to east. Most of the bats were seen commuting over the site and not foraging in the garden. The last bat recorded but not seen was a brown long eared bat at 22:39.		
Building/tre e reference	IR position	Notes/observations:		

B1	3	<p>No emergence or re-entries recorded.</p>  <p>2023/07/20 22:52:47</p> <p><i>Photo 2: IR view at darkest point of survey</i></p>
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4.0 Conclusions, Impacts and Recommendations

Taking the field survey results into account, Table 4 presents an evaluation of the value of the buildings for roosting bats in relation to the proposed development which will comprise of the demolition of the garage (B1) and the construction of a new residential dwelling with associated parking and access.

Table 4: Evaluation of buildings on site for roosting bats

Building	Survey Results Summary	Impact Assessment	Recommendations	Biodiversity Enhancement Opportunities ²
Building B1	<p>The building was found to be a confirmed roost of lesser horseshoe bats (confirmed by DNA analysis) with six LHS droppings found inside the roof void during the PEA (Clarkson & Woods, May 2023).</p> <p>It was considered likely that the building is used by a single horseshoe bat as an occasional night roost.</p> <p>No further bat roosts were identified during the BERS.</p> <p>No additional bat droppings were present at the time of the static detector deployment/collection and the internal</p>	<p>The proposed demolition of B1 will destroy the occasional roost of one lesser horseshoe bat. Any bats present at the time of the works may be injured or killed.</p>	<p>An EPSL application to Natural England will be required to legally permit the proposed works. The EPSL application requires that surveys have been undertaken within the most recent active bat season (optimal May to August, suboptimal September). Planning permission must have been granted and all relevant wildlife-related conditions have been discharged prior to submission, where possible to do so.</p> <p>A Material Changes Check will be required within three months of the EPSL submission, if no survey work has been undertaken within that period.</p> <p>The EPSL will detail any mitigation and compensation measures that will be required for the proposed development to comply with the standing advice and will be designed to reduce any impacts to an acceptably low level so as to maintain (or enhance) the Favourable Conservation Status (FCS) of the local bat population.</p> <p>The EPSL will include the following measures:</p> <ul style="list-style-type: none"> • A standalone bat roost will need to be built to provide replacement roosting habitat for lesser horseshoe bats. Please see Appendix 7. This will need to be in place prior to any works commencing on site and will act as a receptor for any bats that are found during the works, as well as permanent post-development compensation. • The provision of a toolbox talk to contractors, by the Named Ecologist or an Accredited Agent, to inform them of the presence of bat roosts. 	<p>The installation of a small wildlife pond would provide additional foraging value for bats including lesser horseshoe bats, whose favoured food source is Nematocera (a suborder of flies including mosquitos, which lay eggs in and around wet habitats).</p>

² The Local Planning Authority has a duty to ask for enhancements under the NPPF (2021).

	<p>inspection undertaken during the BERS.</p> <p>Static detector analysis is included in Appendix 4.</p>		<ul style="list-style-type: none"> • A pre-commencement inspection of any roost features by the Named Ecologist or an Accredited Agent using a torch and an endoscope (this may be via ladders, scaffolding or a mobile elevated platform). • The removal of bat roost features by hand under the supervision of the Named Ecologist or an Accredited Agent (where it is not possible conclude absence of bats during the pre-commencement inspection). • Avoiding the use of unnecessary lighting, particularly at night, or implementing a low impact lighting strategy to avoid illumination of retained or newly created roosts or roost features. • Avoiding excessive noise or vibration disturbance e.g. from power tools or radios, within close proximity of retained or newly created roosts or roost features. • Post-development monitoring in year 2 post development. This will include a single BERS plus a check of the condition and suitability of the replacement roost. 	
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5.0 Bibliography

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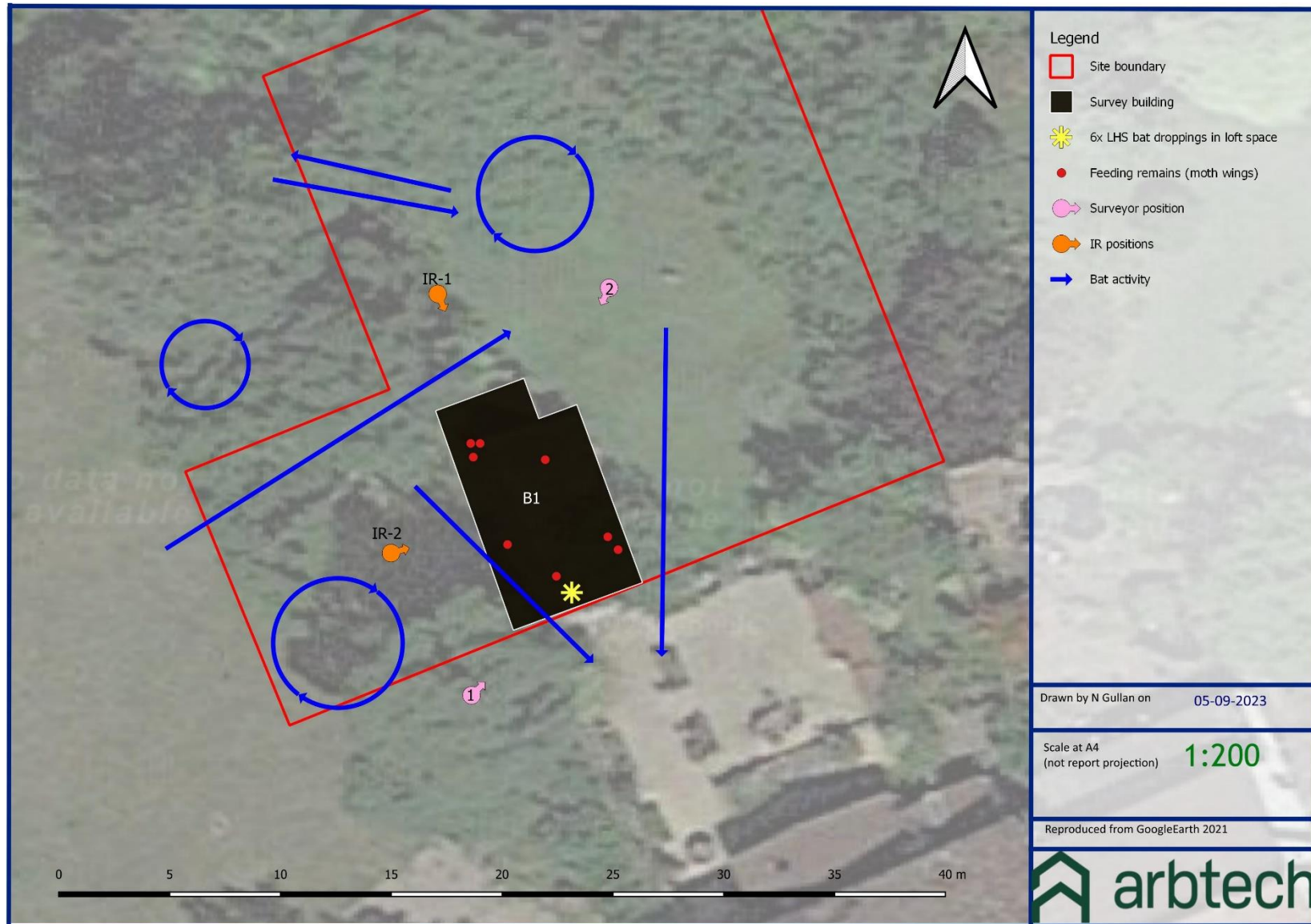
Appendix 1: Proposed Development Plan

None available at time of writing.

Appendix 2: Site Location Plan



Appendix 3: BERS Plan



Appendix 4: Static Detector Data

	20/07/23		21/07/23		22/07/23		23/07/23		24/07/23		25/07/23		26/07/23		
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	
SP		2	3	2	7	2	1	1	2		10	1	7	2	40
CP		2	3	1	26		4			1	1				38
My			1									2			3
N				1				2							3
BLE										1					1
<i>Subtotal</i>		4	7	4	33	2	5	3	2	2	12	1	7	2	
<i>Total</i>	4		11		35		8		4		13		9		84

A Song Meter Mini static detector was left inside B1 for a total of seven nights between Friday 21st July and Friday 28th July. The static detector was placed in the loft void for the first five nights and was then moved to the storage building below for the following two nights, to help to gain a full picture of how bats are using the building.

An analysis of the static detector data against the bat emergence survey data was undertaken. It is concluded that the recordings relate to external bat activity (commuting/foraging passes) as none of the above species were observed to emerge from, or re-enter the building during the BERS, either by surveyors, or by infrared cameras.

No lesser horseshoe activity was recorded either inside or outside the building by the static detector. It is concluded that B1 represents an occasional day roost of a single lesser horseshoe bat, as evidenced by the (six) bat droppings found during the PEA (Clarkson & Woods, May 203).

Appendix 5: Legislation and Planning Policy Related to Bats

LEGAL PROTECTION

All species of bat are fully protected under *The Conservation of Habitats and Species Regulations 2017* (as amended) through their inclusion on Schedule 2.

Regulation 43: Protection of certain wild animals - offences

(1) A person is guilty of an offence if they:

- (a) Deliberately captures, injures or kills any wild animal of a European protected species,
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal,

(2) For the purposes of paragraph (1) (b), disturbance of animals includes in particular any disturbance which is likely—

- (a) To impair their ability:
 - (i) To survive, to breed or reproduce, or to rear or nurture their young; or
 - (ii) In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- (b) To affect significantly the local distribution or abundance of the species to which they belong.

Bats are also protected under the *Wildlife and Countryside Act 1981* (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale

NATIONAL PLANNING POLICY

National Planning Policy Framework 2021

The National Planning Policy Framework promotes sustainable development. The Framework specifies the need for protection of designated sites and priority habitats and species. An emphasis is also made on the need for ecological infrastructure through protection, restoration and re-creation. The protection and recovery of priority species (considered likely to be those listed as species of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006) is also listed as a requirement of planning policy.

In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; measurable gains in biodiversity in and around developments are incorporated; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and the Biodiversity Duty

Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act requires the Secretary of State to publish a list of habitats and species which are of 'principal importance for the conservation of biodiversity'. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

LOCAL PLANNING POLICY

North Somerset Local Plan 2038 (2022)

The Local Plan 2038 can be viewed here: <https://n-somerset.gov.uk/my-services/planning-building-control/planning-policy/our-local-plan/local-plan-2039>

North Somerset Local Biodiversity Action Plan

The North Somerset Biodiversity Action Plan can be viewed here: https://n-somerset-pp.inconsult.uk/consult.ti/core_strat_pub_version/viewCompoundDoc?partid=687572

EFFECT OF LEGISLATION AND POLICY ON DEVELOPMENT WORKS

A European Protected Species Licence (EPSL) issued by Natural England will be required for works likely to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficiency/success to be monitored. The legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost (Garland & Markham, 2008).

There are 17 species of bat breeding in England and Natural England issues licences under Regulation 55 of the Habitats Regulations to allow you to work within the law.

Licences are issued for specific purposes stated in the Regulations, if the following three tests are met:

- The purpose of the work meets one of those listed in the Habitats Regulations (see below);
- That there is no satisfactory alternative;

- That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status (FCS) in their natural range

The Habitats Regulations permits licences to be issued for a specific set of purposes including:

- include preserving public health or public safety or other imperative reasons of over-riding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;
- scientific and educational purposes;
- ringing or marking; and,
- conserving wild animals.

Development works fall under the first purpose and Natural England issues bat mitigation licences for developments.

EUROPEAN PROTECTED SPECIES POLICIES

In December 2016 Natural England officially introduced the four licensing policies throughout England. The four policies seek to achieve better outcomes for European Protected Species (EPS) and reduce unnecessary costs, delays and uncertainty that can be inherent in the current standard EPS licensing system. The policies are summarised as follows:

- Policy 1; provides greater flexibility in exclusion and relocation activities, where there is investment in habitat provision;
- Policy 2; provides greater flexibility in the location of compensatory habitat;
- Policy 3; provides greater flexibility on exclusion measures where this will allow EPS to use temporary habitat; and,
- Policy 4; provides a reduced survey effort in circumstances where the impacts of development can be confidently predicted.

The four policies have been designed to have a net benefit for EPS by improving populations overall and not just protecting individuals within development sites. Most notably Natural England now recognises that the Habitats Regulations legal framework now applies to 'local populations' of EPS and not individuals/site populations.

Appendix 6: Bat DNA Analysis Results



Results

Sample ID: EG-1190-1

Sample information:

Sample type: Faecal	Species group: Bats
Suspected species: Brown long-eared	Site Location: BS48 1PH
Comments:	

Laboratory information:

DNA Extraction Code: EG-2023-1422	Identification method: qPCR
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Analysis Procedure Notes:

All UK bat species tested for - only a single species detected in this sample.

Laboratory Comments:

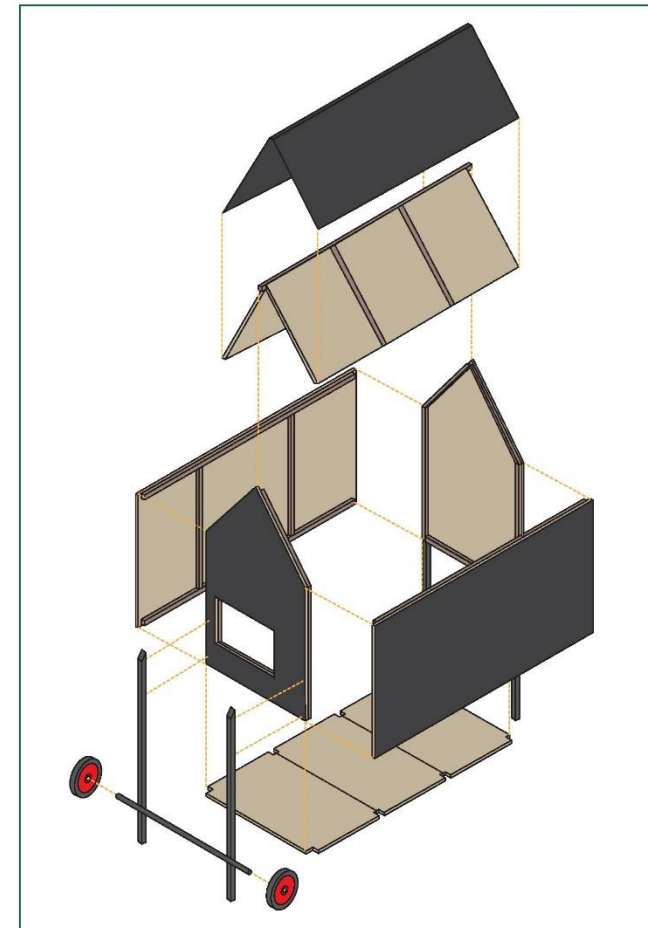
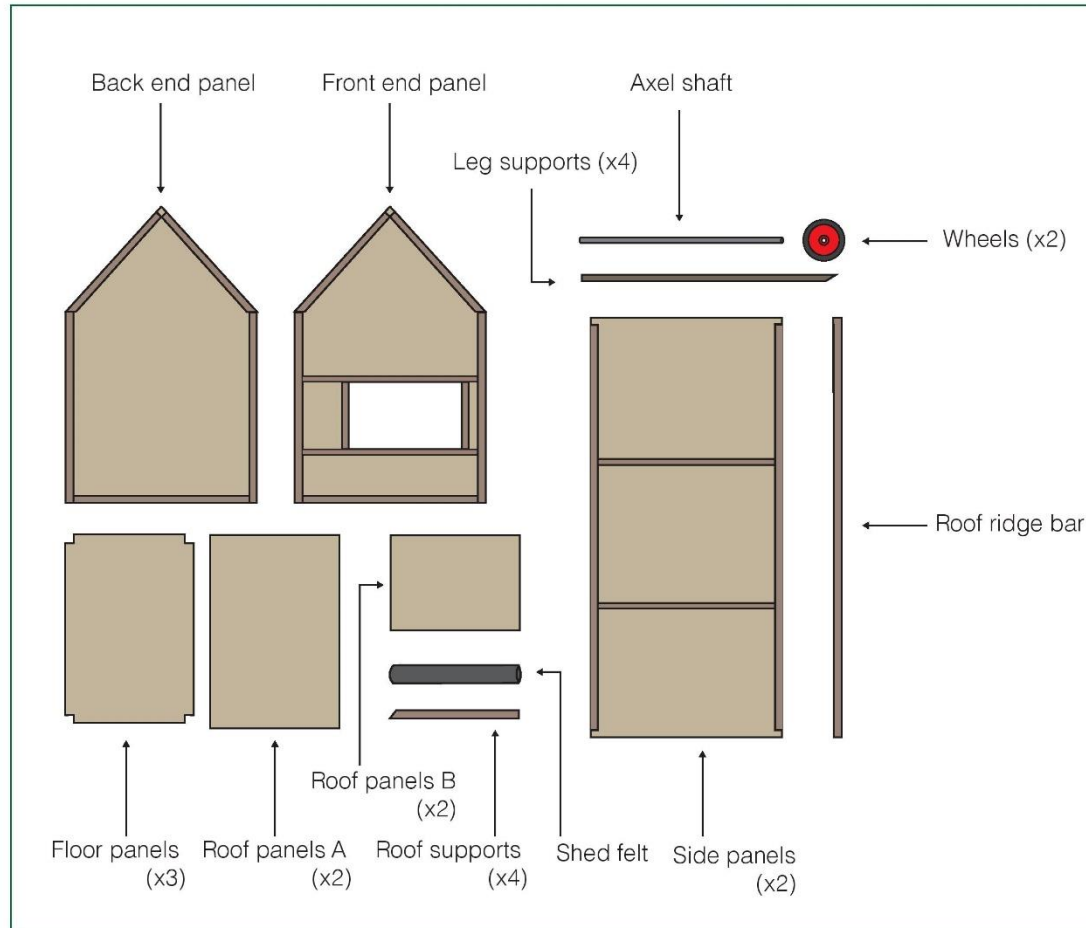
Brown long-eared bat suspected - tested for but not detected in this sample.

Species Identified:

Species 1: Rhinolophus hipposideros (Lesser horseshoe bat)	qPCR Ct Value: 23
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Appendix 7: Stand Alone Bat Roost Specification

Cathedine Night Roost Design



Cathedine Night Roost Design

