



Bat Emergence and Re-entry Surveys and Bat Activity Surveys

Great Birchwood Country Park Lytham Road, Lytham, Lancashire, PR4 1TE

Fylde Coast Care Village Ltd

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Executive summary

Arbtech were commissioned by Fylde Coast Care Village Ltd to undertake Bat Emergence and Re-entry Surveys at Buildings at Great Birchwood Country Park Lytham Road, Lytham, Lancashire, PR4 1TE. The surveys were completed on 24/05/2021, 25/05/2021 and 27/05/2021. The aim of the assessment was confirm the continued presence of bat roosts on site (previously identified during the 2017 surveys) and to provide a current status on all survey features. This includes providing evidence for species, numbers and levels of activity, to identify any entrance and egress points, and to gain an understanding of the activity of bats using the site in the local landscape.

Ref	Survey conclusions	Foreseen impacts	Recommendations / Mitigation
B10	B10 was found to contain a maternity roost of up to 64 common pipistrelle bats. This correlates with the previous 2017 surveys which also found the building to contain a maternity roost of common pipistrelles.	As the proposed development involves the demolition of B10 the bat roosts in will be destroyed. Any bats present during the works could be injured or killed.	A European Protected Species Mitigation Licence (EPSML) will be required from Natural England prior to the commencement of works, once planning has been granted.
B11	B11 was found to contain a day roost of a single common pipistrelle bat. This correlates with the previous 2017 surveys which also found the building to contain a day roost of common pipistrelles.	As the proposed development involves the demolition of B11 the bat roost in will be destroyed. Any bats present during the works could be injured or killed.	A European Protected Species Mitigation Licence (EPSML) will be required from Natural England prior to the commencement of works, once planning has been granted.
Bat activity across site	The main species present across the site was found to be common pipistrelles, with foraging recorded across the grassland along the western side of the site, along the woodland at the north-western corner of the site and along the tree lines towards the southern end of the site.	There is potential for the new development to result in the disturbance to the identified foraging areas due to an increase in light and disturbance.	A bat lighting plan will be required to ensure that bats can continue foraging across the developed site.

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1.0 Introduction and Context

1.1 Background

Arbtech were commissioned by Fylde Coast Care Village Ltd to undertake Bat Emergence and Re-entry Surveys at Buildings at Great Birchwood Country Park Lytham Road, Lytham, Lancashire, PR4 1TE. The surveys were completed on 24/05/2021, 25/05/2021 and 27/05/2021. The assessment is informed by the Bat Conservation Trust publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 2016).

Previous bat surveys have been carried out at this site including a Preliminary Roost Assessment (Arbtech 2016) and subsequent bat emergence/re-entry surveys (Arbtech 2017), which found a common pipistrelle maternity roost within B10 and a common pipistrelle day roost within B11.

1.2 Site Context

The site is located at National Grid Reference SD 39528 28237 and is approximately 11.8ha in area. Two buildings within the site boundaries were the subject of the surveys as these will be impacted by the proposed development and were previously known to contain bat roosts. A bat activity survey was also carried out across the entire site.

1.3 Scope of the report

This report provides a description of the bat activity observed and recorded during each survey. The aim of the assessment was to determine the continued presence of bats on site 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.

Robust data has been collected, following good practice guidelines, to inform an assessment of the potential impacts of the proposed development on bats, and inform mitigation and enhancements. This report provides information on constraints to the proposals as a result of roosting bats, and summarises any mitigation required to achieve planning permission, and statutory consent to comply with wildlife legislation.

To achieve the aims of the assessment, the following steps have been taken:

- A desk study has been carried out, including a request for information from the local bat group or records centre - please refer to the Preliminary Roost Assessment/ Survey report (Arbtech 2016)
- Field survey(s) has been undertaken, including an external survey and internal inspection.
- An outline of likely impacts on any known roosts has been provided, based on current development proposals.
- Recommendations for further survey and assessment have been made, along with advice on the requirements of a European Protected Species Mitigation Licence (EPSML) application if appropriate.

A survey plan is presented in Appendix 1 showing the location of each surveyor and the bat activity observed and recorded during each survey, proposed plans in Appendix 2 (where available), and a summary of relevant legislation is presented in Appendix 3.

1.4 Project Description

The development proposals are for the construction of a multi-plot residential housing scheme. A planning application is being prepared for submission to Fylde Borough Council.

2.0 Methodology

2.1 Desk Study methodology

The desk study included a 2km radius review of statutory and non-statutory designated sites, Biodiversity Action Plan (BAP) Priority Habitats and granted EPSML records for bats held on Magic database. An assessment of the surrounding landscape structure was also completed using aerial images from Google Earth and OS maps.

Existing bat records relating to the site and a surrounding 2km radius are required to conform to national guidelines. The data search is confidential information that is not suitable for public release and was analysed and summarised in the Preliminary Roost Assessment Survey report. Please refer to the Preliminary Roost Assessment Survey report (Arbtech 2016).

2.2 Site Survey methodology

The survey methods were informed by the recommendations presented in the Preliminary Roost Assessment Survey report (Arbtech 2016). This survey identified the following survey requirements in line with best practice:

Table 1: Recommended surveys

Ref	Survey assessment conclusions (with justification)	Recommendations
B10 Bats	Low. Access into the individual rooms via corrugated sections of the roof, gaps between the eastern wall and the roof and missing wooden wall panels. Potential roosting opportunity behind the warped wooden wall sections and missing wooden panels. Foraging and connectivity resource in the surrounding landscape.	As such, one further dusk emergence or dawn re-entrance survey is recommended to determine the presence/likely-absence of bats within the buildings/trees.
B11 Bats	Low. Potential roosting opportunity for crevice dwelling species within the wall cavities of the southern section of the building via the missing wooden panels and gaps between structure features. Large gap at the base of the roof of the western elevation providing access into the building. Foraging and connectivity resource in the surrounding landscape.	As such, one further dusk emergence or dawn re-entrance survey is recommended to determine the presence/likely-absence of bats within the buildings/trees.

The presence of bat roosts was confirmed in B10 and B11 during the subsequent dusk emergence and as such further surveys were carried to characterise the roost to inform the EPSML application, in accordance with the best practice guidelines (2016). The results of the bat emergence/re-entry surveys in 2017 are summarised in the table below:

Ref	Survey assessment conclusions (Type of bat roost present)	Foreseen impacts	Recommendations Mitigation /	Enhancements
				The Local Planning Authority has a duty to ask for enhancements under the NPPF and circular 06/2005: Biodiversity and Geological Conservation. Para.99

B10	Maternity Roost of Common pipistrelle	As the proposed development involves the demolition of B10 the bat roosts behind the weather boarding on the west elevation will be destroyed. Any bats present during the works could be injured or killed including females with dependent young.	EPSML will be required once planning has been granted.	The mitigation/compensation detailed for the EPSML provides sufficient enhancements of the developed site for bats.
B11	Day roost of common pipistrelle	As the proposed development involves the demolition of B11 the bat roosts behind the weather boarding on the west elevation will be destroyed. Any bats present during the works could be injured or killed.	EPSML will be required once planning has been granted.	The mitigation/compensation detailed for the EPSML provides sufficient enhancements of the developed site for bats.

Due to the lapse in time between the 2017 surveys and now, updated surveys were carried out in order to inform the EPLML application.

The surveys involved surveyors positioned around the buildings ensuring that all elevations and roof sections with suitable roosting features could be clearly observed. Particular attention was paid to the areas of the buildings identified as providing suitable access points to bat roosts. The location of each surveyor during each survey is shown in Appendix 1. Each surveyor was assigned an area of the buildings to observe for the duration of the survey. Surveyors used heterodyne and frequency division bat detectors, and Wildlife Acoustics EM3+ and Echo Meter Touch detectors connected to iPads. 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 hand held radio for communication between surveyors to assist with confirming ambiguous bat activity e.g. a bat emergence or a bat passing over the building.

In accordance with the latest bat survey guidelines (Collins, J. 2016) dusk emergence surveys commenced 15 minutes before sunset and continued for 1½ - 2 hours after sunset – depending upon bat activity and surveyor visibility. Dawn re-entry surveys commenced 2 hours before sunrise and continued until 15 minutes after sunrise.

Surveys were completed during optimal weather conditions i.e. when temperatures were above 10°C, with no rain or strong winds, as these adverse weather conditions can impact upon bat emergence and foraging behaviour.

2.3 Surveyors

The lead surveyor is Mel Reid (Natural England Bat Licence Number: 2019-43774-CLS-CLS) and was assisted by experienced surveyors with several years of bat survey experience. Eight surveyors in total were used to provide sufficient cover of the buildings during each survey and to cover the site over set transects for the activity survey. 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 1.

2.4 Limitations

These surveys follow best practice guidance to confirm presence/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 buildings and the site as a whole by bats, at all times cannot be established based on this information. There were no specific limitations to the survey.

3.0 Results and Evaluation

3.1 Survey Results

The results of each survey are provided in the tables below.

Table 2: Survey results

Date		24/05/2021		
Start and End Times		21:00 – 22:55 Sunset: 21:21		
Weather Conditions		<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> Start: Temp: 11°C Relative Humidity: 77% Cloud Cover: 10% Wind: 11mph Rain: None </td> <td style="width: 50%; vertical-align: top;"> End: Temp: 11°C Relative Humidity: 82% Cloud Cover: 90% Wind: 10mph Rain: None </td> </tr> </table>	Start: Temp: 11°C Relative Humidity: 77% Cloud Cover: 10% Wind: 11mph Rain: None	End: Temp: 11°C Relative Humidity: 82% Cloud Cover: 90% Wind: 10mph Rain: None
Start: Temp: 11°C Relative Humidity: 77% Cloud Cover: 10% Wind: 11mph Rain: None	End: Temp: 11°C Relative Humidity: 82% Cloud Cover: 90% Wind: 10mph Rain: None			
Surveyor (position) As shown in Appendix 1		Mel Reid - Natural England Bat Licence Number: 2019-43774-CLS-CLS (Position 1 – observing the northern and eastern elevations and roof structure of B11) Jonathon Roberts – Several years’ experience conducting bat surveys (Position 2 – observing the southern and eastern elevations and roof structure of B11) Katie Swift – Class 2 licenced bat surveyor (Position 3 – observing the northern and western elevations and roof structure of B11) Anthony Carr - Several years’ experience conducting bat surveys (Position 4 – observing the southern and western elevations and roof structure of B11)		
Building Reference	Surveyor Position	Notes/observations:		
B11	1	<p><i>No bats were seen emerging or re-entering during the survey.</i></p> <p>The first bat activity recorded was a pass by common pipistrelle at 21:35 seen flying south to north past the eastern elevation of B11. Further passes in this area were recorded during the survey, with foraging activity observed in the scattered trees to the east of B11 starting at 21:51 and heard until the end of the survey. A distant pass by a brown long-eared bat was recorded at 22:16 which was heard and not seen.</p>		
B11	2	<p><i>No bats were seen emerging or re-entering during the survey.</i></p> <p>The first bat activity recorded was distant feeding by a common pipistrelle at 22:00, which was heard on the detector but not seen. Constant foraging activity was heard but not seen until the end of the survey.</p>		
B11	3	<p><i>The first bat activity recorded was an emergence by a common pipistrelle at 21:29, which was seen emerging from a small gap between two separate sections of the building (see photo below).</i></p>		



			
<p>B11</p>	<p>4</p>	<p>Common pipistrelle activity was recorded for the duration of the survey including commuting over the roof of B11, along the western side of the building and some unseen activity which was recorded on the detector only. A noctule pass was recorded at 22:08 which was heard on the detector but not seen.</p> <p>No bats were seen emerging or re-entering during the survey.</p>	<p>The first bat activity recorded was a distant pass by a common pipistrelle at 21:34 which was heard on the detector but not seen. Constant common pipistrelle activity was recorded for the duration of the survey including commuting passes around and along the building and foraging over the grassland area to the west of B11. A distant noctule pass was recorded at 22:08 which was heard on the detector but not seen.</p>

Table 3: Survey results

Date		25/05/2021		
Start and End Times		21:00 – 22:50 Sunset: 21:22		
Weather Conditions		<table border="0"> <tr> <td style="vertical-align: top;"> Start: Temp: 11°C Relative Humidity: 84% Cloud Cover: 40% Wind: 11mph Rain: None </td> <td style="vertical-align: top;"> End: Temp: 11°C Relative Humidity: 83% Cloud Cover: 90% Wind: 10mph Rain: None (very light drizzle between 22:00 and 22:07) </td> </tr> </table>	Start: Temp: 11°C Relative Humidity: 84% Cloud Cover: 40% Wind: 11mph Rain: None	End: Temp: 11°C Relative Humidity: 83% Cloud Cover: 90% Wind: 10mph Rain: None (very light drizzle between 22:00 and 22:07)
Start: Temp: 11°C Relative Humidity: 84% Cloud Cover: 40% Wind: 11mph Rain: None	End: Temp: 11°C Relative Humidity: 83% Cloud Cover: 90% Wind: 10mph Rain: None (very light drizzle between 22:00 and 22:07)			
Surveyor (position) As shown in Appendix 1		Mel Reid - Natural England Bat Licence Number: 2019-43774-CLS-CLS (Position 1 – observing the northern and eastern elevations and roof structure of B11) Jonathon Roberts – Several years’ experience conducting bat surveys (Position 2 – observing the southern and eastern elevations and roof structure of B11) Katie Swift – Class 2 licenced bat surveyor (Position 3 – observing the northern and western elevations and roof structure of B11)		
Building Reference	Surveyor Position	Notes/observations:		
B10	1	<i>The first bat activity recorded was an emergence by a common pipistrelle from behind the weather boarding on the western elevation of the building at the southern end (see photo below). A further 36 common pipistrelle bats were seen emerging from behind this weather boarding. There were multiple gaps behind the boards which the bats were emerging but were all in the same general area of the building. Most of the bats emerging from the weather boarding flew away to the south or west.</i>		

			
B10	2	<p>The last common pipistrelle emergence was seen at 21:56. Following the emergences constant common pipistrelle commuting and foraging was recorded over the grassland area to the west of B10 for the duration of the survey. A distant noctule pass was recorded at 22:35 which was heard on the detector but not seen.</p> <p>The first bat activity recorded was a distant pass by a common pipistrelle at 21:38 which was heard on the detector but not seen.</p> <p><i>Four common pipistrelles were seen emerging from B10 at 21:40 from roof verge on the northern elevation of B10 (see photo below), one of which foraged around the northern elevation for a few minutes then flew off, with the other flying away to the west immediately after emerging.</i></p>	



A further two common pipistrelle emergences were recorded at 21:44 and 21:50, seen emerging from under the over-hanging roof on the eastern elevation of B10 (see photo below).



Constant common pipistrelle commuting and foraging activity was heard on the detector and occasionally seen for the duration of the survey.


B10	3	<p><i>The first bat activity was a common pipistrelle emergence at 21:18, seen emerging from behind the weather boarding on the southern elevation of B10 (see photo below). A further 23 common pipistrelles were seen emerging from this area between 21:18 and 22:17. Approximately 8 bats were also seen re-entering the roost during the survey. Swarming behavior around the roost was also recorded.</i></p>  <p>Constant common pipistrelle commuting and foraging was recorded to the south and west of B10 for the duration of the survey.</p>
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Table 4: Survey results

Date	27/05/2021	
Start and End Times	21:10 – 22:46 Sunset: 21:24	
Weather Conditions	Start: Temp: 13.5°C Relative Humidity: 75% Cloud Cover: 0% Wind: 4.6mph Rain: None	End: Temp: 12.5°C Relative Humidity: 78% Cloud Cover: 100% Wind: 2mph Rain: None
Surveyor (position) As shown in Appendix 1	Farhat Ramzan - Several years' experience conducting bat surveys (Walking along transect 1) Anthony Carr - Several years' experience conducting bat surveys (Walking along transect 2)	
Transect Reference	Notes/observations:	
1	<p><i>Transect 1 was along the western side of the building, running north to south covering the marshy grassland and woodland areas of the site.</i></p> <p>The first bat activity recorded was a distant pass by a noctule at 21:42 which was heard on the detector but not seen. A further noctule pass was recorded at 22:34, which was also only heard on the detector.</p> <p>The common pipistrelle activity started at 21:44 with a pass heard on the detector only. Constant common pipistrelle activity was recorded and seen from this point until the end of the survey with foraging and swarming activity observed around B10 and B11, along the woodland edge at the north-western corner of the site, multiple passes east to west and vice versa across the grassland area to the west of the site and also across the ponds towards to centre of the site. No other species of bat were detected during the survey.</p>	
2	<p><i>Transect 2 was along the southern and eastern side of the site.</i></p> <p>The activity recorded was common pipistrelle foraging along the trees at the southern end of the site. Common pipistrelle foraging activity was recorded in this area and also in the trees towards the centre of the site for the duration of the survey. No other species of bat were detected during the survey.</p>	

4.0 Conclusions, Impacts and Recommendations

4.1 Informative guidelines

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 Mitigation Licence (EPSML) 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 publication *Bat Surveys for Professional Ecologists – Good Practice Guidelines* (Collins, J. (Ed) 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.

The surveys undertaken to date in and around B10 and B11 provide sufficient information to inform a European Protected Species Mitigation Licence (EPSML). An EPSML **will be required** to enable the proposed works to be lawfully undertaken, whilst ensuring the favourable conservation status of the species concerned in their natural range; detailed mitigation will be described in the EPSML Method Statement. Appropriate justification for this assessment is provided in Section 3 of this report.

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:

1. ***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;***
2. scientific and educational purposes,
3. ringing or marking
4. conserving wild animals

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

4.2 Evaluation

The following recommendations are provided taking the desk based assessment and site survey results into account.

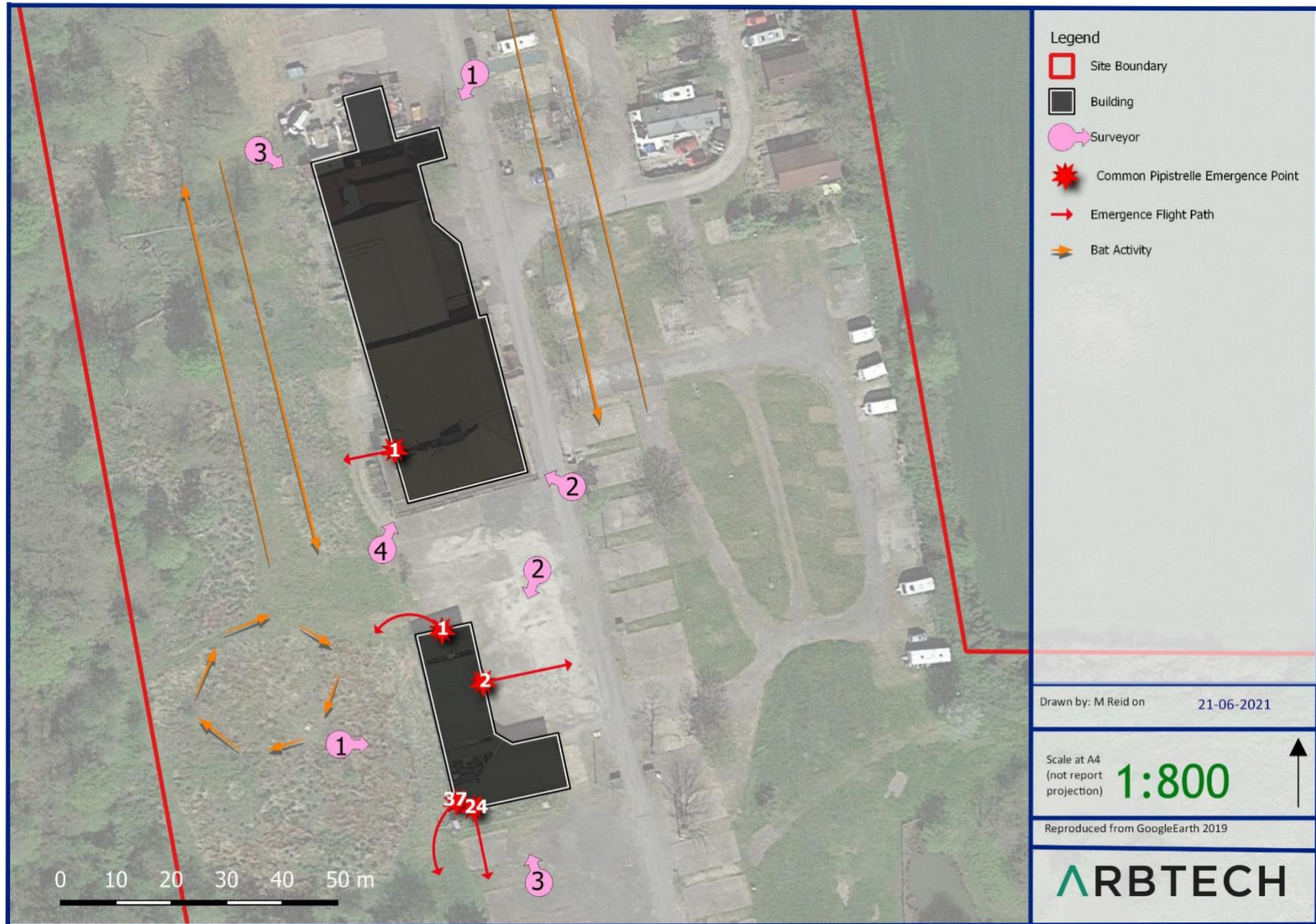
Table 5: Evaluation of buildings on site

Ref	Survey conclusions	Foreseen impacts	Recommendations / Mitigation	Enhancements The Local Planning Authority has a duty to ask for enhancements under the NPPF (July 2018)
B10	B10 was found to contain a maternity roost of up to 64 common pipistrelle bats. This correlates with the previous 2017 surveys which also found the building to contain a maternity roost of common pipistrelles.	As the proposed development involves the demolition of B10 the bat roosts in will be destroyed. Any bats present during the works could be injured or killed.	A European Protected Species Mitigation Licence (EPSML) will be required from Natural England prior to the commencement of works, once planning has been granted.	The mitigation/compensation detailed for the EPSML will provide sufficient enhancements of the developed site for bats.
B11	B11 was found to contain a day roost of a single common pipistrelle bat. This correlates with the previous 2017 surveys which also found the building to contain a day roost of common pipistrelles.	As the proposed development involves the demolition of B11 the bat roost in will be destroyed. Any bats present during the works could be injured or killed.	A European Protected Species Mitigation Licence (EPSML) will be required from Natural England prior to the commencement of works, once planning has been granted.	The mitigation/compensation detailed for the EPSML will provide sufficient enhancements of the developed site for bats.
Bat activity across site	The main species present across the site was found to be common pipistrelles, with foraging recorded across the grassland along the western side of the site, along the woodland at the north-western corner of the site and along the tree lines towards the southern end of the site.	There is potential for the new development to result in the disturbance to the identified foraging areas due to an increase in light and disturbance.	A bat lighting plan will be required to ensure that bats can continue foraging across the developed site.	None applicable.

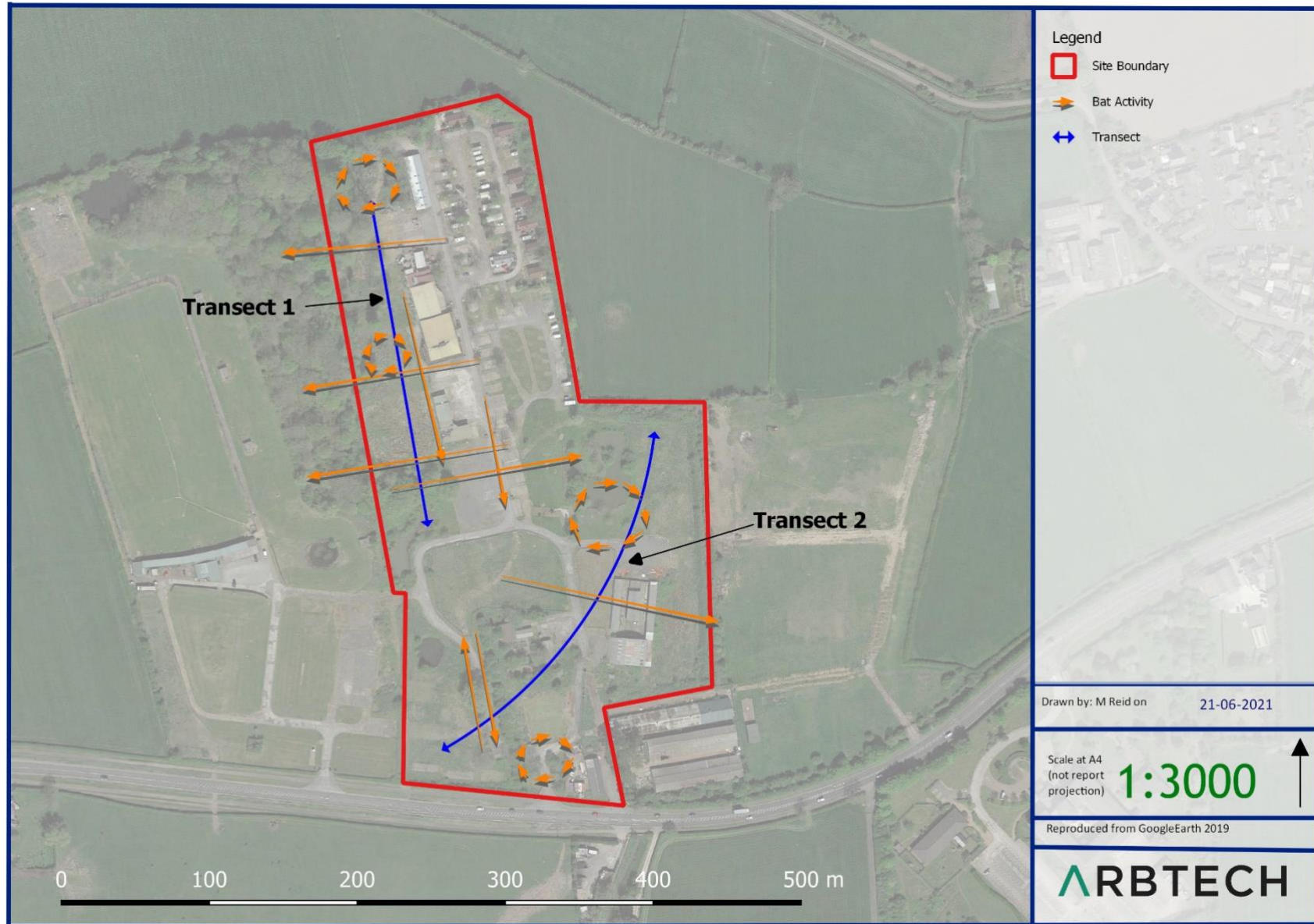
5.0 Bibliography

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- Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected?
- Google Earth (2021) accessed on 21/06/2021.
- Magic database (2021) <http://www.magic.gov.uk/MagicMap.aspx> accessed on 21/06/2021.
- Mitchell-Jones, A.J. (2004). Bat Mitigation Guidelines. English Nature, Peterborough.

Appendix 1: Survey Plan (Bat Emergence Survey)



Appendix 2: Survey Plan (Bat Activity Survey)



Appendix 3: Proposed Site Plan

None provided

Appendix 4: Legislation and Planning Policy related to bats

LEGAL PROTECTION

New legislation (2020)

The ***Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*** came into force when Britain left the European Union on 31st January 2020. It covered amendments relevant to this survey to:

Wildlife and Countryside Act 1981: England and Wales (x1 amendment)

Conservation of Habitats and Species Regulations 2017 (x29 amendments)

All species of bat are fully protected under ***The Conservation of Habitats and Species Regulations 2017*** (amended by the ***Conservation of Habitats and Species Regulations (amendment) (EU Exit) Regulations 2019*** which continue the same provision for European protected species, licensing requirements and protected sites after the UK leaves the EU) 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 01.04.1996)*** 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 (ENGLAND)

National Planning Policy Framework 2019

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 UK Biodiversity Action Plan priority species) 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; opportunities to incorporate biodiversity in and around developments are encouraged; 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.

Effect on development works:

A European Protected Species Mitigation (EPSM) Licence 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
- conserving wild animals

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