# Adonis Ecology

A Preliminary Bat Roost Assessment and Nocturnal Bat Survey of 1 Bridges Cottages, Darmsden to support a Planning Application

Project Ref: 1708

Prepared on behalf of:

Mr Roger Southgate 1 Bridges Cottages Darmsden Needham Market IP6 8RA

By:



Unit 11 Lavenham Studios Brent Eleigh Road Lavenham, Sudbury Suffolk, CO10 9PE Tel: 01787 249 160 E-mail: askus@adonisecology.co.uk www.adonisecology.co.uk

Registered in England and Wales No: 6208092 Registered Office: Crane Court, 302 London Road, Ipswich, IP2 0AJ.

# **Quality Assurance**

#### Copyright © Adonis Ecology Ltd.

The findings outlined within this report and the data we have provided are to our knowledge true and express our bona fide professional opinions. This report has been prepared and provided in accordance with the Chartered Institute for Ecology and Environmental Management (CIEEM) Code of Professional Conduct and the British Standard BS 42020:2013 which provides a code of practice for biodiversity in planning and development (BSI, 2013).

No method of assessment can completely remove the possibility of obtaining partially imprecise or incomplete information. Therefore, we cannot guarantee that this assessment completely defines the degree or extent of the occurrence of various species or habitats on the site, or the effectiveness of recommended actions as described in the report. In addition, as the ecological situation of a site is dynamic, this assessment pertains only to the conditions noted during the site visit. Therefore, to achieve the objectives of assessment as stated in this report, the conclusions are based on the information that was available during the time of the assessment and within the limits prescribed by our client in the agreement.

	Name	Signature		
Report prepared by:	Stephen Winser BSc (Hons)	S. on		
Report checked by:	Richard Sands MA (Oxon) MSc CEnv MCIEEM			
Surveys conducted by:	Richard Sands and Stephen Winser. Details of relevant training and experience available on request.			
Date of surveys:	18 <sup>th</sup> and 24 <sup>th</sup> of August 2022			

# Contents

0 1		MMARY	
	1.1	Background	
2	ME	THODOLOGY	4
	2.1	Desk Study	4
	2.2 2.3	Preliminary Roost Assessment Nocturnal Bat Survey	
3	-	SULTS.	
-	3.1 3.2 3.3	Site Location and Surroundings Preliminary Roost Assessment and Likelihood of Bat Roosts Occurring Nocturnal Bat Surveys	8 9
4	IM	PACT RISK ASSESSMENT	.12
	4.1 4.2	Summary of Relevant Legislation Impact Risk Assessment	
5	RE	COMMENDATIONS	.13
	5.1	Actions for Compliance with Wildlife Legislation	13
6 7 8	RE	NCLUSION FERENCES PENDICES	.14
	8.1 8.2	Appendix 1: Figures Appendix 2: Photographs	

# Figure and Photographs

Figure 1: Site Plan of Buildings at 7	1 Bridges Cottages, Darmsden	15
i igare ii eite i ian ei Dananige at	- Briagoo Conagoo, Barroadon mana	

Photograph 1: Building 2 Utility room16
Photograph 2: Building 3 Gym16
Photograph 3: Building 4 Double garage17

# Tables

Table 1: Weather Conditions and Timings of Nocturnal Bat Survey of buildings at 1 Bridges Con Darmsden	
Table 2: Key Features of the Site Surroundings	-
Table 3: Key findings for calculated likelihood of bat roosts occurring in Buildings 1,2,3 and 4	10
Table 4: Summary of Nocturnal Survey Results for All Surveyors 24th August 2022	11

# 0 SUMMARY

- 0.1 Adonis Ecology Ltd. was commissioned by Mr Roger Southgate to undertake a Preliminary Roost Assessment (PRA) and nocturnal survey of the buildings proposed for works at 1 Bridges Cottages, Darmsden, Needham Market, Suffolk, IP6 8RA (grid reference TM 092 527). The bat assessment is required to support a planning application to assess the current potential for impact on bats as a protected species and provide a strategy to ensure compliance with wildlife legislation and associated planning requirements.
- 0.2 The preliminary roost assessment was carried out by a licensed bat surveyor from Adonis Ecology on the 18<sup>th</sup> of August 2022 and included checking all potential external and internal crevices as far as possible with a torch.
- 0.3 The buildings were generally well-sealed and very light with limited potential access for bats and the risk of the proposed works impacting bats in the voids of these buildings was considered low. However, some lifted tiles were considered to provide potential bat roosts. It was not possible to get close enough to every tile at the time of survey to check under each individual tile.
- 0.4 Taking the nature and extent of the proposed works into account, the risk of impact on bats from the proposed works based on the Preliminary Roost Assessment alone was considered to be low.
- 0.5 Given the low risk of impact on bats, in line with Bat Conservation Trust guidelines, a nocturnal bat survey was conducted on the 24<sup>th</sup> of August 2022 and consisted of a dusk emergence survey assisted by a night vision camera and thermal imaging camera. No bats were seen to emerge from the building.
- 0.6 Given the lack of bats emerging, the proposed works were considered to present a negligible risk of impact on bats. It was considered that works could proceed in compliance with bat-related wildlife legislation with minimal risk of harm to bats, bat roosts or the local bat population.

# 1 INTRODUCTION

#### 1.1 Background

1.1.1 Adonis Ecology Ltd. was commissioned by Mr Roger Southgate to undertake a Preliminary Roost Assessment and nocturnal bat survey of the buildings proposed for works at 1 Bridges Cottages, Darmsden, Needham Market, Suffolk, IP6 8RA (grid reference TM 092 527).

#### Development Description

- 1.1.2 It is understood that it is proposed to carry out conversion of the buildings shown in Figure 1 in Appendix 1. The plans and information used to determine the boundaries and proposed buildings to be altered and extended were contained in the site drawing document dated September 2021 produced by TMA Tim Moll Architecture.
- 1.1.3 The site consisted of a small group of buildings which at present have four separate voids. It is understood that the proposed works are alterations and extensions of these buildings.
- 1.1.4 It was further understood that the Local Planning Authority (LPA) are likely to require the results of the bat survey to accompany the planning application for the site.

#### Aim and Objectives

- 1.1.5 The aim of this report is to determine the risk of impact of the proposed works on bats, taking into account the numbers and type of roosts potentially present, the likelihood of such roosts being present, and the degree of hazard presented by the proposed works. The need and potential for impact avoidance, mitigation and enhancement are then determined as appropriate based on the impact risk assessment.
- 1.1.6 To achieve this aim, the report has the following objectives:
  - to identify and describe potentially significant impact risks to bats relevant to planning and legislation that is associated with the proposed works;
  - to identify ways in which any significant risk of deleterious impacts could be avoided, wherever reasonably possible;
  - for any significant impact risks to bats that could not reasonably be avoided, to describe the risk outstanding, and actions required.

### 2 METHODOLOGY

#### 2.1 Desk Study

2.1.1 The surrounding habitat was assessed using a combination of maps (Google Earth, 2022, MAGIC, 2022 and Promap, 2022) and observations of the surrounding landscape from the site, to enable the site to be put into its local habitat context and

identify any statutory wildlife sites where bats are a reason for designation and could be affected by the proposed activity.

#### 2.2 Preliminary Roost Assessment

#### Survey method

- 2.2.1 The site visit was undertaken on the 18<sup>th</sup> of August 2022 by an ecologist who is covered by a Natural England Level 2 Class licence for bats (2015-11578-CLS-CLS).
- 2.2.2 The bat assessment methods followed Natural England Bat Mitigation Guidelines (Natural England, 2004) and Bat Conservation Trust (BCT) Good Practice Guidelines (Collins, 2016) and therefore considerations were:
  - the availability of access points of a size large enough to allow entry of bats to roosts;
  - the presence and suitability as roosts of cracks, crevices, holes, dense ivy *Hedera helix* covering and other places;
  - signs of bat activity or presence.
- 2.2.3 Definite signs of bat activity were taken to be:
  - the bats themselves;
  - droppings;
  - dead bats;
  - audible bat squeaks;
  - scratch marks;
  - urine splatter.
- 2.2.4 Signs of possible bat presence were taken to be:
  - grease marks;
  - moth and butterfly wings.
- 2.2.5 The outsides of the buildings were checked for gaps, cavities, access points and crevices, and any signs of bats, in accordance with Natural England guidelines (Natural England, 2004).
- 2.2.6 The insides of the buildings were then checked as accessed allowed for signs and evidence of bat activity and opportunities for roosts.
- 2.2.7 As many crevices internally and externally as could be safely accessed were checked for suitability and signs of bats.
- 2.2.8 The suitability of places to roost was assessed based upon factors such as:

- size;
- illumination;
- access (clutter and cobwebs);
- materials (including presence of breathable membrane).
- 2.2.9 The locations of bat signs and potential roost access points were noted.
- 2.2.10 Internal access to all buildings (Buildings 1,2,3 and 4 in Figure 1 in Appendix 1) was available with no constraints to survey.
- 2.2.11 Building inspection survey is a suitable method at any time of year for determining presence or absence of bats in buildings, according to Natural England guidelines (Natural England, 2004).

#### Evaluation and Risk Assessment Method

- 2.2.12 Where roosting bats themselves were not found, to determine whether bat roosts were likely to be present within the buildings in as objective, transparent and evidence-based a way as possible in accordance with BS 42020, and while complying with Bat Conservation Trust good practice guidelines (Collins, 2016), a semiquantitative risk assessment calculation has been undertaken. This is obtained by multiplying the following:
  - The probability of a bat roost occurring, based on a calculated estimate, modified by the ecologist as required to account for factors on site not included in the calculation;
  - The severity of hazard presented in terms of equivalent loss per bat;
  - The numbers of bats potentially affected, in terms of whether a small roost (up to five bats) or major roost (up to 50 bats) is reasonably likely the calculation uses the figure for a major rather than a minor roost where a major roost is considered to have a low or more likelihood of occurring.
- 2.2.13 The output of the semi-quantitative risk assessment is therefore the number of bats expected to on average be lost given the nature of the proposals and potential for roosting bats.
- 2.2.14 The calculation for the probability of a bat roost occurring was initially developed by Adonis Ecology in 2015 using information on features known from published research to influence bat roost occurrence in buildings. This information was used to calculate the probability of major/maternity roosts or minor roosts of both crevice and void dwelling species occurring in buildings. Bats were divided into crevice dwelling (e.g. pipistrelle *Pipistrellus* spp. bats) and void dwelling species (e.g. brown long-eared *Plecotus auritus* and Natterer's *Myotis nattereri* bats) to reflect the expected main separation between bat species in their roost preferences.
- 2.2.15 Features used in the calculation included within site variables, such as potential roosting opportunities and the presence or absence of bat signs, as well as off-site

variables such as the abundance and availability of foraging habitat, habitat connections, the level of urbanisation around the site and the distance of the site to water. The probability level at which each feature may influence the likelihood of a bat roost occurring had been determined using 67 bat surveys of buildings carried out in England and Wales by Adonis Ecology in accordance with Bat Conservation Trust guidelines (Hundt, 2012), where the presence or absence of a bat roost had been proven beyond reasonable doubt.

2.2.16 In 2021 the bat roost probability calculations were reviewed and checked against the findings of 71 bat surveys of buildings undertaken since 2015 in accordance with Bat Conservation Trust guidelines (Hundt, 2012 and/or Collins, 2016), comparing the predicted proportion of roosts occurring for each risk level (negligible, very low, low, moderate, high) obtained from the bat roost probability calculations against the actual proportion of roosts confirmed by survey for each risk level. There was a good agreement (no statistically significant difference detected) between predicted and actual proportion of roosts confirmed for each risk level apart from for "high", where the predicted was lower than the actual proportion encountered (this would not have affected any survey recommendations, as the predicted values were high enough to trigger surveys for proposals that would be hazardous to bats). The calculation was then modified to provide a better fit to the actual proportion of roosts observed. The most significant modification was to no longer include distance to water in the calculation, as neither the original 67 or further 71 sites surveyed provided evidence of any clear pattern of roost occurrence based on distance from water. All other variable used in the calculations were found from the sites surveyed to show clear trends with regard to roost occurrence.

#### 2.3 Nocturnal Bat Survey

- 2.3.1 In line with Natural England (Natural England, 2004) and Bat Conservation Trust (BCT) Good Practice Guidelines (Collins, 2016), a nocturnal survey of the site was conducted. The survey was completed in line with the same guidance documents. The nocturnal bat survey consisted of a single dusk emergence survey completed on the 24<sup>th</sup> of August 2022.
- 2.3.2 Two surveyors were used during the survey. The location of surveyors during the survey can be found in Figure 1 in Appendix 1. The surveyors were as follows:
  - Surveyor Location 1 Richard Sands, Principal Ecologist at Adonis Ecology Ltd and holder of a Natural England Level 2 Class licence for bats (2015-11578-CLS-CLS), was located just to the south-east of buildings 1,2 and 3;
  - Surveyor Location 2 Stephen Winser, an Ecologist at Adonis Ecology Ltd, experienced in bat surveying, was located to the south-east and in front of building 4.
- 2.3.3 The survey was conducted in line with Natural England (2004) and Bat Conservation Trust (BCT) guidelines (Collins, 2016). In line with these guidelines, the dusk survey on the 24<sup>th</sup> of August began 15 minutes before sunset, sunset being at 20:02, and finished 90 minutes after sunset.

#### Weather and Timing

- 2.3.4 The weather conditions and timings of the three surveys are shown in Table 1 below. All were in accordance with the Natural England (Natural England, 2004) and BCT (Collins, 2016) guidelines.
- Table 1: Weather Conditions and Timings of Nocturnal Bat Survey of buildings at 1 Bridges Cottages, Darmsden

Survey	Sunset	Survey	Survey Timings		Temperature (°C) Cloud		Wind Speed
Date	Junser	Start	End	Start	End	Cover (%)	(Beaufort Scale)
24/08/2022	20:02	19:47	21:32	19	19	5%	1

#### Equipment

- 2.3.5 During the nocturnal survey visits, surveyors used a Batbox Duet bat detector connected to a Roland R05 recording device and an Echo Meter Touch bat detector connected to an iPad, to record the number and likely species of bats detected on the site.
- 2.3.6 During the survey, both a thermal and an infra-red imaging camera equipment were used to cover the areas of the building where there was considered to be most potential for bat emergence. The recorded videos were later watched and analysed to determine any bat movements.

#### Analysis

2.3.7 During the nocturnal surveys, bat species, numbers and activities were all noted by the surveyors, and the audio from the bat detectors was recorded. Calls from the EchoMeter Touch bat detectors were analysed using the BTO Acoustic Pipeline.

#### Limitations

2.3.8 It is generally accepted that bats may have several roosts in an area which they use depending upon weather conditions, time of year etc., and so may be found roosting in a building one night, and then not found there again for some time. Thus, detecting a transient or occasionally used bat roost can be difficult. In addition, some bats have a very quiet echolocation and may emerge in complete darkness and thus detecting roosts of these species can be difficult. However, the surveys to date were considered sufficient to be confident in identifying a regularly used roosting site.

### 3 RESULTS

#### 3.1 Site Location and Surroundings

Site location and landscape context

3.1.1 The site was located in a rural location at the western edge of the village of Darmsden and around 2.20km south of the centre of Needham Market. The nearest block of

woodland (Molehill Covert) was around 316m to the south-east and the closest pond 105m to the south. (Google Earth, 2022 and Promap, 2022).

Summary of habitats on and adjacent to site

- 3.1.2 The buildings consisting of a conservatory, utility room, a room being used as a gym and a double garage, set in gardens of mown grassland and scattered mature trees, shrubs and hedgerows. Further out the landscape consisted of arable farmland with several substantial areas of woodland to the south-west. (Google Earth, 2022).
- 3.1.3 Key features of the surrounding landscape are summarised as follows:

Table 2: Key Features of the Site Surroundings

Feature	Value
Percentage deciduous tree cover within 500m of site	4%
Percentage non-illuminated tree/tall shrub cover (over 4m) within 50m of the site	18%
Number of non-illuminated tree/tall shrub lines within 50m of the site	4
Distance from nearest medium-large pond, lake, river or open stream to site boundary	105m to pond
Percentage of rough grassland within 500m of the site	3%
Degree to which surrounding 500m is built up (rural, suburban, urban)	Rural

#### Statutory wildlife sites citing bats

3.1.4 No SSSIs cited for bats occurred within 10km of the site (MAGIC, 2022).

#### 3.2 Preliminary Roost Assessment and Likelihood of Bat Roosts Occurring

Building 1 - Conservatory

3.2.1 This was of glass construction approximately 2.5m high and 4m wide. A very light space with no access for bats and no signs of bat activity seen.

Buildings 2 and 3 – Utility room and Gym

- 3.2.2 These two buildings were adjacent to each other, the utility room (see Photograph 1 in Appendix 2) being internally approximately 3m long and 2.5m high with a rendered ceiling and very light due to a window with no signs of bat activity seen. The building being used as a gym (see Photograph 2 in Appendix 2) was the same internal height 2.5m and around 4m long. The internal roof space was mostly lined with bitumen felt and some plasterboard. A very light space again due to a window with no signs of bats.
- 3.2.3 From the outside, the building's roof was tiled and had terracotta ridge tiles. Two lifted tiles were seen during the PRA but examination by torch showed no signs of roosting bats.

#### Building 4 – Double Garage/Workshop

- 3.2.4 The double garage was around 3.5m high internally and approximately 6.5m long with a 3m x 3m workshop at the north-western end. The internal roof space was bitumen felt lined with some additional fibreboard on the eastern side of the roof ridge. The internal roof ridge was found to be largely cobwebby. Both garage doors had large glass windows making the internal space very light (see Photograph 3 in Appendix 2). The inside space was used for storage. The occasional mouse dropping was found but no signs on bat activity.
- 3.2.5 Externally there was possible access through gaps in the garage doors and open windows. There were 24 lifted roof tiles seen during the PRA which upon further examination by torch showed no signs of roosting bats, with around six not accessible for examination.

#### Calculated Likelihood of Bat Roosts Occurring

3.2.6 The results of the desk study and survey are summarised together with the calculated probabilities in Table 3 below.

	Building 1	Building 2	Building 3	Building 4
Void suitability. Criteria: Uncluttered, dark, wooden beams, undraughty, 2m+ to apex, 5m+ long, no breathable membrane around apex	Negligible	Negligible	Negligible	Negligible
Number/estimated number of suitable external crevices. Criteria: minimum 15mm depth by 20mm width, unilluminated, dry.	0	1	1	6
% Deciduous tree cover within 500m, estimate to nearest 1%	4	4	4	4
% Tree cover (unilluminated & over 4m high) within 50m, estimate to nearest 1%	18	18	16	15
No. tree lines/directions (unilluminated & over 4m high) within 50m	4	4	4	4
Distance in m to nearest medium-sized pond, lake or river (for research only)	103	105	107	108
Rough grassland and pasture within 500m, estimated to nearest 1%	3	3	3	3
Built upness: rural, suburban, urban	Rural	Rural	Rural	Rural
Bat droppings: crevice or void roosting type	None	None	None	None
Comments & factors adjusting likelihood	Conservatory - glass sides and roof, no dark crevices or places for bats. No deep cracks within structure. No cellar or similar cool, humid structure.	Lifted tile inspected by torch. Utility room. Small, very light due to window. No deep cracks within structure. No cellar or similar cool, humid	Lifted tile inspected by torch. Gym. Small, very light due to window. No deep cracks within structure. No cellar or similar cool, humid	Lifted tiles all inspected by torch. Very light, roof ridge largely cobwebbed. No deep cracks within structure. No cellar or similar cool, humid
Likelihood of any bat crevice roost	0.08	structure. 0.14	structure. 0.14	structure.

#### Table 3: Key findings for calculated likelihood of bat roosts occurring in Buildings 1,2,3 and 4

#### Preliminary Roost Assessment of 1 Bridges Cottages Darmsden

	Building 1	Building 2	Building 3	Building 4
Likelihood of major bat crevice roost	<0.01	<0.01	<0.01	0.01
Likelihood of any bat void roost	0.07	0.07	0.07	0.07
Likelihood of major bat void roost	<0.01	<0.01	<0.01	<0.01
Likelihood of minor hibernation roost	Negligible	Negligible	Negligible	Negligible
Likelihood of major hibernation roost	Negligible	Negligible	Negligible	Negligible



3.2.7 Given the lack of apparent potential access to the building for bats and its glass construction, the likelihood of bats roosting in Buildings 1, was considered to be negligible. However, the likelihood of crevice-roosting bats occurring in building 4 (under the tiles) was considered low. Given that the roof will need to be worked on, it was considered potential impact could not be reasonably avoided. In accordance with BCT guidelines, further bat survey for low roost suitability was recommended and undertaken as described below.

#### 3.3 Nocturnal Bat Surveys

Dusk Emergence Survey: 24<sup>th</sup> of August 2022

3.3.1 A summary of the survey results can be seen in Table 4 below.

 Table 4: Summary of Nocturnal Survey Results for All Surveyors 24<sup>th</sup> August 2022

Species Observed	Scientific Name	No. Emerged	Overall level of Activity on Site	Max No. Seen or Heard at One Time
Common pipistrelle	Pipistrellus pipistrellus	0	Low by low numbers	1
Soprano pipistrelle	Pipistrellus pygmaeus	0	Low by low numbers	1
Noctule	Nyctalus noctula	0	Very low by low numbers	1
Brown long eared	Plecotus auritus	0	Very low by low numbers	1
Barbastelle	Barbastella barbastellus	0	Very low by low numbers	1

- 3.3.2 No bats were seen to emerge from or enter into the buildings or tiles above the buildings on site at any time during the survey visit, nor were any recorded using the buildings on the infrared and thermal video cameras.
- 3.3.3 Overall, bat activity around the site was considered to be relatively low and consisted predominantly of common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus* commuting and foraging particularly over bushes and trees to the south-west of the site. One barbastelle *Barbastella barbatellus* was detected around 15 minutes after sunset and one noctule *Nyctalus noctule* was detected around 45 minutes later along with a Brown long-eared bat *Plecotus auratus* being detected just as the survey was ending.

# 4 IMPACT RISK ASSESSMENT

#### 4.1 Summary of Relevant Legislation

- 4.1.1 Bats are protected under the Conservation of Habitats and Species Regulations 2017, as well as the Wildlife and Countryside Act 1981 as amended by the Countryside Rights of Way Act 2000. Offences likely to be relevant to development are to:
  - deliberately capture, injure or kill a bat;
  - deliberately disturb a bat in a way that would affect its ability to survive, breed, rear young, hibernate or migrate or significantly affect the local distribution or abundance of the species;
  - damage or destroy a roost;
  - intentionally or recklessly disturb a bat at a roost;
  - intentionally or recklessly obstruct access to a roost.

#### 4.2 Impact Risk Assessment

#### Roosting Bats

4.2.1 Given the absence of any bats emerging during the survey, the likelihood of bats roosting in the buildings was considered to be negligible and the risk of the proposed development harming bats or obstructing or damaging roosts was considered to be negligible.

#### Foraging and Commuting Bats

4.2.2 It is understood that at this stage all trees and hedgerows are to be retained on site in the proposed development, therefore no direct impact on foraging bats is likely. No significant increase in lighting is likely to occur to nearby trees or shrubs as a result of the proposed development.

#### Interest features of statutory sites

4.2.3 Given that there were no statutory sites within 10km where bats were an interest feature, and as there was considered to be negligible likelihood roost on site, the risk of impact to the bat interest features of any statutory site was considered to be negligible.

## 5 **RECOMMENDATIONS**

#### 5.1 Actions for Compliance with Wildlife Legislation

#### Further survey

5.1.1 No further surveys were considered necessary at this stage as the assessment and survey completed to date was considered sufficient to confirm an absence of any regular bat roost in the building.

#### Impact avoidance precautions

5.1.2 No impact avoidance or mitigation measures were considered necessary for bats based on the works as described in Section 1.

#### Expiry of Report

5.1.3 If the works have not been undertaken within eighteen months of the surveys outlined in this report, the risk of impact to bats should be re-assessed.

# 6 CONCLUSION

6.1.1 The proposed works were considered to present a negligible risk of impact on bats. It was considered that works could proceed in compliance with bat-related wildlife legislation with minimal risk of harm to bats, bat roosts or the local bat population.

# 7 **REFERENCES**

- BSI (2013). *BS 42020:2013 Biodiversity Code of Practice for Planning and Development*. British Standards Institute, London.
- CIEEM (2013). *Guidelines for Preliminary Ecological Appraisal*. Technical Guidance Series. Chartered Institute for Ecology and Environmental Management, Winchester.
- CIEEM (2017). *Guidelines for Ecological Report Writing*. Chartered Institute for Ecology and Environmental Management, Winchester.
- Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3*<sup>rd</sup> *Edition.* The Bat Conservation Trust, London.
- Google Earth (2022). Aerial View of Darmsden and Surroundings. Image Dated September 2021.
- Hundt, L. (2012). *Bat Surveys: Good Practice Guidelines, 2<sup>nd</sup> edition.* The Bat Conservation Trust, London.
- MAGIC Map (2022). *Statutory Wildlife Sites near Darmsden.* Multi-Agency Geographic Information for the Countryside, London. Accessed September 2022.
- Natural England (2004). *Bat Mitigation Guidelines Version 2004*. Natural England, Peterborough.
- Promap (2022). OS VectorMap Local of Darmsden and Surroundings. Accessed September 2022. http://www.promap.co.uk.

# 8 APPENDICES

# 8.1 Appendix 1: Figures

Figure 1: Site Plan of Buildings at 1 Bridges Cottages, Darmsden



#### 8.2 Appendix 2: Photographs

All photographs taken by Richard Sands on  $18^{\mbox{th}}$  of August 2022

### Photograph 1: Building 2 Utility room



Photograph 2: Building 3 Gym



#### Photograph 3: Building 4 Double garage

