

**DESIGN AND ACCESS STATEMENT:**

**Location:** Deepdale Farm, Bickley Gate, Langdale End, YO13 0LL

**Proposal:** Proposed new link extension, new water store extension, new greenhouse and conversion of existing stable into gym.

**Scope of Works:**

Proposed new single storey link extension between main house and proposed gym is to be constructed. A photograph below shows the location of this link. The design is to be sympathetic to the main house and all materials will match the existing house. A glass screen is proposed to allow the area to have as much daylight as possible. The land will be dug out and a retaining wall constructed again to match the existing stone walls.



Rear where link extension is proposed and retaining wall to be built.



View higher up showing where proposed link will be constructed.



View where main dwelling meets existing stable block at the front

Proposed new single storey water store to the rear of the main house. A photograph below shows the location of this water store. The design of the new water store is to mimic the main staircase extension as shown on the photograph below.



View at the rear showing existing staircase extension.

Proposed greenhouse location is as shown on the plans at the end of the stable block and also as shown on the photograph below. The separate plans and elevations as detailed by White Cottage Leisure Buildings detail the construction etc. of this proposed greenhouse.



View at the end of the existing stable block showing where the proposed greenhouse is to be located.

Conversion of existing stable into gym. Photographs are attached showing the external part of the stables and internal part of the stables. The existing door and window are to be replaced with new to match the existing house and a new roof to replace the existing is to be carried out. An area of roof is to be created so that the swallows can easily access the roof area to nest. A structural survey has been carried out some recommendations and a copy are attached to this planning application for review.



External view of existing stable block.



Internal view of existing stable block

## View of Deepdale Farm



### History of the Site:

Deepdale Farm is situated on the fringes of Dalby Forest. The main dwelling was extended some years ago to create a three-storey extension.

### Existing Use:

Residential

With reference to the flood risk map obtained from the environment agency web site the accommodation is in floor zone 1.

### Driveway Alterations and Site Layout Proposals:

There are no driveway alterations or site layout proposals as part of this application.

**Refuse storage/collection:**

The refuse storage collection will remain the same.

**Access:**

Pedestrian and vehicular access will remain the same.

**Impact on Environment and Neighboring Occupants.**

It is considered therefore that the proposal would not result in any loss of daylight/sunlight or obstruction to any existing premises.

We do not believe the proposal will have a detrimental effect on any adjacent premises or visual amenity.

**Drainage:**

Foul and surface water drainage will remain the same.

**Species:**

Our client has had a bat company visit the site and they have advised that a full Bat survey is required during May. It is therefore our client's intention to have this carried out as soon as possible in May and this report will be forwarded to the council upon completion.

**General:**

It is considered that the surrounding landscape character will remain unchanged as a result of this extension and dormer window.

for and on behalf of  
Rone Design Projects Ltd

April 2021



# Flood map for planning

Your reference  
**2490**

Location (easting/northing)  
**491474/491906**

Created  
**29 Apr 2021 9:10**

**Your selected location is in flood zone 1, an area with a low probability of flooding.**

## This means:

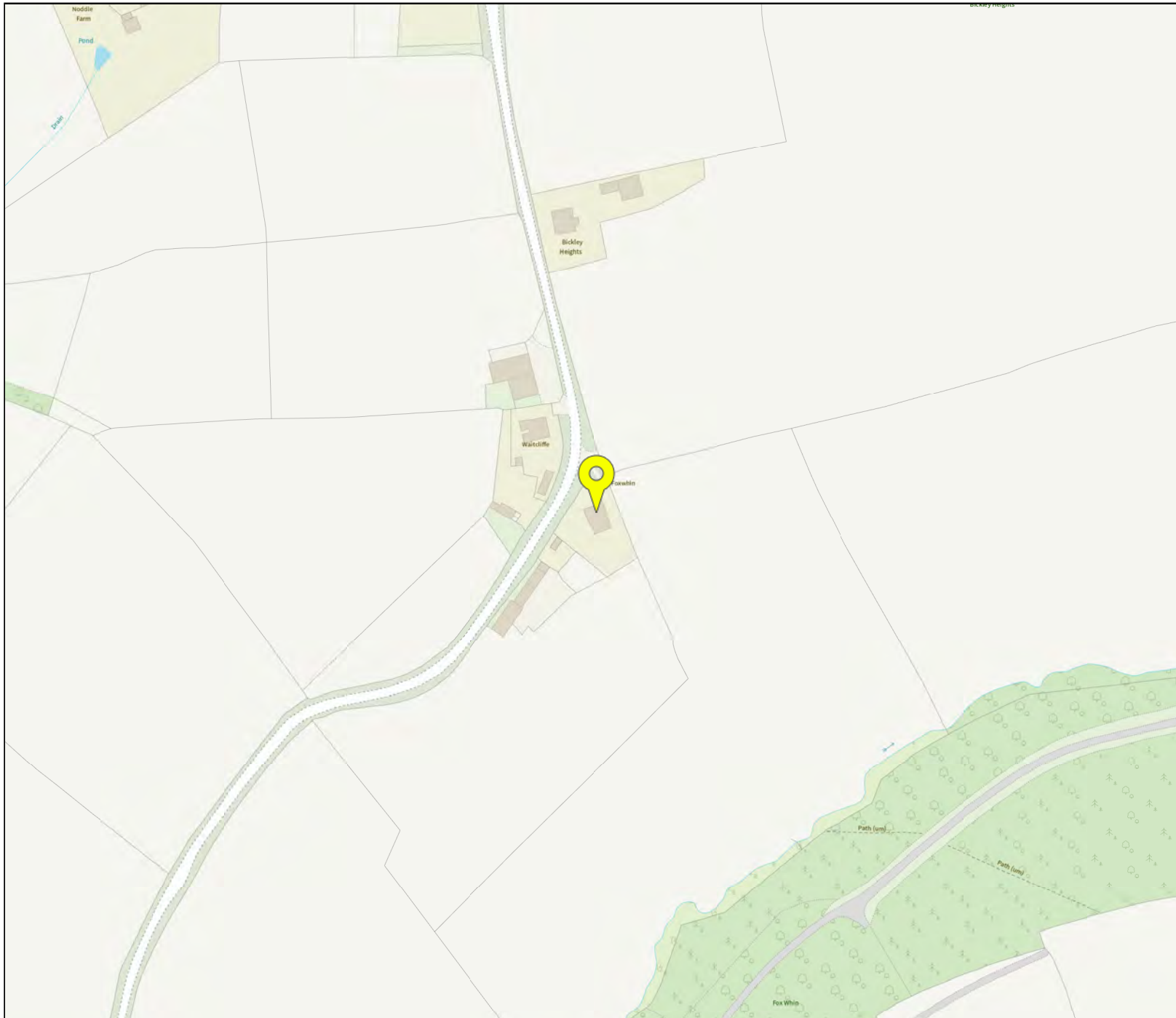
- you don't need to do a flood risk assessment if your development is smaller than 1 hectare and not affected by other sources of flooding
- you may need to do a flood risk assessment if your development is larger than 1 hectare or affected by other sources of flooding or in an area with critical drainage problems

## Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

The Open Government Licence sets out the terms and conditions for using government data.  
<https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>



### Flood map for planning

Your reference

**2490**

Location (easting/northing)

**491474/491906**

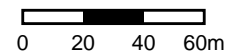
Scale

**1:2500**

Created

**29 Apr 2021 9:10**

-  Selected point
-  Flood zone 3
-  Flood zone 3: areas benefitting from flood defences
-  Flood zone 2
-  Flood zone 1
-  Flood defence
-  Main river
-  Flood storage area



# Engineer/ Manage/ Deliver/

NYMMPA  
29/04/2021

**APRIL 2021**

**STRUCTURAL REPORT  
ON BARNs TO  
DEEPDALE FARM  
BICKLEY  
LANGDALE END  
SCARBOROUGH  
NORTH YORKSHIRE  
YO13 0LL**

**PROJECT NO.  
MCB/PAA/JC/45418 Rpt-001**



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**STRUCTURAL REPORT ON BARNs TO DEEPDALE FARM, BICKLEY,  
LANGDALE END, SCARBOROUGH, NORTH YORKSHIRE, YO13 0LL**

Prepared by: **Paul Aspden, HNC, IMaPS**

Signed: .....  
Date: 23<sup>rd</sup> April 2021

Approved by: **Mr Mike C Blake, BSc, CEng, MICE, MCIHT, IMaPS**  
Director

Signed: .....  
Date: 23<sup>rd</sup> April 2021

Issue	Revision	Revised by	Approved by	Revised Date

For the avoidance of doubt, the parties confirm that these conditions of engagement shall not and the parties do not intend that these conditions of engagement shall confer on any party any rights to enforce any term of this Agreement pursuant of the Contracts (Rights of Third Parties) Act 1999.

The Appointment of Alan Wood & Partners shall be governed by and construed in all respects in accordance with the laws of England & Wales and each party submits to the exclusive jurisdiction of the Courts of England & Wales.

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## 1.0 INTRODUCTION

### 1.1 Details

**Client** This report has been prepared at the request of Mr Kevin Ingram, in consequence of a planning application to change the use of the buildings.

**Property** Deepdale Farm  
Bickley  
Langdale End  
Scarborough  
North Yorkshire  
YO13 0LL



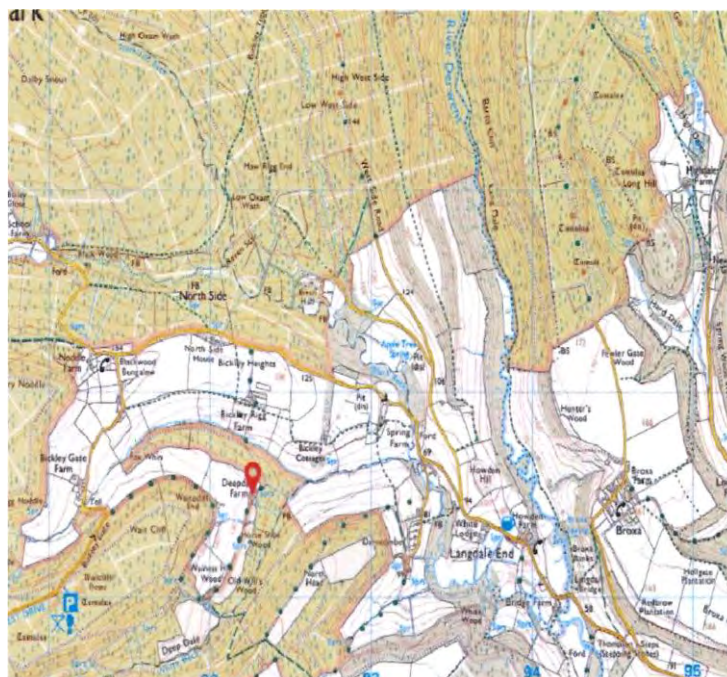
**Weather** Dry, sunny, light winds : 13°C

1.2 This report is intended to record the general condition of the buildings and to make any recommendations for remedial works which we consider necessary .

1.4 All reference to orientation is as though viewed from the south

## 2.0 BACKGROUND

### Location Plan



- 2.1 These single storey barn buildings occupy a slightly elevated and sloping site. The buildings are of stone construction with pitched roofs. The roofs are of traditional timber construction with a clay pantile finish. Land to the rear of the buildings is retained by the rear elevation. There is a small lean to building to the north of the barns which is of similar construction.
- 2.2 It is proposed to change the use of the barns to form a gymnasium, and the purpose of this report is to comment on the feasibility of this proposal.
- 2.3 No detailed information is available for the foundations but it is anticipated they comprise stepped stone footings laid directly on the natural sub-soils at a fairly shallow depth below ground level. Corbelled stonework is noted to the west of the southern elevation where ground level is reduced and we believe this to be the start of the foundation.
- 2.5 The sub-soils beneath the property are not known precisely but we anticipate that they consist of clay over shale.

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## 3.0 INSPECTION

### General

- 3.1 An inspection of the parts of the building concerned was made on 16<sup>th</sup> April 2021 covering both external and internal aspects and a detailed record was made of the state of the building. This, together with photographs, is being retained on the file for the property.

### External

- 3.2 The roof of the barns dips between the principal structural supports. (See photos 1 to 4)
- 3.3 The window openings throughout the barns have timber lintels which deflect slightly. (See photo 1)
- 3.4 The stonework to the south elevation is in serviceable condition with little evidence of weathering. It is relatively plumb with only minor distortion, and a slight bulge to the east of the wall.
- 3.5 To the east gable elevation there is a near vertical separation crack, close to the junction of the south elevation. This corresponds with the bulge to the south elevation. (See photo 5)
- 3.6 The roof covering and rafters to the rear lean to have been replaced and the floor to this area has also been re-cast. (See photos 7 to 9)
- 3.7 The exposed stonework to the north elevation is in a serviceable condition, though where it forms a retaining structure we are unable to assess its condition.
- 3.8 The west gable elevation has previously had a structure attached to it with the previously covered stonework being in better condition than the exposed areas, which has crack damage evident at eaves level. (See photos 10 & 11)



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### **Internal**

- 3.9 Within the barn to the west, the roof structure is exposed and comprises of central truss supporting purlins to each slope. Eaves ties are also present. The foot of the truss to the rear of the building is precariously supported on a single brick. The purlins throughout the barn deflect between supports. The rafters to some slopes have been replaced and a breathable membrane has been installed beneath the pantiles to some area. (See photos 12 to 15)
- 3.10 The stone dividing wall between the two barns has cracking noted to the junction with the south elevation, and a poor connection exists at the junction with the north elevation. (See photos 16 to 19)
- 3.11 Within the eastern barn, the roof has been subject to repairs, with replacement rafters to some areas; breathable felt has been installed, though the timber purlins deflect between supports. Blockwork piers have been installed to both sides of the rear entrance to this barn. These appear to have constructed to support the roof truss above. The timber lintel to the south elevation entrance has also been replaced and the stonework above rebuilt to carry the truss. (See photos 20 to 24)
- 3.12 At the junction of the south and east elevations there is a vertical crack evident, corresponding with that noted externally. (See photo 25)

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## 4.0 CONCLUSIONS

- 4.1 The barn buildings are generally in a reasonable to good condition for this type of agricultural building, particularly when you consider the exposed location. The cracking noted to the walls at their junctions with elevations is a result of slight ground movement together with the poor tie present at these locations. The ground movement and cracking noted is all aged and historic, and likely a legacy of shallow foundations responding to seasonal changes in ground conditions.
- 4.2 The distortion of roof structure is a result of its inadequate design.
- 4.3 We understand that the intention is to convert these spaces to a gymnasium and incorporate ceilings internally at eaves level, leaving the roof structure accessible for the nesting birds.
- 4.4 The existing structure of the building is of sufficient strength to accommodate the proposed use, and will benefit from the addition of ceilings as these can be used to restrain the longer north and south elevations.

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## 5.0 RECOMMENDATIONS

- 5.1 The existing roof structure is of inadequate design, and should be replaced with either gang nail trusses or a traditional roof with correctly designed members.
- 5.2 The cracking to wall junctions and the gable elevation should be repaired by fixing chemical “sock anchors” through the north and south elevations into the gable and cross walls. Anchors should be installed over the full height of the wall at approximately 450mm centres, and the cracking should be filled with a none shrinking grout material.
- 5.3 Where ceilings are introduced, these should span north to south, and be fixed to the supporting walls to provide restraint. Restraint straps should also be installed to both gable elevations and dividing wall between the barns to aid stability.
- 5.4 All cracked and severely weathered mortar joints should be raked out to a minimum depth of 30mm and be repointed with a mortar which will give some degree of flexibility such as a 1:1:6 (lime) or plasticised mortar. Any cracked, broken or severely weathered stones should be cut out and new units, of a similar pattern and material, be built in using a mortar similar to that as used in the repointing.
- 5.5 As the building is within a conservation area all works should be undertaken following approval by the local authority conservation officer.

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## 6.0 LIMITATIONS

- 6.1 Our inspection and report are concerned with the structural aspects of the building, such as foundations, walls, floors and roof but we have not concerned ourselves with details of other elements such as doors, windows and other fittings. Similarly we have not commented on dampness or timber infestation or services such as electricity, plumbing, heating or drainage.
- 6.2 We have not inspected woodwork or other parts of the structure which are covered, unexposed or inaccessible and we are therefore unable to report that any such part of the property is free from defect.
- 6.3 No comment is made in the report as to the presence of new or old mine workings or tunnelling, heavy metals, chemical, biological, electromagnetic or radioactive contamination or pollution, or radon methane or other gases, underground services or structures, springs and water courses, sink holes or the like, noise or vibratory pollution, mould, asbestos and asbestos products.
- 6.4 Similarly, we make no comment on flood risk or previous flood events, invasive species of vegetation such as Japanese Knotweed, vermin or protected species, boundary conditions or materials, landscaping or any non-permanent structure.
- 6.5 For the avoidance of doubt, the Contracts (Rights of Third Parties) Act 1999 shall not apply to this contract.

# **APPENDIX A**

## **Photographs**



**Photograph No. 1**



**Photograph No. 2**



**Photograph No. 3**



**Photograph No. 4**



**Photograph No. 5**



**Photograph No. 6**





**Photograph No. 7**



**Photograph No. 8**



**Photograph No. 9**



**Photograph No. 10**



**Photograph No. 11**



**Photograph No. 12**



**Photograph No. 13**



**Photograph No. 14**



**Photograph No. 15**



**Photograph No. 16**



**Photograph No. 17**



**Photograph No. 18**



**Photograph No. 19**



**Photograph No. 20**



**Photograph No. 21**



**Photograph No. 22**





**Photograph No. 23**



**Photograph No. 24**



**Photograph No. 25**

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## Deepdale Farm, Langdale End

NYMNPA  
04/06/2021

Bat Survey, June 2021.

	Staff Member	Position
Lead surveyor(s) :	Chris Toohie M Sc., MCIEEM Daniel Lombard B Sc., MCIEEM Josh Saunders	Ecologist.
Report prepared by :	Chris Toohie M Sc., MCIEEM Daniel Lombard B Sc., MCIEEM	Ecologist.
Authorised by :	Chris Toohie M Sc., MCIEEM	Signature protected
Notes :	This report contains sensitive information concerning protected species and caution should be exercised when copying and distributing to third parties.	

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### DOCUMENT CHECKING

Issue No.	Date.	Status.	Verified by.
1	02/06/2021	Draft for internal review.	Daniel Lombard B Sc MCIEEM
2	03/06/2021	Draft for client review.	Chris Toohie MSc MCIEEM
3	03/06/2021	Submission of non-draft version for client.	Chris Toohie MSc MCIEEM

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## 1.0 EXECUTIVE SUMMARY

1.1 In April 2021, Wold Ecology was commissioned by Kevin Ingram to undertake a bat survey at Deepdale Farm, Bickley, Langdale End. The site is located at approximate National Grid Reference SE 92274 91499, in North Yorkshire.

1.2 The field survey results are summarised below:

		Application Site Status
<b>Proceed with caution, timing constraints</b>	<b>Birds</b>	Birds are afforded various levels of protection and levels of conservation status on a species by species basis. The most significant general legislation for British birds lies within Part 1 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to, kill, injure or take any wild bird, take, damage or destroy the nest of any wild bird while that nest is in use or being built, take or destroy an egg of any wild bird. All nests should remain undisturbed and intact until after the breeding bird season – mid February to early September. Planning consent for a development does not provide a defence against prosecution under this act. Bird's nests were observed in the building (refer to section 8.0).
<b>No roosting bats, Method Statement approach (Section 7.0) – Stable</b>	<b>Bats</b>	The field surveys during April, May and June 2021 revealed no evidence of roosting bats in the studied stable. As no bats or signs of bats were recorded in the stable, a Natural England European Protected Species development license is not required. The method statement outlined in section 7.2 details the best working practice and precautions to be taken to avoid breaking the law and must be followed and provided to all contractors involved with the renovation of the stable building.
<b>No constraints</b>	<b>Barn owl</b>	There was no evidence of barn owls <i>Tyto alba</i> roosting in the building. No further surveys recommended.

1.3 **Bat roosts are protected throughout the year, whether bats are present or not.**

1.4 All bats and their roosts are fully protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and are further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Should any bats or evidence of bats be found prior to or during development, work must stop immediately, and Natural England contacted for further advice. This is a legal requirement under the aforementioned acts and applies to whoever carries out the work.

1.5 Planning consent for a development does not provide a defence against prosecution under this act.

1.6 Habitat enhancement for bats should be implemented as outlined in section 7.0, in order to improve foraging opportunities to bats in the local area.

1.7 The data collected to support the output of this report is valid for one year. This report is valid until **June 2022**. After this time, additional surveys need to be undertaken to confirm that the status of the stable, as a bat roost, has not changed.

## 2.0 INTRODUCTION

### 2.1 Background Information

2.1.1 In April 2021, Wold Ecology was commissioned by Kevin Ingram to undertake a bat survey at Deepdale Farm, Bickley, Langdale End. The site is located at approximate National Grid Reference SE 92274 91499, in North Yorkshire.

2.1.2 The Application Site comprises the following building:

- Stable

2.1.3 The proposed development includes the conversion of the former stable building into a gym including re-roofing works and new glazing.

### 2.2 Survey Objectives

2.2.1 The site was visited and assessed on 15<sup>th</sup> April, 14<sup>th</sup> May and 1<sup>st</sup> June 2021; this was to determine whether the stable on site contained bat roosts. The work involved the following elements:

Survey objective	Yes/No	Comments
Determine presence/absence of roosting bats	Yes	A daytime, visual inspection for bat roosts and roosting bats. Internal inspection of all roof voids. An assessment of the on-site potential for bats and the likelihood of their presence. Desktop study.
Determine bat usage e.g.s maternity roost, summer roosts	Yes	An assessment of whether bats are a constraint to the development. Emergence (dusk) survey x 2. Endoscope survey.
Identify swarming, commuting or mating sites	Yes	The survey looked at commuting routes from the roost to foraging grounds to ensure works did not impact these.
Other	Yes	The production of a non-technical summary of the legal implications behind bat presence.
		Report the findings of the field survey work and identify recommendations for a potential mitigation strategy.



NORTH 

Scale: 1:25,000

Drawing title:  
Location Map

KEY



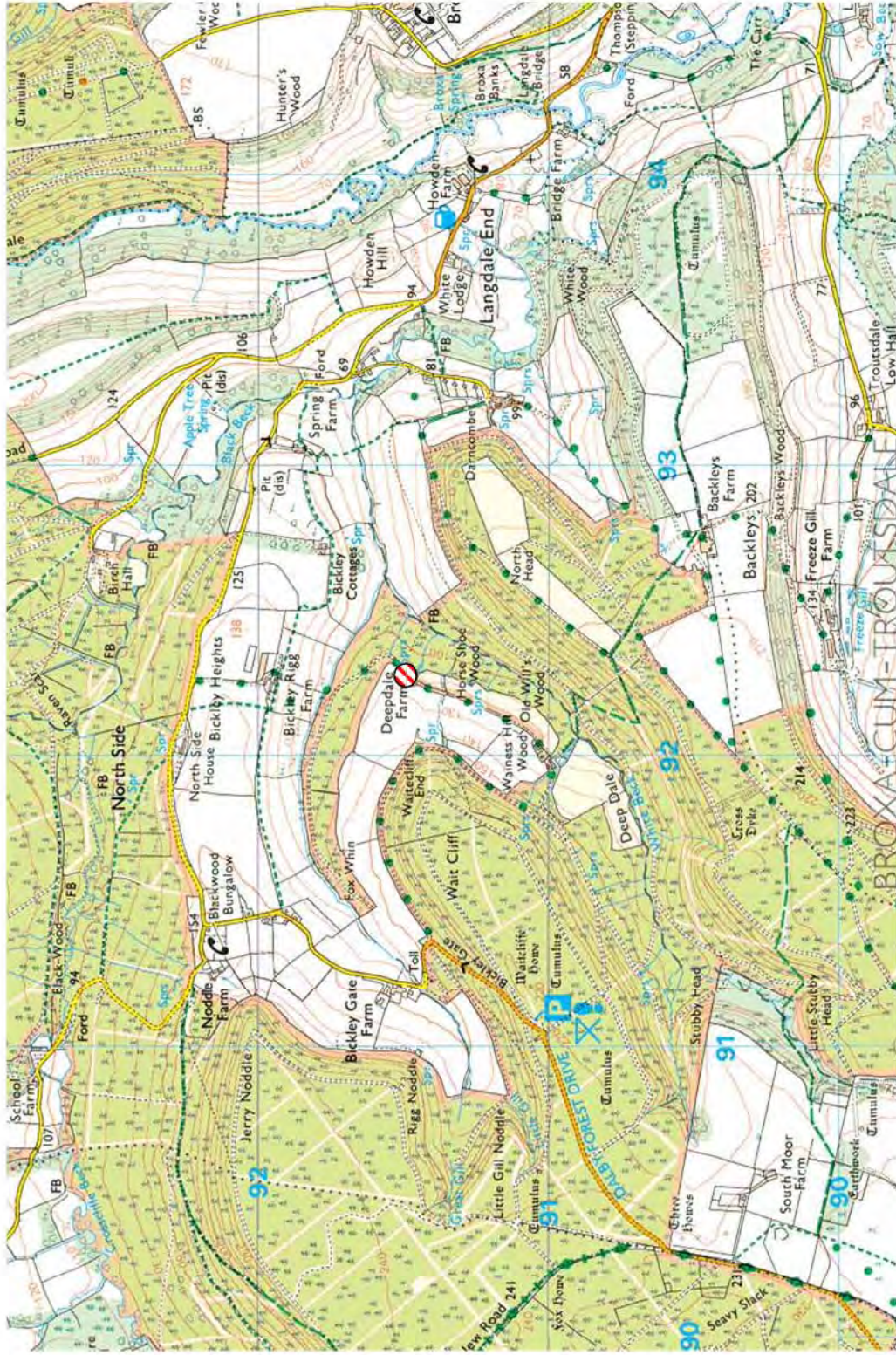
Application Site

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## **3.0 BACKGROUND TO SPECIES**

### **3.1 Ecological overview**

3.1.1 There are seventeen species of bat that currently breed in the UK. There is a wide variety of roost type and ecological characteristics between species and for this reason it is necessary to determine the species of bat and the type of roost resident in a structure prior to development. Roosts are utilised by different species of bat, at different times of year for different purposes i.e. summer, breeding, hibernating, and mating etc. (for more detailed information see section 9.0).

3.1.2 Bat populations have undergone a significant decline in the latter part of the 20<sup>th</sup> century; the main factors cited for causing loss and decline include:

- A reduction in insect prey abundance, due to high intensity farming practice and inappropriate riparian management.
- Loss of insect-rich feeding habitats and flyways, due to loss of wetlands, hedgerows, and other suitable prey habitats.
- Loss of winter roosting sites in buildings and old trees.
- Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.

### **3.2 Legal Framework**

3.2.1 A bat survey is required prior to planning permission being granted for a development, in order to prevent the potential disturbance, injury and /or death of bats and the disturbance, obstruction and/or destruction of their roosting places. This is in compliance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, provision 41 states an offence is committed if a person:

- (a) Deliberately captures, injures, or kills any wild animal of a European protected species (i.e. bats),
- (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.

3.2.2 Section 9 of the Wildlife and Countryside Act (1981) states:

- It is an offence for anyone without a licence to kill, injure, disturb, catch, handle, possess or exchange a bat intentionally. It is also illegal for anyone without a licence to intentionally damage or obstruct access to any place that a bat uses for shelter or protection.

3.2.3 Bat roosts are protected throughout the year, whether or not bats are occupying a roost site.

### **3.3 Planning Policy Guidance**

3.3.1 A bat survey is a requirement of the Local Planning Authority (LPA), as part of the planning application process. This is specified in the following legislation:

- National Planning Policy Framework (NPPF): Conserving and Enhancing the Natural Environment.

- 3.3.2 To protect and enhance biodiversity and geodiversity, plans should:
- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.
  - b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
- 3.3.3 When determining planning applications, local planning authorities should apply the following principles:
- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
  - b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
  - c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and
  - d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.
- 3.3.4 The LPA has to assess whether the development proposal would breach Article 12(1) of the Habitats Directive. If Article 12(1) would be breached, the LPA would have to consider whether Natural England was likely to grant a European protected species licence for the development; and in so doing the LPA would have to consider the three derogation tests:
- a) ‘Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’.
- In addition, the LPA must be satisfied that:
- (b) ‘That there is no satisfactory alternative’
  - (c) ‘That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range’.
- 3.3.5 Relevant Case Law
- Woolley v Cheshire East Borough (2009).
  - R. (Morge) v Hampshire County Council (2011).
  - Prideaux v. Buckinghamshire County Council and Fcc Environmental UK Limited (2013).

- 3.3.6 The rulings summarise that if it is clear or perhaps very likely that the requirements of the Directive cannot be met because there is a satisfactory alternative or because there are no conceivable ‘other imperative reasons of over-riding public interest’ then the authority should act on that and refuse permission.’
- 3.3.7 The conclusion of the judgement is that LPAs must ensure that the option/alternative that best takes into account all the relevant considerations (not just EPS) should be the preferred option assuming that the other two tests specified in Article 16 (1) are also met.
- 3.3.8 The judgements also clarified that it was not sufficient for planning authorities to claim that they had discharged their duties by imposing a condition on a consent that requires the developer to obtain a licence from Natural England. Natural England considers it essential that appropriate survey information supports a planning application prior to the determination. Natural England does not regard the conditioning of surveys to a planning consent as an appropriate use of conditions.

## 4.0 ASSESSMENT METHODOLOGY

### 4.1 Status of species present in Yorkshire

Bat Specie	UK Status	UK Distribution	Yorkshire Distribution
Common Pipistrelle	Not threatened	Common & widespread	Common & widespread.
Soprano pipistrelle	Not threatened	Common & widespread	Less common than common pipistrelle but fairly widespread.
Nathusius's pipistrelle	Rare	Restricted. Throughout British Isles.	Scarce, bat detector records only.
Brown long-eared	Not threatened	Widespread	Widespread.
Daubenton's	Not threatened	Widespread	Widespread.
Natterer's	Not threatened	Widespread (except N & W Scotland)	Present
Brandt's	Endangered	England and Wales	Few confirmed records.
Whiskered	Endangered	England, Wales, Ireland & S Scotland.	Present.
Noctule	Vulnerable	England, Wales, S Scotland.	Widespread
Leisler	Vulnerable	Widespread throughout the British Isles, except N Scotland.	Rare (locally common in West Yorkshire).
Barbastelle	Rare	England.	No records since 1950's.

Source - <http://www.nyorkbats.freeseve.co.uk/bats.htm>

### 4.2 Data Review and Desk Study

4.2.1 Previous bat activity survey at Deepdale Farm have identified the following roosts within the adjacent barn that was converted circa 2016/2017 under Natural England Development License 2015-15717-EPS-MIT.

Date	Taxon Name	Common Name	Location	County	Grid reference	Record Type	Abundance
2015	Pipistrellus pipistrellus	Common Pipistrelle	Langdale End	N. Yorkshire	SE 92274 91499	Day x 9	13
2015	Plecotus auritus	Brown long-eared	Langdale End	N. Yorkshire	SE 92274 91499	Maternity/day	10

4.2.2 Wold Ecology employees, field surveyors and network of associate ecologists have recorded brown long-eared *Plecotus auritus*, noctule *Nyctalus noctula*, Natterer's *Myotis nattereri*, Daubenton's *Myotis daubentonii*, Brandt's *Myotis brandtii*, whiskered *Myotis mystacinus*, soprano pipistrelle *Pipistrellus pygmaeus* and common pipistrelle *Pipistrellus pipistrellus* within 5km of the Application Site. Wold Ecology bat records date from 2006 and include over 1000 bat activity surveys.

4.2.3 The following Natural England development licenses are located within 2km of the Application Site (source - magic.gov.uk):

Specie	Distance from site	Destruction of a breeding site	Destruction of a resting site
Common pipistrelle	20m: S	N	Y
Brown long-eared		Y	Y
Common pipistrelle	1.4km:E	N	Y

4.2.4 Wold Ecology bat activity surveys within 3km of the Application Site have recorded the following roosts:

Date	Taxon Name	Common Name	Location	County	Grid reference	Record Type	Abundance
June 2016	Pipistrellus pipistrellus	Common Pipistrelle	White Lodge Farm, Langdale End	N. Yorkshire	SE 93701 91336	Day	1
June/July 2019	Pipistrellus pipistrellus	Common Pipistrelle	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Day x 9	48
June/July 2019	Pipistrellus pipistrellus	Common Pipistrelle	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Maternity	47
June/July 2019	Plecotus auritus	Brown long-eared	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Maternity	19
June/July 2019	Plecotus auritus	Brown long-eared	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Day	1
June/July 2019	Pipistrellus pygmaeus	Soprano pipistrelle	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Day x 2	4
June/July 2019	Myotis Brandt's	Brandt's	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Day	1
May 2019	Pipistrellus pipistrellus	Common pipistrelle	White Lodge Farm, Langdale End	N. Yorkshire	SE 93701 91336	Day x 2	2
September 2019	Pipistrellus pipistrellus	Common pipistrelle	White Lodge Farm, Langdale End	N. Yorkshire	SE 93701 91336	Day	3
March 2020	Pipistrellus pipistrellus	Common Pipistrelle	Highdales Farm, Hackness	N. Yorkshire	SE 94971 93028	Hibernation	2

4.2.5 Consultation with the North Yorkshire Bat Group did not identify any additional records with 2km of the Application Site.

### 4.3 Daytime and Visual Inspection

4.3.1 The daytime assessment identified whether the area had any signs of occupancy and/or bat usage. This took the form of a methodical search, both internally and externally, for actual roosting bats and their signs. Specifically, the visual survey involved:

- Assessment for droppings on walls, windowsills and in roof spaces
- Scratch marks and staining on beams, other internal structures and potential entrance and exit holes
- Wing fragments of butterfly and moth species underneath beams and other internal structures
- The presence of dense spider webs at a potential roost can often indicate absence of bats

- Assessment of crevices and cracks in the buildings to assess their importance for roosting bats
- The duration of the daytime, visual inspection was 45 minutes

#### 4.3.2 Summary of daytime inspection and visual survey

Date of each survey visit	Structure reference/location	Equipment used/available	Weather
15/04/21	Stable	Binoculars, 1million candle power clu-lite torch, micro Dart endoscope, Dewalt DW03050 Laser Measure. 3.9m telescopic ladders Phantom 4 Drone	10°C, 0% cloud. Beaufort 0. No recent rain.
<b>Comments (to include # of surveyors used for each visit):</b> 1 surveyor undertook the visual inspection.			
14/05/21	Stable	Binoculars, 1million candle power clu-lite torch, micro Dart endoscope, Dewalt DW03050 Laser Measure. 3.9m telescopic ladders	12°C, 40% cloud. Beaufort 0. No recent rain.
<b>Comments (to include # of surveyors used for each visit):</b> 1 surveyor undertook the visual inspection.			
01/06/21	Stable	Binoculars, 1million candle power clu-lite torch, micro Dart endoscope, Dewalt DW03050 Laser Measure. 3.9m telescopic ladders	14°C, 0% cloud. Beaufort 0. No recent rain.
<b>Comments (to include # of surveyors used for each visit):</b> 1 surveyor undertook the visual inspection.			
<b>Personnel:</b> Chris Toohie (Class 2 bat license - 2019-44215-CLS-CLS and RC027) – 15 <sup>th</sup> April 2021 Josh Saunders (2020 – 46828 – CLS-CLS) – 14 <sup>th</sup> May 2021 Daniel Lombard (Class 1 bat licence – 2015-11490-CLS-CLS) – 1 <sup>st</sup> June 2021			

## 4.4 Activity Surveys

- 4.4.1 Emergence surveys are used to determine bat presence in a building and can also give a good estimate of the numbers present. Bats can emerge up to 15 minutes before sunset and 2 hours after sunset. The survey times ensured that bats would have emerged from their roost sites and would be foraging (see section 9.4 and 9.5).

#### 4.4.2 Summary of emergence survey(s)

Date of each survey visit	Start/end times and times of sunset	Structure reference/location	Equipment used/available	Weather
14/05/21	Sunset: 2100 Start: 2030 Finish: 2300	Stable	Cluson CB2 1 million candle power lamps Digital thermometer Anabat Walkabout Wildlife Acoustics EM Touch 2 PRO EM3 Anabat Express	12°C - 10°C, 40% cloud. Beaufort 0. No recent rain.
<b>Comments (to include # of surveyors used for each visit):</b> 2 surveyors were positioned around the site so that all potential access points, identified in the daytime, visual inspection, could be observed.				
01/06/21	Sunset: 2125 Start: 2055 Finish: 2325	Stable	Cluson CB2 1 million candle power lamps Digital thermometer Anabat Walkabout Wildlife Acoustics EM Touch 2 PRO EM3 Anabat Express	14°C - 12°C, 0% cloud. Beaufort 0. No recent rain.
<b>Comments (to include # of surveyors used for each visit):</b> 2 surveyors were positioned around the site so that all potential access points, identified in the daytime, visual inspection, could be observed.				
<b>Personnel:</b> Josh Saunders (2020 – 46828 – CLS-CLS) – 14 <sup>th</sup> May 2021 Daniel Lombard (Class 1 bat licence – 2015-11490-CLS-CLS) – 1 <sup>st</sup> June 2021 Owen Coles – 14 <sup>th</sup> May 2021 Craig Hullah – 1 <sup>st</sup> June 2021				

#### 4.5 Summary of personnel

Personnel	Experience	Licence No.
Chris Toohie MCIEEM	Project Manager of Wold Ecology with over 11 years' experience surveying bat roosts for development licences. Chris has conducted approximately 900 bat activity surveys since 2006, held over 125 development licenses and is one of only 186 (April 2021) Natural England Registered Consultants who can hold a Bat Mitigation Class Licence.	RC027 and 2019-44215-CLS-CLS
Daniel Lombard MCIEEM	Experienced bat surveyor since 2010, Daniel has assisted with over 400 bat surveys for Wold Ecology and is currently working towards his bat handling license.	2015-11490-CLS-CLS
Josh Saunders	Experienced Wold Ecology Ltd bat surveyor, Josh has conducted over 150 bat activity surveys for Wold Ecology since 2017.	2020 – 46828 – CLS-CLS
Craig Hullah Owen Coles	Wold Ecology Ltd associates with bat activity survey experience undertaken under the tuition of Wold Ecology licensed bat ecologists.	N/A



## 5.0 RESULTS

### 5.1 Habitat description

5.1.1 Deepdale Farm is located 1.5km west of Langdale End village, within the North York Moors National Park in a valley between Dalby Forest and Langdale Forest. The Application Site is less than 0.1ha and the studied stable building is immediately surrounded by grazed pasture and a residential dwelling with mature private garden. The adjoining residential buildings also have bat roosting potential and include bat boxes and a bat loft.

#### 5.1.2 Adjacent Landscapes

5.1.2.1 Deepdale Farm is approximately 120m above sea level and is immediately surrounded by grazed pasture and woodland. Woodland and forestry cover within 2km is excellent and occurs as semi natural broadleaf woodland and coniferous forests currently under rotational management. Habitat connectivity is excellent and provided by woodland edges adjacent to the stable, hedgerows and watercourses. The River Derwent is approximately 1.6km east of the farm and also provides habitat connectivity to the wider countryside.

5.1.2.2 Wold Ecology concludes that the adjacent and continuous high-quality habitats that include woodland, tree lines, hedgerows, scrub, and watercourses connect the Application Site to the wider countryside. These habitats are likely to be used regularly by foraging and commuting bats. Consequently, the Application Site and adjacent habitats are considered to be integral to the favourable conservation status of local bat populations.

#### 5.1.3 Habitat Summary

5.1.3.1 A summary of the surrounding habitat is (radius of < 2km from the site):


- Buildings – farm buildings and residential properties
- Hedgerow
- Mature trees and woodland
- Langdale Forest
- Dalby Forest
- White Wood
- Hunters Wood
- Old Wills Wood
- Horse Shoe Wood
- Backleys Wood
- Crosscliff Wood
- Arable
- Mature private gardens
- Ponds and watercourses
- Black Beck
- White Beck
- Grazed pasture



Scale: 1:25,000

Drawing title:  
Aerial Photograph

**KEY**

 Application Site

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## 5.2 Building description

5.2.1 The bat survey and assessment targeted the following (see section 5.5):

- a. **Stable** – the former stable is single storey and comprises local stone walls and a pitched roof covered with pan tiles. The roof is supported by smooth sawn and original timbers and is underdrawn with a bitumen felt product and breathable membrane. The building is used for storage.

5.2.2 **Stable** (see 5.5 plates 1 - 3) - the following roosting opportunities were present within the fabric of the stable building:

- There are no gaps beneath the ridge tiles, and none are missing.
- Loose fitting pan tiles with gaps beneath.
- Gaps beneath coping stones.
- Gaps above the eaves.
- A small number of gaps in missing mortar in the stone work.
- Gaps adjacent to timber doors and timber windows.
- Gaps above the internal wall plates.
- The ridge beam was tight fitting.
- Gaps between felt/roof membrane and pan tiles above.
- Gaps in the internal stone work.
- Gaps in the roof structure and mortice joints.
- There was no open doors/window access into the building.
- No evidence of bats was observed.
- The stable has been assessed as having a MODERATE SUITABILITY to support roosting bats.

5.2.3 Based on the field survey and the criteria in table 4.1 (Bat Surveys for Professional Ecologists – 3<sup>rd</sup> Edition, p35. Bat Conservation Trust, 2016), the Application Site and studied building has the following suitability for bats:

	Negligible	Low	Moderate	High
Application Site habitats (<2km)				X
Stable			X	

**Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.**

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions <sup>a</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation <sup>b</sup> ).  A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. <sup>c</sup>	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.  Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions <sup>a</sup> and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.  Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions <sup>a</sup> and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.  High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.  Site is close to and connected to known roosts.

Source - Bat Surveys for Professional Ecologists – 3<sup>rd</sup> Edition, p35. Bat Conservation Trust, 2016.

### 5.3 Justification of activity surveys

5.3.1 The level of survey to give confidence in a **negative result** is summarised as (Bat Surveys for Professional Ecologists, 3<sup>rd</sup> Edition. Bat Conservation Trust, 2016):

Low Roost Suitability	Moderate Roost Suitability	High Roost Suitability
One survey visit. One dusk emergence or dawn re-entry survey.	Two separate survey visits. One dusk emergence survey and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence survey and a separate dawn re-entry survey. The third visit could either be dusk or dawn.
May to August.	May to September with at least one survey between May to August.	May to September with at least two surveys between May to August.
Activity surveys should be at least 2 weeks apart. Moderate buildings will be assessed according to site location and habitats within the locality and if there is a possibility that late emerging bats are present, a dawn survey will be more appropriate.		

5.3.2 The Application Site requires the following surveys between May and late September:

	Emergence (dusk)			Re-entry (dawn)		
	LOW	MOD	HIGH	LOW	MOD	HIGH
Stable		x 2				

#### 5.4 Results of Activity Surveys

##### 5.4.1 Emergence Survey

###### 5.4.1.1 14<sup>th</sup> May 2021

- The first common pipistrelle bat was detected at 2118. This was close to the anticipated (< 30 minutes after sunset) emergence time and suggests that the bat emerged from a roost close by.
- Common pipistrelle, soprano pipistrelle, noctule and brown long-eared bats were detected and/or observed foraging and commuting around the site in low numbers.
- No bats were observed emerging from the stable building.

###### 5.4.1.2 1<sup>st</sup> June 2021

- The first common pipistrelle bat was detected at 2136. This was close to the anticipated (< 30 minutes after sunset) emergence time and suggests that the bat emerged from a roost close by.
- Common pipistrelle, soprano pipistrelle, noctule and brown long-eared bats were detected and/or observed foraging and commuting around the site in low numbers.
- No bats were observed emerging from the studied building.
- Three common pipistrelle bats emerged from a roost located beneath lead flashing on the chimney of the house adjacent to the stable.

5.4.1.3 For survey results see appendix 9.4 and 9.5.

5.5 Photographs of key features – April 2021

Plate 1 – north elevation and west gable.



Plate 2 – south elevation.



Plate 3 – internal roof void.







**NORTH**   
Not to Scale

**Drawing title:**

Layout plan of the Application Site and summary of bat surveys.

**KEY**

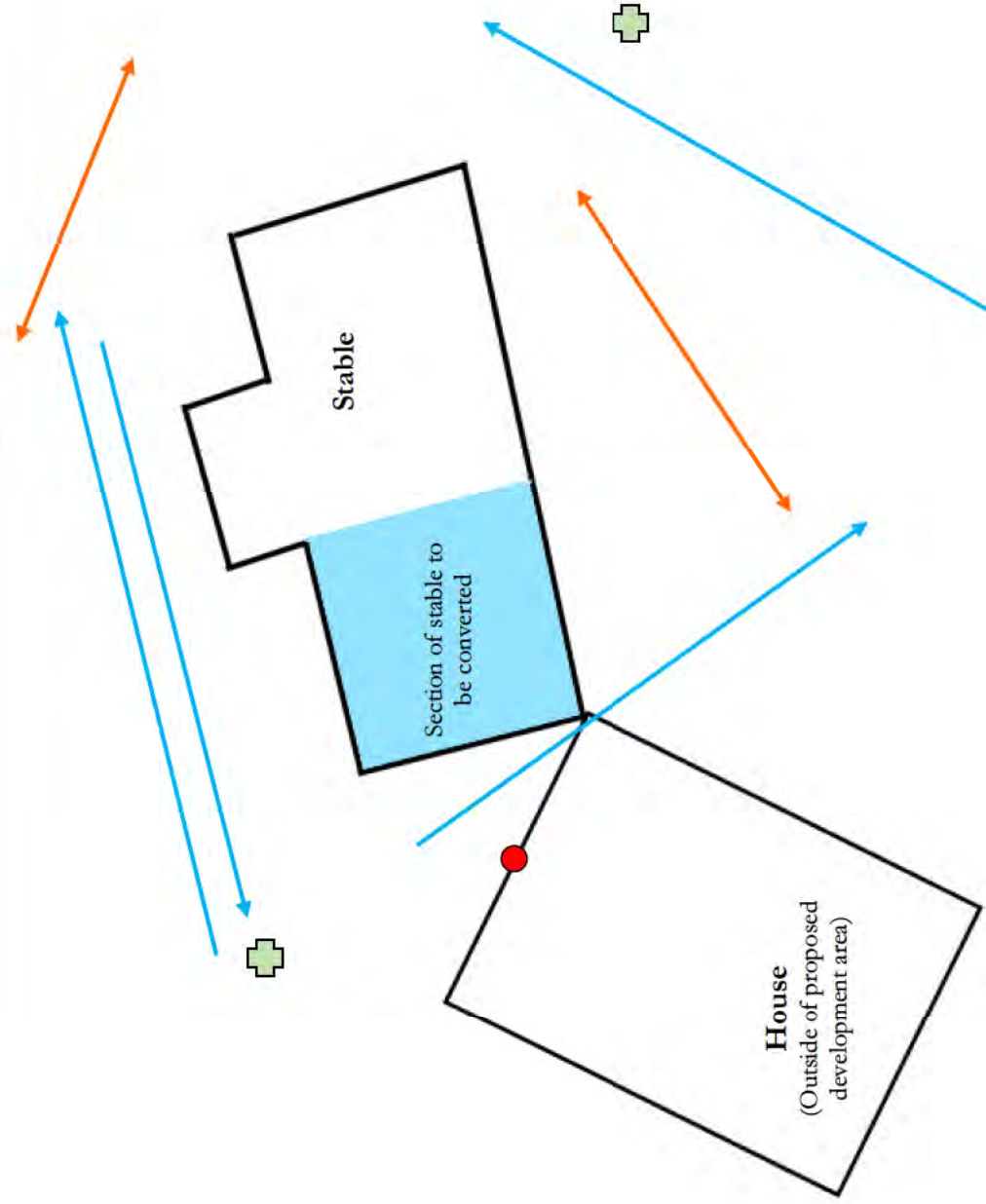
-  Primary commuting route
-  Primary foraging activity
-  Location of surveyor – 14<sup>th</sup> May & 1<sup>st</sup> June 2021
-  Common pipistrelle day roost
- R** Roost – located in adjacent building

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**NORTH**



Scale unknown

Drawing title:

Aerial photograph of the

Application site -

Phantom 4K



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## 5.6 Summary of field surveys conducted in 2021

Date	Type of survey	Results
15/04/21	Habitat assessment	Wold Ecology concludes that the adjacent and continuous high-quality habitats that include woodland, tree lines, hedgerows, scrub, and watercourses connect the Application Site to the wider countryside. These habitats are likely to be used regularly by foraging and commuting bats. Consequently, the Application Site and adjacent habitats are considered to be integral to the favourable conservation status of local bat populations.
15/04/21 14/05/21 01/06/21	Visual inspection.	<i>Stable</i> There were no signs of roosting bats or bat activity inside the building, but due to the presence of features with potential to provide roosting opportunities for bats, the stable has been assessed as having a MODERATE SUITABILITY to support roosting bats (see 5.3 plates 1 - 3). No evidence of bats were observed during the endoscope survey.
14/05/21	Emergence	No roosting bats were observed emerging from the stable.
01/06/21	Emergence	No roosting bats were observed emerging from the stable.

## 5.7 Interpretation and Evaluation of Survey Results

### 5.7.1 Presence/absence

5.7.1.1 The site is currently used by foraging and commuting common pipistrelle, soprano pipistrelle, noctule and brown long-eared bats, a maximum of two bats were observed at any one time.

5.7.1.2 No roosting bats or evidence of roosting bats were observed during the field surveys.

### 5.7.2 Site Status Assessment

5.7.2.1 Based on a building inspection and two emergence surveys, it has been determined that the stable is unlikely to support a bat roost. The results are based on survey work conducted in May and June, but as the stable has a moderate suitability to support roosting bats, there remains the possibility that bats could use the stable at other times of the year.

5.7.2.2 Deepdale Farm is located adjacent to surrounding favourable foraging habitat which will play an important role in the ecology of the local bat population.

### 5.7.3 Constraints

5.7.3.1 There are no constraints to the survey.

## 6.0 IMPACT ASSESSMENT

- 6.1 Based on current information, the stable does not support a bat roost. Consequently, the impact to roosting bats from the conversion of the stable is considered to be **negligible**.
- 6.2 The current information obtained is based on a desk top study, visual inspection and activity surveys conducted in May and June. Bat activity surrounding the stable was moderate, with a total of 4 common and widespread bat species observed foraging/commuting in low numbers. Consequently, the impact to bat populations locally, nationally and regionally from the proposed development is considered to be **negligible**.

## 7.0 MITIGATION & COMPENSATION

### 7.1 Legal Protection

7.1.1 Legal obligations towards bats are generally concerned with roost protection. All developments, known to contain bat roosts, require a development licence from Natural England. Under the Wildlife and Countryside Act (1981) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, it is an offence for anyone without a licence to:

- Deliberately take, injure or kill a wild bat
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- Damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time)
- Possess or advertise/sell/exchange a bat of a species found in the wild in the EU (dead or alive) or any part of a bat.
- Intentionally or recklessly obstruct access to a bat roost.

7.1.2 Planning consent for a development does not provide a defence against prosecution under these acts.

7.1.3 **Bat roosts are protected throughout the year, whether bats are present or not.**

7.1.4 As no bat roosts or evidence of bats were detected in the stable during the surveys, conversion work to the stable would not require a Natural England development licence. However, the stable has a low suitability of bat interest and therefore have features that could support roosting bats. There is a low possibility that individual bats could turn up roosting in the stable at any time during the year. The following procedures highlighted in Section 7.2 should be adopted during the building works. Section 7.2 identifies working practices or precautions necessary to avoid injury or death to any bats that may be present in the building.

### 7.2 Method Statement

7.2.1 **This statement should be copied to contractors and all those involved with timber treatment, roofing and building works, whose work may affect bats and their roosts on site. Even though bats have not been found, building works should occur as though bats could be present.**

- 7.2.2 Timing
- 7.2.2.1 There are no mandatory timing constraints when roosting bats have not been found.
- 7.2.3 Locating Bats
- 7.2.3.1 Bats are by nature highly secretive, mobile mammals, therefore bats and their roosts can be very difficult to detect. A pipistrelle bat is capable of roosting in a crack measuring 20mm. In order to reduce any unnecessary disturbance, injury or death of any late discoveries of individual bats roosting in the buildings the following procedures should be implemented. Common roosts locations must be checked. These include:
- Underneath tiles
  - Underneath ridge tiles
  - Crevices in stone work and gaps in mortar
  - Mortise joints in roof timbers
  - Above the eaves and internal wall plates
  - Around window/door frames
  - Roof timbers including ridge beams and rafters
- 7.2.4 Working Approach
- 7.2.4.1 Careful removal by hand of all fittings and fixtures as describe in 7.2.3. Wall cavities should be checked prior to pointing.
- 7.2.4.2 Remove roof coverings by hand. Only half of the roof should be removed on the first day and the second half 24 hours later. This will create unfavourable conditions for any bats still roosting within the roof structure and encourage the bats to leave on their own accord.
- 7.2.4.3 In the unlikely event that bats are discovered:
- Immediately stop the work that you are undertaking.
  - Do not expose the bat or cause it to fly out of the roost on its own accord.
  - Contact Wold Ecology on 01377 200242 or 07795 071504 for advice.
  - Advise colleagues in the vicinity of your work why you have stopped and advise them to be aware of the potential for bats being disturbed, injured or killed.
  - Immediately report the matter to your site manager/line manager who will inform relevant personnel.
  - Grounded bats must be carefully placed in a lidded, ventilated box with a piece of clean cloth and a small shallow container with some water. The box must be kept in a safe and quiet location.
  - Any underweight or injured bats must be taken into temporary care by an experienced bat carer and looked after until such time that the bat can be transferred to a suitable replacement roost at the same site, or weather conditions are suitable for release at the same site.
- 7.2.4.4 Bats will only be handled by a licensed bat ecologist, wearing gloves, who has received a rabies vaccination. The bat will be placed either into a holding box, with

water provided, and re-released close to the farm at dusk, or placed into a bat box located on site.

7.2.4.5 Injured bats will be taken into care (as directed by the Bat Workers Manual, section 7.3, pages 64 – 66: 3<sup>rd</sup> edition 2004) and fed and cared for until such time when conditions are suitable (night time temperature are  $>6^{\circ}\text{C}$ ) for them to be released at dusk in the mitigation area.

7.2.5 Bat boxes

7.2.5.1 Due to the provision of 4 bat boxes and a bat loft on site during 2015, no additional bat boxes are recommended.

7.2.6 Lighting

7.2.6.1 Lighting has a detrimental effect on bat activity; many bats will actually avoid areas that are well lit. Lighting can cause habitat fragmentation by preventing bats from commuting between roosts and foraging grounds (A.J Mitchell-Jones 2004).

7.2.6.2 It is recommended that a lighting consultant is employed to design a lighting plan based on the following principles:

- Luminaire and light spill accessories - Lighting should be directed to where it is needed, and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.
- If applicable, the height of lighting columns in general should be as short as is possible as light at a low level reduces the ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reduce horizontal spill. For pedestrian lighting, this can take the form of low level lighting that is as directional as possible and below 1 lux at ground level.
- Aim for lighting column of 5m or less, hooded and cowled to prevent light spill, for main lighting columns.
- All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white spectrum (ideally  $<2700\text{Kelvin}$ ) should be adopted to reduce blue light component.
- Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
- The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered.
- Only luminaires with an upward light ratio of 0% and with good optical control should be used.
- Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Any external security lighting should be set on motion-sensors and short (1min) timers.
- As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.

- Light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding

7.2.6.3 At this site, new lighting design will ensure lights will **not** be mounted where they will shine directly on to bat boxes, the bat loft or the surrounding woodland habitat used by foraging and commuting bats. A light intrusion lux level besides woodland along the southern boundaries will be 1 lux or below.

7.2.7 Timber treatment

7.2.7.1 It is good practice, where bats may come into contact with roof timbers, to carry out timber treatment using Permethryn type chemicals on the Natural England list of approved safe chemicals. New pre-treated timbers i.e. tanalised timber will be allowed to dry thoroughly before use, if applicable. A list of Natural England approved paints and timber treatments is available at <https://www.gov.uk/guidance/bat-roosts-use-of-chemical-pest-control-products-and-timber-treatments-in-or-near-them>

## 8.0 BIRDS

8.1 Birds are afforded various levels of protection and levels of conservation status on a species by species basis. The most significant general legislation for British birds lies within Part 1 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to, kill, injure or take any wild bird, take, damage or destroy the nest of any wild bird while that nest is in use or being built, take or destroy an egg of any wild bird.

8.2 The daytime assessment identified whether the studied building had any signs of residency and/or barn owl usage. Specifically, the visual survey involved:

- An assessment of the suitability of the stable to enable access for breeding barn owls.
- A thorough check for pellets, feathers or signs of old nest remains in the form of pellet debris and/or old broken egg shells.

8.3 The visual inspection also recorded any other visible active/disused nests and bird activity within the buildings.

8.4 Field survey results

8.4.1 There was no evidence of barn owls *Tyto alba* roosting in the stable. No further surveys are recommended

8.4.2 The following nests were observed:

Species/nest type	Number	Location	Comment
Swallow <i>Hirundo rustica</i>	3 (nests)	Stable	April 2021
Tree Sparrow <i>Passer montanus</i>	2 (nests)	Stable	June 2021

8.5 Biodiversity Gains and Recommendation

8.5.1 All nests should remain undisturbed and intact until after the breeding bird season – mid February to early September. Any buildings and roofing to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged.

8.5.2 In order to increase nesting opportunities for birds, it is recommended that Schwegler bird boxes are erected throughout the site. Local Authority guidance recommends that 25% of houses within a development should contain a bird box.

8.5.3 Bird boxes will target species of conservation concern. A summary of recommended bird boxes are listed below:

Name	Description	Number
Schwegler sparrow terrace #1SP	Brick building box	1
Schwegler swallow box #10	Brick building box	2

- 8.5.4 Boxes should be placed so that the entrance does not face the prevailing wind, rain and strong sunlight. The sector from north to south east should be used, with south facing boxes positioned in more shaded areas.
- 8.5.5 Many species will use boxes at a wide variety of heights however to give the box protection in areas with a lot of human or mammalian predator activity they should be placed approximately 3-4 metres above ground level. A clear flight path should be available to and from the nest box.

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Mitchell-Jones, A.J. (2004) 'Bat mitigation guidelines'. English Nature, Peterborough.

The Bat Conservation Trust [www.bats.org.uk](http://www.bats.org.uk) Much additional information is available on bats at this website.

Thomas, D.W. 1995. The physiological ecology of hibernation in vespertilionid bats. Symposia of the Zoological Society of London 67: 233–244.

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UK Mammals: Species Status and Population Trends. JNCC / Tracking Mammals Partnership. 2005

[www.bats.org.uk](http://www.bats.org.uk)



## 10.0 APPENDICES

### 10.1 Background to Bats - Bat Biology.

- 10.1.1 Bats roost in a variety of places such as caves, mines, trees, and buildings. Woodlands, pasture, ponds and slow flowing rivers or canals provide suitable feeding areas for bats as they support an abundance of suitable insect forage. Bats tend to feed during the first two to three hours after sunset and again before dawn, when insect activity is at its most intense (JNCC 2004).
- 10.1.2 Bat activity over the course of a year reflects the seasonal climate and the availability of food as follows (The Bat Conservation Trust, undated):  
**January - March** - insect prey is scarce, and bats will hibernate alone or in small groups.  
**April - May** - insects are more plentiful and bats will become active. They may become torpid (cool and inactive) in bad weather. Females will start to form groups and will roost in several sites.  
**June - July** - females gather in maternity roosts and give birth to young, which are suckled for several weeks. Males roost alone nearby.  
**August - September** – mothers leave the roost before the young. Bats mate and build up fat for the winter.  
**October - December** – Bats search for potential hibernacula. They become torpid for longer periods and then hibernate.
- 10.1.3 Bats do not stay in the same roost throughout the year. They have different requirements of roosts at different times of the year. During late April/May the bats leave their winter roosts and the females come together to form ‘nursery roosts’, these usually consist of pregnant females along with a few non-breeding and immature females. At this time, the males roost either singly or in small numbers. The single offspring is born during late June early July and can fly within 3-5 weeks.
- 10.1.4 Typical roost sites are cracks and crevices in buildings and other structures but more typically under hanging tiles, slates, soffits and cavity walls of fairly modern buildings or holes and splits in trees.
- 10.1.5 The conditions needed by bats for hibernation require the maintenance of a relatively stable low temperature (2 – 6°). Suitable sites include; old trees, caves, cellars, tunnels, and icehouses.
- 10.1.6 Whilst the summer roosts consist of single species (although 2 – 3 species can be found within one large structure but occupying separate roost sites), winter sites often consist of 4 – 6 different species of bat, although there is often niche separation.
- 10.1.7 Bats have a complex social structure based on ‘meta populations’ and also utilise other transitional or intermediate roost sites. The several different types of roost, which bats occupy throughout the year, are as follows:
- **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. These have to be cold and free from any temperature fluctuation with high humidity. The coldness enables bats to lower their body temperature and become torpid. This saves a lot of energy, enabling them to survive on the fat stores within their bodies that they have built up throughout the summer.
- **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.

10.1.8 The main threats to bats include:

- Habitat loss (e.g. deforestation)
- Loss of feeding areas as a result of modern forestry and farming practices.
- Use of toxic agrochemicals and remedial timber treatment chemicals.
- Disturbance and damage to bat roosts.

10.1.9 Bats have been in decline both nationally and internationally during the latter part of the 20<sup>th</sup> Century. Bats require a variety of specific habitats in order to meet the basic needs of feeding, breeding, and hibernating and are therefore extremely vulnerable to change such as the loss of flight lines through the removal of hedgerows. It is thought that even the two most common and widespread bats, the common pipistrelle and the soprano pipistrelle, have declined by an estimated 70% (1978-1993 figures). There are a number of bat species, which are now considered seriously threatened with one species, the greater mouse-eared bat being classed as extinct as it is no longer breeding in the U.K.

10.1.10 All European bats are listed in Annex IV of the EC Directive 92/94/EEC ‘The Conservation of Natural Habitats and of Wild Fauna and Flora’ as needing “strict protection”. This is translated into British Law under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. British bats are included under Schedule 5 of the Wildlife & Countryside Act 1981. They can therefore be described as a ‘fully protected’ or ‘protected’ species.

10.1.11 A summary of the legal protection afforded to bats under both European and British law is provided by the Bat Conservation Trust (BCT, 2010):  
 ‘All European bat species and their roosts are listed in Annex IV of the EC Directive 92/94/EEC ‘The Conservation of Natural Habitats and of Wild Fauna and Flora’ as needing “strict protection”. This is implemented in Britain under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. In summary, in the UK, it is an offence to:

- Deliberately capture, injure, or kill a bat;

- Deliberately disturb a bat in a way that would affect its ability to survive, breed or rear young, hibernate or migrate or significantly affect the local distribution or abundance of the species;
  - Damage or destroy a roost (this is an absolute offence); and
  - Possess, control, transport, sell, exchange or offer for sale/exchange any live or dead bat or any part of a bat.’
- 10.1.12 The species is also listed in Appendix II of the Bonn Convention (and its Agreement on the Conservation of Bats in Europe) and Appendix II of the Bern Convention (and Recommendation 36 on the Conservation of Underground Habitats). Although these are recommendations and not statutory instruments.
- 10.1.13 Natural England is the Government body responsible for nature conservation. Local planning authorities must consult them before granting planning permission for any work that would be likely to result in harm to the species or its habitat. Natural England issue “survey” licenses for survey work that requires the disturbance or capture of a species for scientific purposes. They also issue “conservation” licenses that are required for actions that are intended to improve the natural habitat of a European protected species or to halt the natural degradation of its habitat.
- 10.1.14 ‘Development’ licences are issued by Natural England for any actions that may compromise the protection of a European protected species, including bats, under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This includes all developments and engineering schemes, regardless of whether or not they require planning permission.
- 10.1.15 The UK Biodiversity Action Plan states that although the pipistrelle is one of the most abundant and widespread bat species in the UK, it is still thought to have undergone a significant decline in the latter part of this century. The main factors cited for causing loss and decline include:
- A reduction in insect prey abundance, due to high intensity farming practice and inappropriate riparian management.
  - Loss of insect-rich feeding habitats and flyways, due to loss of wetlands, hedgerows, and other suitable prey habitats.
  - Loss of winter roosting sites in buildings and old trees.
  - Disturbance and destruction of roosts, including the loss of maternity roosts due to the use of toxic timber treatment chemicals.

## 10.2 Significance of bat roosts, appraising the nature conservation value;

- 10.2.1 The significance of bat roosts should be appraised against the following table. Where the extent of the bat roost is unclear a precautionary approach should be taken in evaluating the significance of the roost and the highest potential category should be selected.

Table 10.2.1 Appraisal of significance of bat roosts.

Scale	Summary	Examples
International	Any significant roosting sites for European Annex 2 species	Barbastelle bat roosts are only known applicable feature in East Anglia.
National	Any roosts qualifying as SSSI under the EN criteria.	Details of criteria are given in

		9.1.2 Site Selection Guidelines for Biological SSSI's.
Regional	Any significant bat roosts and features, equivalent in interest to qualifying a site as a Country Wildlife Site.	Breeding and hibernation roosts of most species.
Local	All other sites supporting feeding bats as Wildlife and Countryside Act protected species.	Bats foraging within a structure, night roosts and minor transition roosts.

10.3 Summary of conservation significance of roost types (Bat Mitigation Guidelines, 2004).

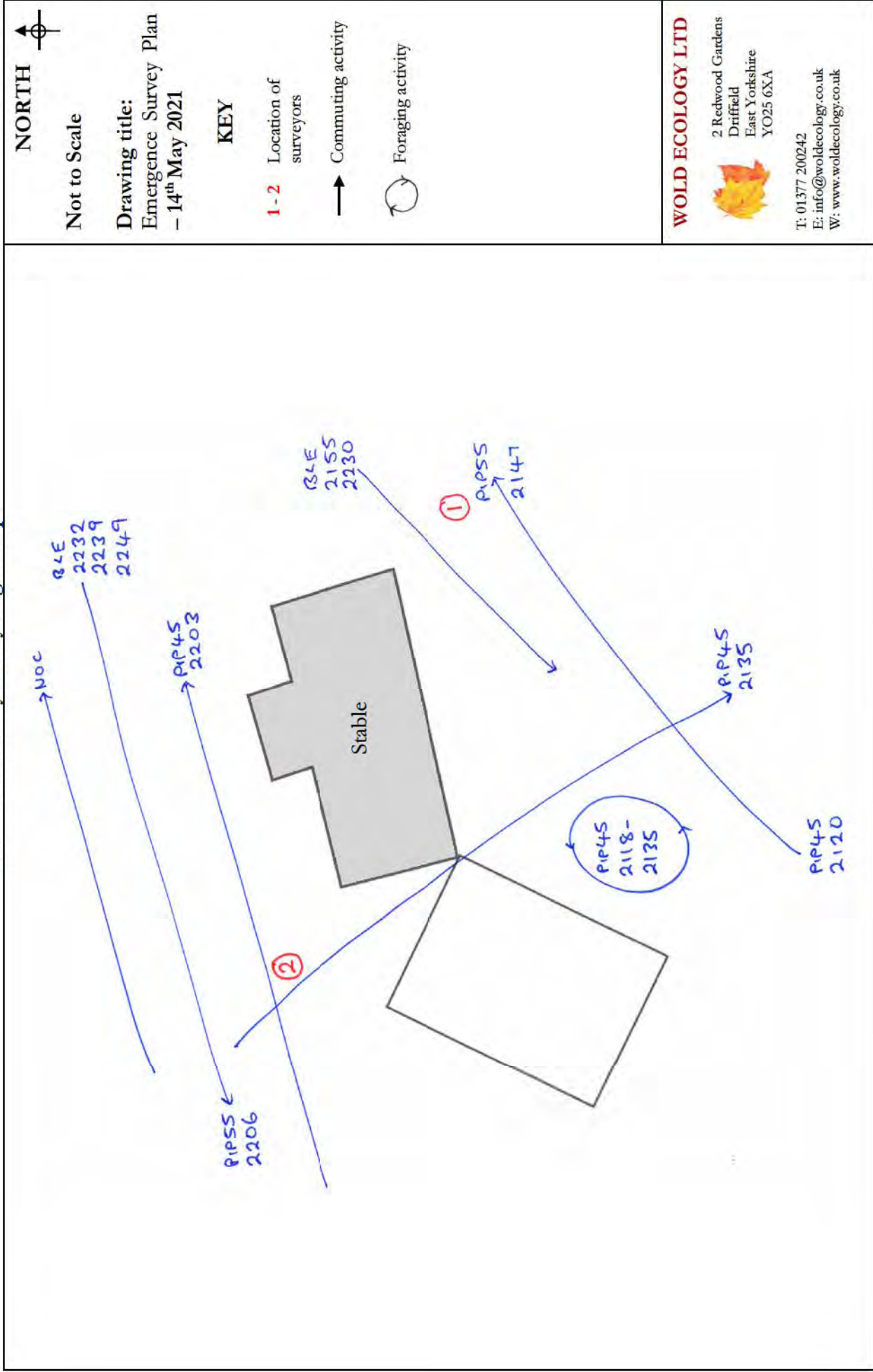
Roost type	Development effect	Scale of impact		
		Low	Medium	High
Maternity	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction; modification		✓	
	Temporary disturbance outside breeding season	✓		
	Post-development interference			✓
Major hibernation	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction; modification		✓	
	Temporary disturbance outside hibernation season	✓		
	Post-development interference			✓
Minor hibernation	Destruction			✓
	Isolation caused by fragmentation			✓
	Partial destruction, modification		✓	
	Modified management		✓	
	Temporary disturbance outside hibernation season	✓		
	Post-development interference		✓	
	Temporary destruction, then reinstatement	✓		
Mating	Destruction		✓	
	Isolation caused by fragmentation		✓	
	Partial destruction	✓		
	Modified management	✓		
	Temporary disturbance	✓		
	Post-development interference	✓		
	Temporary destruction, then reinstatement	✓		
Night roost	Destruction	✓		
	Isolation caused by fragmentation	✓		
	Partial destruction	✓		
	Modified management	✓		
	Temporary disturbance	✓		
	Post-development interference	✓		
	Temporary destruction, then reinstatement	✓		

**NB** This is a general guide only and does not take into account species differences. Medium impacts, in particular, depend on the care with which any mitigation is designed and implemented and could range between high and low.

10.4 Bat records for activity surveys conducted in 2021

Date – 14 <sup>th</sup> May 2021					
Loc.	Time	Species	kHz	Direction	Comment
1	2118-2135	C. Pipistrelle	45	-	Foraging
1	2120	C. Pipistrelle	45	E	Commuting
2	2135	C. Pipistrelle	45	S	Commuting
1	2147	C. Pipistrelle	45	E	Commuting
2	2147	Noctule	20	E	Commuting
1	2155	Brown long-eared	39	W	Commuting
2	2203	C. Pipistrelle	45	E	Commuting
2	2206	S. Pipistrelle	55	W	Commuting
1	2230	Brown long-eared	39	W	Commuting
2	2232	Brown long-eared	39	W	Commuting
2	2239	Brown long-eared	39	W	Commuting
2	2249	Brown long-eared	39	W	Commuting
Date – 1 <sup>st</sup> June 2021					
2	2136	C. Pipistrelle	45	S	Commuting
2	2137	C. Pipistrelle	45	S	Emerged from a gap beneath lead flashing in chimney of the adjacent house
2	2139	C. Pipistrelle	45	S	Emerged from a gap beneath lead flashing in chimney of the adjacent house
2	2139-2204	C. Pipistrelle	45	-	Foraging
1	2150-2259	C. Pipistrelle	45	-	Foraging
2	2151	Noctule	20	E	Commuting
1	2152	C. Pipistrelle	45	E	Commuting
2	2153	C. Pipistrelle	45	S	Emerged from a gap beneath lead flashing in chimney of the adjacent house
1	2158-2311	C. Pipistrelle	45	-	Foraging
2	2205	C. Pipistrelle	45	S	Commuting
1	2217	Brown long-eared	39	N	Commuting
1	2219	S. Pipistrelle	55	E	Commuting
1	2236	S. Pipistrelle	45	E	Commuting
2	2239	Noctule	20	E	Commuting
2	2252	C. Pipistrelle	45	S	Commuting

### 10.5 Bat Activity Survey Flight Maps





Not to Scale

Drawing title:  
Emergence Survey Plan  
- 1<sup>st</sup> June 2021

**KEY**

1-2 Location of  
surveyors

→ Commuting activity

↻ Foraging activity

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