# BAT RISK ASSESSMENT

Faceby Lodge Farm, Faceby

MD2



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## 1.0 INTRODUCTION

#### **BACKGROUND**

- 1.1 Applied Ecological Services Ltd. (AES-LTD) was commissioned by MD2 to undertake a review of existing survey information, desktop assessment and preliminary ground level roost assessment (bat risk assessment) at Faceby Lodge Farm, Faceby, North Yorkshire, TS9 7DP.
- 1.2 The buildings have been surveyed in previous years and evidence of roosting bats has been found. Survey information previously obtained is several years old and cannot be relied upon. The current survey has clarified existing information through the inclusion of an update to the building descriptions and the provision of an up to date assessment of the bat roosting potential of the buildings. The grounds were also assessed for their potential to provide roosting and foraging opportunities for bats. Notes were made about other protected species, such as nesting birds, where applicable.

## SITE LOCATION AND OUTLINE DESCRIPTION

1.3 The site is centred on OS grid reference NZ 49648 04049 and lies 0.7km to the north of the village of Faceby. The location of the site is shown on **Figure 1.** 

Figure 1 Site location.





1.4 Faceby Lodge Farm is situated within a rural area and is surrounded by agricultural land. The surrounding fields are divided by a mixture of dry stone walls and hedgerows which provide some connectivity across the landscape. The farm building complex is located 175m to the north of Faceby Beck, which has wooded banks; a large pond is located within the riparian corridor of Faceby Beck 130m to the north north east. These features provide excellent foraging and commuting habitat and the beck provides a potential flyway for bats to connect with other areas of good foraging habitat in the wider area.

## **PROPOSED WORKS**

1.5 The development proposals are understood to include the redevelopment of a proportion of the farm buildings and demolition of others to provide four residential dwellings with associated gardens and an access road.



## 2.0 SURVEY AND SITE ASSESSMENT

#### **OBJECTIVES OF FIELD SURVEY**

- 2.1 This survey was undertaken to assess the current potential use of the buildings by bats and to recommend additional survey work, mitigation and any licensing required to inform the planning application.
- 2.2 The aim of the survey is;
  - to prevent any bat being physically harmed;
  - to protect all roost sites where possible;
  - to provide mitigation for the maintenance of roosting sites in buildings, if present;
     and to
  - maintain the conservation status of bats in the area, where appropriate.

#### **LEGISLATION**

- 2.3 All bat species are European Protected Species ('EPS'), considered to require strict protection through listing on Annex IV of Council Directive 92/43/EEC of 21st May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora (the 'Habitats Directive'). Some bats (though none which occur in north-east England) are additionally listed on Annex II of the Directive; this relates to the designation of Special Areas of Conservation (SACs) and covers greater and lesser horseshoe bats, barbastelle and Bechstein's bat. The Habitats Directive has been transposed into English law through the Conservation of Habitats and Species Regulations 2010 (as amended). Inclusion on Annex IV means that member states are required to put in place a system of strict protection as outlined in Article 12 of the Directive; this is done through inclusion on Schedule 2 of the Regulations. Regulation 41 makes it an offence to:
  - Deliberately capture or kill a bat [Regulation 41(1)(a)]
  - Deliberately disturb a bat [R. 41(1)(b)]
  - Damage or destroy a breeding site or resting place of a bat [R. 41(1)(d)]
  - Keep, transport, sell or exchange, or offer for sale or exchange a live or dead bat or any part of a bat [R. 41(3)]



- 2.4 The definition of disturbance is explained in Regulation 41(2), which states that it includes any disturbance which is likely:
  - (a) to impair their ability (i) to survive, to breed or reproduce, or to rear or nurture their young...(b) to affect significantly the local distribution or abundance of the species to which they belong.
- 2.5 Licences permit otherwise unlawful activities, and can only be granted for certain purposes.
- 2.6 All bat species are additionally listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are therefore subject to provisions under Section 9 which makes it an offence to:
  - Intentionally or recklessly disturb a bat while it is occupying a structure of place that it uses for that purpose [Section 9(4)(b)]
  - Intentionally or recklessly obstruct access to any structure or place which any such animal uses for shelter or protection [Section 9(4)(c)]
- 2.7 The addition of reckless destruction or disturbance was also made through Schedule 12 of the Countryside and Rights of Way Act 2000.
- 2.8 In England the National Planning Policy Framework (NPPF) references the ODPM Circular 06/2005 (Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within The Planning System) which states that 'The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat'.

#### **LIMITATIONS**

2.9 Access was freely available to the exterior and interior of the buildings, however due to the deterioration in the condition of the buildings it was not possible to inspect the first floor of Building 6 as the stairs and wooden floor were rotten and Building 5 was full of piles of reclaimed building materials making it difficult to examine the internal wall.

#### **PERSONNEL**

2.10 The bat survey work was carried out by Dr Caroline Hillier MCIEEM. Caroline is senior ecologist employed by AES-LTD, she holds Natural England roost visitor and survey licences (2015-10998-CLS-CLS and 2015-15581-CLS-CLS respectively) and has over 12 years' experience in carrying out bat risk assessments and activity surveys.



## **SURVEY TIMES AND CONDITIONS**

The survey was carried out on 4<sup>th</sup> February 2019 under good conditions, weather was dry 2.11 and cool (9°C) and visibility was good.



## 3.0 METHODOLOGY

#### **DESK STUDY**

- 3.1 North East Yorkshire Environmental Data Centre (NEYEDC) was asked to provide records of bat roosts and bat activity within 2km of the site.
- 3.2 A web-based data search was carried out for statutory designated sites of nature conservation interest and granted European Protected Species Licenses within 2km of the site using the government Multi-Agency Geographic Information for the Countryside (MAGIC) website.
- 3.3 Overhead aerial photography was viewed using Google Maps (www.maps.google.co.uk) to look at the ecological context of the site.

#### **BUILDING INSPECTION**

- 3.4 A close inspection of the buildings was made in good light using binoculars and a torch where required. The exterior and interior of the buildings were examined for characteristic signs indicating the presence of, or use by bats. Characteristic signs include: droppings, urine streaks, clean cobweb-free areas on the ridge boards or over and in crevices and potential roost exit holes, piles / large amounts of invertebrate wings / exoskeletons and other food remains. All external crevices were checked using a torch.
- 3.5 A detailed description of the buildings was made and features were assessed for their suitability for both roosting and feeding bats, photographs were taken of the structures. The potential of the site to provide foraging habitat for bats was also assessed.
- 3.6 When an ecological appraisal is carried out the potential suitability of a proposed development site for bats is assessed applying the ecologist's professional judgement, based on the presence of habitat features within the survey area and wider landscape. The guidelines for assessing suitability are summarised in Table 4.1 of Collins 2016, reproduced below in **Table 1**.



Table 1: Guidelines for assessing the suitability of a proposed development site for bats

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> ).	Habitat could be used by a small number of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding habitat 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.
	A tree of sufficient size and age to contain potential roosting features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential <sup>c</sup> .	
	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	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.
Moderate	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).	Habitat is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger	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	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.	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.



- <sup>a</sup> For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.
- <sup>b</sup> Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et. al.*, 2015). This phenomena requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments
- <sup>c</sup> This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

## 4.0 RESULTS

#### **DESK STUDY**

North Yorkshire Bat Group note that of the 17 British species of bat 10 have been recorded in North Yorkshire. Pipistrelle bats are the most abundant and widespread bat species in the UK, but are thought to have undergone a significant decline in numbers in the last century. Estimates from the National Bat Colony Survey suggest a population decline of approximately 70% between 1978 and 1993. The current pre-breeding population estimate for the UK stands at approximately 2,000,000. The problems of estimating population trends have been compounded by the recent discovery that there are 3 distinct species of Pipistrelle bat in the UK. Brown long eared bats are the next commonest species in the county. Bats known to occur in North Yorkshire and their status in the county is shown in **Table 2.** 

Table 2: Status of bats of North Yorkshire

Species	Status
Brandt's bat <i>Myotis brandtii</i>	Rare, few roosts known
Brown Long Eared <i>Plecotus auritus</i>	Widespread, but local
Common Pipistrelle Pipistrellus pipistrellus	Widespread & fairly common
Daubenton's bat Myotis daubentonii	Locally widespread, frequent on water
Leisler's bat <i>Nyctalus leisleri</i>	Uncommon
Alcathoe bat <i>Myotis alcathoe</i>	Very rare
Natterer's bat <i>Myotis nattereri</i>	Rare, few roosts known
Noctule bat <i>Nyctalus noctula</i>	Scattered, few roosts known
Soprano Pipistrelle <i>Pipistrellus pygmaeus</i>	More local than common pipistrelle, few roosts known
Whiskered bat <i>Myotis mystacinus</i>	Local, few roosts known

#### Existing data relating to the site

4.2 Surveys have been carried out at Faceby Lodge Farm on two previous occasions by Ecoloserve Ltd. (2010) and Brindle & Green (2014). Both found evidence of bats roosting in various buildings, but both of the surveys were conducted late in the season. Ecoloserve undertook surveys in September and October and Brindle & Green in August and September. These surveys are considered sub-optimal as they did not include the peak



survey period of bat activity which is June and July. A summary of the results of the previous surveys undertaken by Ecoloserve and Brindle & Green are as follows:

- The Farmhouse at Faceby Lodge Farm is a maternity roost;
- Building 3 has a soprano pipistrelle roost (2 bats) within an interior wall;
- Building 4 is a feeding roost (probably for brown long-eared bats due to presence of butterfly wings);
- Building 5 is a common pipistrelle roost;
- Buildings 8 & 9 share an internal wall that is a roost for up to five common pipistrelle;
- Building 10 has a roost of three common pipistrelle in an outer wall above the main entrance;
- Building 11 is a brown long-eared bat roost;
- Building 14 is a common pipistrelle roost of <10 common pipistrelle, and
- Buildings 1, 2, 6, 7 and 12 had no evidence of bat roosts being present.

#### Data search with local records centre

4.3 NEYEDC returned three records of bats within the 2km search area, with no details regarding whether the records relate to roosting bats or field records of bats foraging or in flight. All of the records are of common pipistrelle. Two of the records are of common pipistrelle at the same location on two different survey occasions 1.09km to the east north east at Carlton-in-Cleveland. The remaining record is of common pipistrelle near a property on Faceby Road 1.25km to the east, also in Carlton-in-Cleveland.

#### **European protected species licensing check**

The Government's MAGIC website was used to obtain information on European Protected Species (EPS) licence data within 2km of the site. The results indicate there are five granted European Protected Species Applications with 2km of the site. The nearest application (2015-13898-EPS-MIT) is for the destruction of the resting place of a mixed colony of brown long-eared, common pipistrelle and Natterer's bats 1.17km to the south in Faceby between September 2015 and October 2017. The next nearest licence application is for the destruction of the resting place of brown long-eared and common pipistrelle bats (2015-14928-EPS-MIT) 1.25km to the east of the site at Carlton-in-Cleveland between October 2015 and October 2016. The final three licence applications are at the same location 1.78km to the east of the site (2015-15905-EPS-MIT, 2017-31377-EPS-MIT1 and 2017-31377-EPS-



MIT). 2015-15905-EPS-MIT is for the destruction of the resting place of brown long-eared and common pipistrelle bats between October 2015 and October 2025. 2017-31377-EPS-MIT1 is for the damage and destruction of the resting place of common pipistrelle bats between October 2017 and October 2022. The final licence application 2017-31377-EPS-MIT is for the damage and destruction of the resting place of common pipistrelle and brown long-eared bats between October 2017 and October 2022. The location of bat records (including the EPS licence applications) in relation to the site is illustrated on **Drawing 1**.

## **Designated sites**

- 4.5 NEYEDC records indicate that there are no non-statutory sites of nature conservation interest within 2km of the site.
- 4.6 The results obtained from the MAGIC search for statutory sites of nature conservation interest show that the site lies within the **North York Moors National Park**. The North York Moors Special Protection Area (SPA) and Special Area for Conservation (SAC) lie just outside of the 2km search area at 2.45km to the south east of the site.
- 4.7 **North York Moors SAC** is designated for the presence of large tracts of North Atlantic wet heathland with cross-leaved heath *Erica tetralix*, dry heathland and blanket bogs. **North Yorks Moors SPA** qualifies under Article 4.1 of the Directive (70/409/EEC) by supporting populations of European importance of golden plover *Pluvialis apricaria* (2.3% of the breeding population) and merlin *Falco columbarius* (3.1% of the breeding population) in Great Britain. None of the citations mention bats, but habitats within the North York Moors are likely to provide some excellent foraging habitat for bats in the wider area.



## **FIELD SURVEY**

4.8 No field signs such as droppings or butterfly wings were noted at the time of the survey. The buildings have deteriorated considerably since they were last survey by Brindle & Green in 2014, Building 9, Building 13 and part of Building 14 have collapsed and the condition of the roofs are very poor. A detailed description of the buildings and surrounding habitats and potential for bats is provided in **Table 3**.

**Table 3: Site description** 

Feature	Description	Bat risk
Building 1	Hay barn with almost flat, corrugated sheet roof which sits directly onto slender wooden beams. Building of wooden framed construction with interior breeze block walls and external corrugated sheet walls and breeze block end walls.	Negligible
Building 2	Open, single storey barns, in two sections with arched corrugated sheet roofs supported by a metal frame. Lower walls in areas are constructed with breeze blocks. Upper walls at either end no longer has wooden planks, just small bits of corrugated sheet remain. Southern wall partly comprises wooden planks. Currently two horses in southern barn.	Negligible
Building 3	Single-storey, brick-built, stable block with a pitched slate roof. Asbestos guttering is attached directly to wall with brackets. Gaps were noted within internal walls and there were opportunities associated with the roof including missing and displaced slates and gaps at the tops of the walls between the roof and stonework.	Known roost
	A <b>soprano pipistrelle roost</b> was previously noted to the east of the building, on the southern aspect, above a boarded up doorway. This is no longer boarded up but opportunities in the building still remain.	
Building 4	A brick-built, single-storey stable block with pitched slate roof and wooden framed windows and doors.	Feeding roost
	Close-coupled roof construction with wooden beams, joists and purlins. Condition of roof has deteriorated considerably due to climbing plant.	
Building 5	Large stone-built storage building comprising with a pitched corrugated sheet roof. The building adjoins building 6 on its eastern side. The interior roof structure is a collar beam roof with beams resting directly on the top of the walls.	Known roost
	Many crevices within internal walls particularly along the southern wall of the building. The southern wall	

Feature	Description	Bat risk
	(~0.5m wide) of the building was previously used to heat the orchard to the rear of the building and a boiler used to pump hot air through a system of flues within the wall. These still provide roosting opportunities for bats.	
Building 6	Two-storey, stone-built, granary building with a pitched corrugated sheet roof. Close-coupled roof construction over narrow wooden beams and steel supports. Roof lights allow light ingress.  Excessive damp and rot, unsafe to survey first floor	Low
	due to condition of woodwork. Gaps in stonework within interior and on the exterior due to deterioration in condition and wooden beam failing and damaging the stone walls <b>Tawny owl</b> roosting in wooden beams. Evidence of previous use by swallows.	
Building 7	Single-storey, stone-built pig pen with a pitched slate roof. The building is dilapidated and the roof is in very poor condition with most of the ridge tiles missing now allowing water ingress which has resulted in excessive damp and the collapse of the wooden sarking. The stone wall in the south west corner has partially collapsed any many rows of slates are missing at the northern end of the building.	Negligible
Building 8	Large stone-built barn with a pitched corrugated sheet roof over a steel metal frame. Roof has plastic roof lights allowing light ingress. Currently houses sheep.	Negligible - directly adjoins known roost (Building
	Wooden sliding doors at southern aspect and wooden frames window. Holes in roof and walls.	9)
Building 9	Large brick-built barn which adjoins Building 8 to the east and building 10 to the west. The roof was a pitched corrugated sheet roof of wooden framed construction but it has now collapsed leaving just the walls.	Known roost
	Holes in brick wall that adjoins building 8 has previously had bat droppings associated with them and <b>common pipistrelle</b> and <b>soprano pipistrelle</b> were found to be roosting in the gaps. These gaps, and many other deep cracks, gaps and holes in the wall remain.	
Building 10	Large rectangular, stone-built piggery with rendered walls in some areas. The building is dilapidated and comprises a pitched slate roof with a wooden roof construction and plastic roof lights allowing light ingress.	Known roost
	Interior brick walls at gable ends have gaps around wooden beams and between the wall and roof that could support roosting bats. The roof of the southern half of the piggery has fallen in.	

Feature	Description	Bat risk
	South facing doorway with wooden frame and lintel and crack in stonework. Previous surveys noted bat droppings associated with a crack above the doorway and emergence surveys found three <b>common pipistrelle</b> roosting in the crack. No dropping noted in 2019 but substantial cracks present and former roost site is still intact.	
Building 11	Stone built, single-storey, stable block with pitched slate roof. Cobbled floors. Eastern aspect has wooden stable doors and wooden framed windows. Roof is of close-coupled construction with wooden beams, rafters and purlins. Opportunities for bats in gaps along either side of the ridge beam still present, although ridge has some gaps now. Wooden boarding on walls in southern stable also suitable for crevice dwelling bats.	Known roost
	Previously bat droppings ( <b>brown-long eared</b> size) found in southern stable. Nesting swallows.	
Building 12	Single-storey, brick-built building used for feed and tack storage. Pitched slate roof of wooden framed construction with roof lights. Roof in very poor condition with lots of missing ridge tiles and slates exposing the ridge beam to the elements.	Negligible
	Old birds' nest on fuse box and evidence of previous use by swallows.	
Building 13	Building has collapsed just corrugated sheet walls and a small central section of the roof remain.	Negligible
Building 14	Dilapidated hay barn complex with breeze block lower walls and upper walls and pitched roofs of corrugated sheet with plastic roof lights. Interior is of trussed rafter construction with wooden beams and rafters. Internal walls are of breeze block construction. Wooden framed wooden doors on northern aspects.	Known roost
	Western barn has now totally collapsed whilst the eastern barn is still standing and currently houses sheep.	
	Previous surveys have recorded common pipistrelle leaving the building and common pipistrelle, soprano pipistrelle and brown long-eared bats feeding in close proximity. Also a roost of <10 common pipistrelle.	
Surrounding Habitats	Yard, mature garden associated with the farm house and fields of pasture divided by hedgerows and dry stone walls.	Low
	The pond and stream corridor associated with Faceby Beck is likely to provide good habitat for foraging and commuting bats and provides connectivity to other suitable habitat in the wider area.	Moderate



## 5.0 DISCUSSION

- 5.1 A detailed inspection of the buildings found no field signs indicative of use of the buildings by bats. The visit took place outside of the bat activity season, when signs would be most evident, so droppings on external walls in particular are unlikely to be still present.
- 5.2 The roofs of the eastern part of Building 14, Building 13 and Building 9 have all collapsed. A dividing brick wall between Buildings 8 and 9 remained and still provided opportunities for bats to gain ingress into the structure.
- 5.3 Buildings 3, 4, 5, 8/9, 10, 11 and 14 have been identified as roosts in past surveys and the opportunities to support roosting bats remain, although due to the ongoing deterioration of the condition of the buildings it cannot be ascertained if the thermal properties of the buildings have changed substantially. The walls of building 9 and Building 5 had deep holes on the walls that also had the potential for hibernating crevice dwelling bats.
- 5.4 There were no trees within the site that had any potential for roosting bats.
- 5.5 Previous use by nesting birds was evident in most of the farm buildings (swallow, wren, blackbird, pigeon) and a roosting tawny owl was seen in Building 6.



## 6.0 ASSESSMENT

- 6.1 The conversion of the farm buildings in to residential dwellings has the potential to impact on crevice dwelling and/or void dwelling bats.
- 6.2 The hardstanding around the farm buildings has low potential for foraging bats. No significant negative impact on foraging or commuting bats is anticipated.
- 6.3 There were no mature trees within the survey area, just some regenerating sycamore and elder which did not have any potential to support roosting bats.
- The surrounding fields are divided by a mixture of dry stone walls and hedgerows which provide some connectivity across the landscape. The farm building complex is located just 175m to the north of Faceby Beck, which has wooded banks; There is a large pond within the riparian corridor of Faceby Beck which is located 130m to the north north east, these features provide excellent foraging and commuting habitat and the beck provides a potential flyway for bats to connect with other areas of good foraging habitat in the wider area.
- 6.5 Nesting birds are noted utilising several of the buildings. Nesting birds are protected by law under The Wildlife & Countryside Act (1981) as amended and some species listed under Schedule 1 are offered additional protection from disturbance. Council Directive 2009/147/EC on the conservation of wild birds (the 'Birds Directive') provides for the conservation and management of all wild bird species naturally occurring in the European Union, their nests, eggs and habitats. The Birds Directive bans activities that directly threaten birds (e.g. deliberate killing and destruction of nests and young), regulates hunting of selected species, bans non-selective and large scale killing of birds, and promotes research for bird conservation and management. Article 4(4) of the Birds Directive requires that member states "should strive to avoid pollution or deterioration of habitats." The Conservation of Habitats and Species (Amendment) Regulations 2012 provide a fuller transposition of the Birds Directive into English law. Regulation 8 introduces a new Regulation 9A to the Habitats Regulations for duties of appropriate authorities in relation to wild bird habitat. Regulation 9A(3) addresses the transposition of Article 2 of the Birds Directive, while Regulation 9A(8), requiring competent authorities to "use all reasonable endeavours" to "avoid any pollution or deterioration of habitats of wild birds."



## 7.0 RECOMMENDATIONS

- 7.1 It is recommended that roost characterisation surveys are undertaken between May and July /August 2019<sup>1</sup> for the buildings that have been assessed as having potential for use by bats and where previous use by bats has been noted. Emergence surveys will be required for each building so that enough information is gathered regarding the presence or absence of bats, species composition of bats using the buildings and where applicable how the bats are utilising features of the buildings for roosting.
- 7.2 The information above will be required to either produce a method statement or to devise a mitigation strategy and to inform a Natural England European Protected Species mitigation licence application for the buildings where roosting bats will be negatively impacted upon as a result of the proposed development.
- 7.3 Due to use by birds and previous use by nesting birds it is recommended that the buildings are demolished outside of the bird breeding season.

## 8.0 REFERENCES

Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> Edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1.

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<sup>&</sup>lt;sup>1</sup> It is important that survey is taken throughout the active period for bats including surveys within optimum months for survey - June & July



## **APPENDIX 1 PHOTOGRAPHS**



**Photograph 1** Building 1 southern aspect.



**Photograph 2** Building 2, hay barns currently housing two horses.





**Photograph 3** Building 3 southern and eastern aspect.



**Photograph 4** Building 3 northern aspect. Showing roof in poor condition.



Photograph 5 Building 4, eastern and southern aspect. Roof in poor condition and damaged due to climbing plant.



**Photograph 6** Building 5, northern aspect.





**Photograph 7** Building 5 internal structure. Illustrating storage of reclaimed building materials.



**Photograph 8** Interior wall of building 5 showing example of hole in brickwork.





**Photograph 9** Building 6, northern aspect showing cracks in stonework due to failing wooden lintel and missing stones.



Photograph 10 Building 6, internal roof structure examined through holes in floor. Circled area shows location of roosting tawny owl.





**Photograph 11** Building 7, southern and western aspect showing collapsed corner of building.



Photograph 12 Building 7, internal structure showing area of missing roof slates at northern end of the building. Building is in a state of disrepair.





**Photograph 13** Brick wall between buildings 8 & 9 showing deep cracks in brickwork, some of which lead deep into the cavity.



**Photograph 14** Building 9 – Roof has collapsed exposing the interior to the elements. Walls with gaps in brickwork remain.





Photograph 15 Northern part of piggery (Building 10) in a state of disrepair, but roof is still standing.



**Photograph 16** Southern part of piggery, roof has collapsed exposing it to the elements.





**Photograph 17** Cracks in stonework on southern aspect of piggery evident, with former roost site still present (circled) along with larger holes and cracks.



**Photograph 18** Building 11 - still has opportunities for void and crevice dwelling bats.





Photograph 19 Building 12 has lots of ridge tiles missing and missing slates. Ridge draughty, negligible potential.



Photograph 20 Building 13, mostly collapsed, just a small central section of roof and corrugated sheet walls remaining.





Photograph 21 Western part of Building 14, mostly collapsed.



Photograph 22 Western part of Building 14, barn still intact and houses sheep.





