Andrew Brennan, Ecology

BAT REPORT

Mr & Mrs D Cockerill

Linglands Cottage, Gowlands Lane, Cloughton, North Yorkshire. YO13 ODU

September 2014

ANDREW BRENNAN BSc (Hons) MCIEEM

After graduating from Sheffield Hallam University in 2005 with a BSc (Hons) in Environmental Conservation I have gained ten years post graduate experience working for a large ecological consultancy. In this time I have worked on and managed a wide range of ecological projects, both large and small scale. I am a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM) I have gained broad ecological survey experience and am registered to use Natural England Class Survey Licences for Great Crested Newts and Bats.

16 The Rise,

Thornton Le Dale,

Pickering,

North Yorkshire.

YO18 7TG

CONTENTS

1.0 NON TECHNICAL SUMMARY

1.1 It is not considered that proposed redevelopment of the barn will impact upon any statutory sites for nature conservation.

1.2 No records of roosting bats were received within 1 km of the site.

1.3 An internal and external bat assessment found the building to have moderate bat roosting potential, but no evidence of roosting bats.

1.4 Two nocturnal presence / likely absence surveys found no evidence of roosting bats within the barn.

1.5 It is recommend that, in order to further enhance the site for bats, and therefore contribute to the requirements of NPPF through enhancement of biodiversity that bat boxes are placed upon the barns or nearby trees or buildings

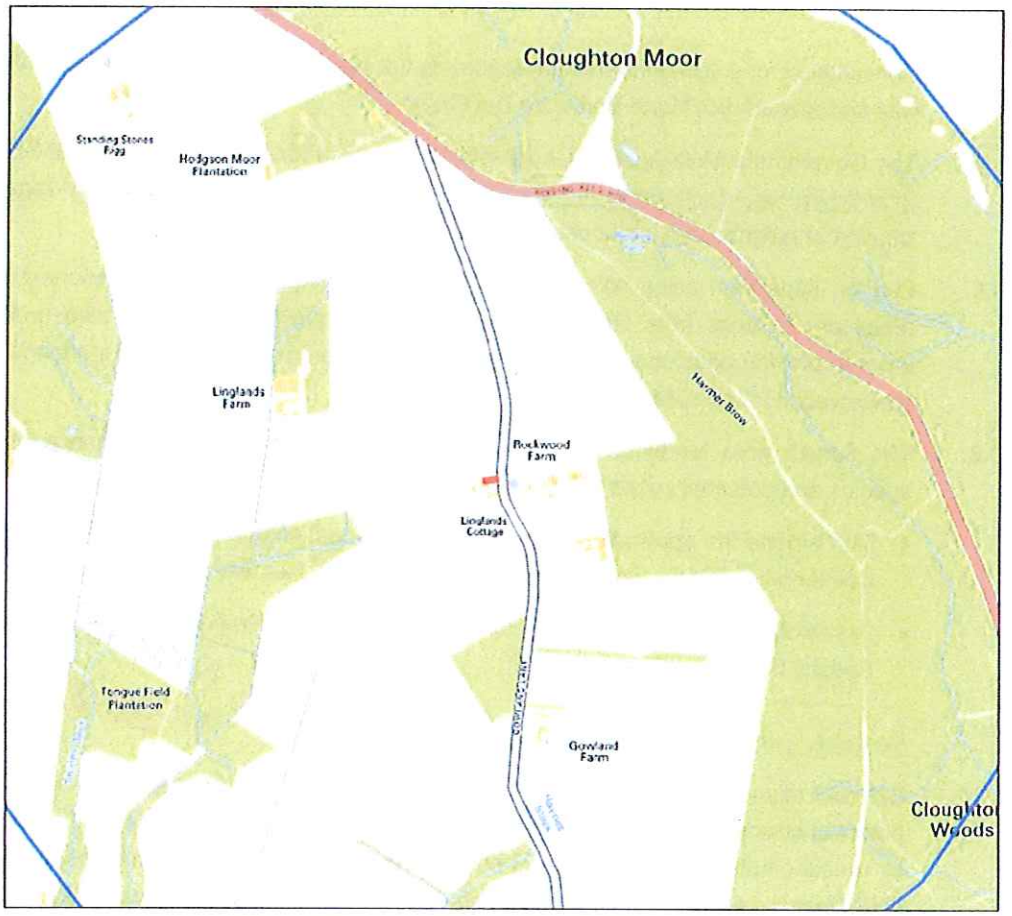
1.6 It is recommended that works that may affect nesting birds are undertaken outside of the nesting bird season (March to August) or checks are made to ensure no nesting birds are present before work commences.

2.0 INTRODUCTION

2.1 This report provides the findings of an initial bat assessment and subsequent nocturnal presence/ absence surveys of a barn at Linglands Cottage, Cloughton. The site is centred on OS grid reference SE 990 962 see Figure 1.

2.2 Current proposals are to convert a barn and garages and outbuildings into ancillary living accommodation.

Figure 1: Site Location Plan



3.0 METHODOLOGY

3.1 The following methodology takes into account guidance provided in the Bat Survey Good Practice Guidelines[1] the 2004 Bat Workers Manual[2] and North Yorkshire Bat Groups Bat Survey Requirements[3].

3.2 Surveys were undertaken by Andrew Brennan, licensed bat ecologist (Natural England Class Licence Registration Number: CLS 00302) and also Carl Thomas a trainee bat worker with three years survey experience.

Desk Based Assessment

3.3 Consultation for existing information regarding the baseline bat data for the site and local area was undertaken with North Yorkshire Bat Group.

3.4 The Government Multi-Agency Geographic Information for the Countryside (MAGIC) website (http://www.natureonthemap.naturalengland.org.uk) for existing information regarding the location of neighbouring statutorily designated sites.

3.5 Further inspection, using colour 1:25,000 OS base maps (www.ordnancesurvey.co.uk) and aerial photographs from Google Earth (www.maps.google.co.uk), was also undertaken in order to provide additional context and identify any features of potential importance for nature conservation in the wider countryside.

3.6 The search area for biodiversity information was related to the significance of sites and species and potential zones of influence, as follows:

- 5km around the application area for sites of International Importance (e.g. Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site)
- 2km around the application area for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI))

Internal / External Building Assessment

3.7 External aspects of the building were examined on the 15th August 2014 to determine any potential or actual access points and roost sites. Structural features with the potential for use by roosting bats were recorded and suitable access points such as small gaps under eaves/ soffit boards, raised or missing ridge tiles and gaps at gable ends were identified. Evidence to substantiate use was also sought including staining from urine and/or fur and the presence of bat droppings in and around features. Indicators that potential access points had not recently been used included the presence of heavy cob-webbing and general detritus around these points.

3.8 The interior of the building was also visually assessed for evidence of bat activity and/or for the potential to be used by bats on 15th August 2014.

---

[1] Hundt L, (2012) Bat Survey Good Practice Guidelines, *Bat conservation Trust,* 2nd Edition
[2] Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004), 3rd Edition Bat Workers' Manual
[3] North Yorkshire Bat Group, (2013), *Bat Survey Requirements, Minimum Standards in North Yorkshire*

Evidence of a roost would be determined by the presence of a dead or live bat(s), concentrated piles or scattered droppings, food remains such as insect wing fragments as well as scratch marks and/or staining.

Nocturnal Presence/Absence Survey

3.9 A series of nocturnal presence/ absence surveys was undertaken on the barn. As specified within the Bat Conservation Trust (BCT) guideline (Hundt, 2012) these surveys were undertaken to provide sufficient survey effort for buildings with a moderate roost potential.

3.10 The surveys were undertaken during appropriate weather conditions i.e. an ambient temperature of at least 10°C, with little/ no wind and rain, as noted in Table 1.

Table 1 Nocturnal survey sunset/sunrise and weather details

Survey date	Start temp	Wind (BF)	Rain (1 -5)	Cloud Cover	Sunset time	Start time	Finish time
15/08/2014	16°C	0	0	60%	20:30	20:15	21:50
31/08/2014	14°C	0	0	5%	19:58	19:40	21:43

4.0 RESULTS

Desk Based Assessment

Statutory Designated Sites

4.1 A search of the MAGIC Website found that the North York Moors was situated 2.5 km east of the site. The North York Moors comprises of a Special Protection Area (SPA), a Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI) and a National Park. None of the key features or designating species of these sites are relating to bats.

Non- Protected/Notable Species

4.2 The North Yorkshire Bat Group returned no bat records from within a 1 km radius of site.

Building Descriptions (see Figure 2)

4.3 The wall construction of the single storey barn comprised a stone outer and concrete block inner with a cavity between. The roof comprised a pitched clay pan tile roof and clay ridge tiles with a bank of 17 solar panels to the south. All windows and entrances were situated on the southern aspect which comprised three garage doors leading to the western and central internal sections and a timber window and door leading to the eastern internal section. Wooden soffits and facias were present at the eaves. No barge boards were present on the gable ends. The western gable was abut to a further building used as dog kennelling.

4.4 Potential bat access points comprised the following;

- Numerous slipped tiles throughout roof structure;
- Occasional missing roof tiles;
- Gaps in soffits and facias on northern and southern aspects providing access to the top of the wall plate and wall cavity.

4.5 Internally the building was divided into three separate sections. Throughout the building the roof was a traditional wooden purlin and rafter construction which had been reinforced with modern rafters, trusses, collars and close couplings. The roof was underfelted which contained sporadic holes which exposed the pan tiles and where these had slipped, gaps providing potential bat access points were present.

4.6 The western and central rooms were accessed via wooden garage doors. Each room was vaulted with concrete block walls and partitions. These rooms had substantially sized wooden tie beams and queen posts, which at the joints some gaps were present. At the time of survey these gaps and the ridge were both heavily cobwebbed making them unlikely to be used by roosting bats. On the western gable wall a large hole was present close to the apex which was open to the exterior through a missing tile. Within the roof structure a number of swallow nests were present.

4.7 The eastern room contained a roof void creating a ground floor room which was entirely plastered.

The roof void was typical of the roof construction throughout the rest of the building and measured approximately 1.5 m to the ridge which was heavily cobwebbed. Daylight was visible in sections of the eaves where the soffits and facias were damaged and thus providing potential bat access point to the roof void. A small amount of insect frass was present within the roof void but was not considered to be associated with bat feeding remains.

4.8 Due to the absence of any live or dead bats, droppings and feeding remains and due to the heavily cobwebbed ridges and crevices in the timber roof construction. It is considered reasonably unlikely that the bats use any internal features or features accessed from inside the building.

4.9 Following the internal and external assessment it is considered that the following features provided potential bat roosting opportunities;

- Inside wall cavities accessed through gaps at the eaves;
- Between roofing felt and tiles, accessed via damaged pan tiles;

As such it is considered that the building provides moderate bat roosting potential.

Figure 2: Building and Notable Potential Bat Access Points Plan

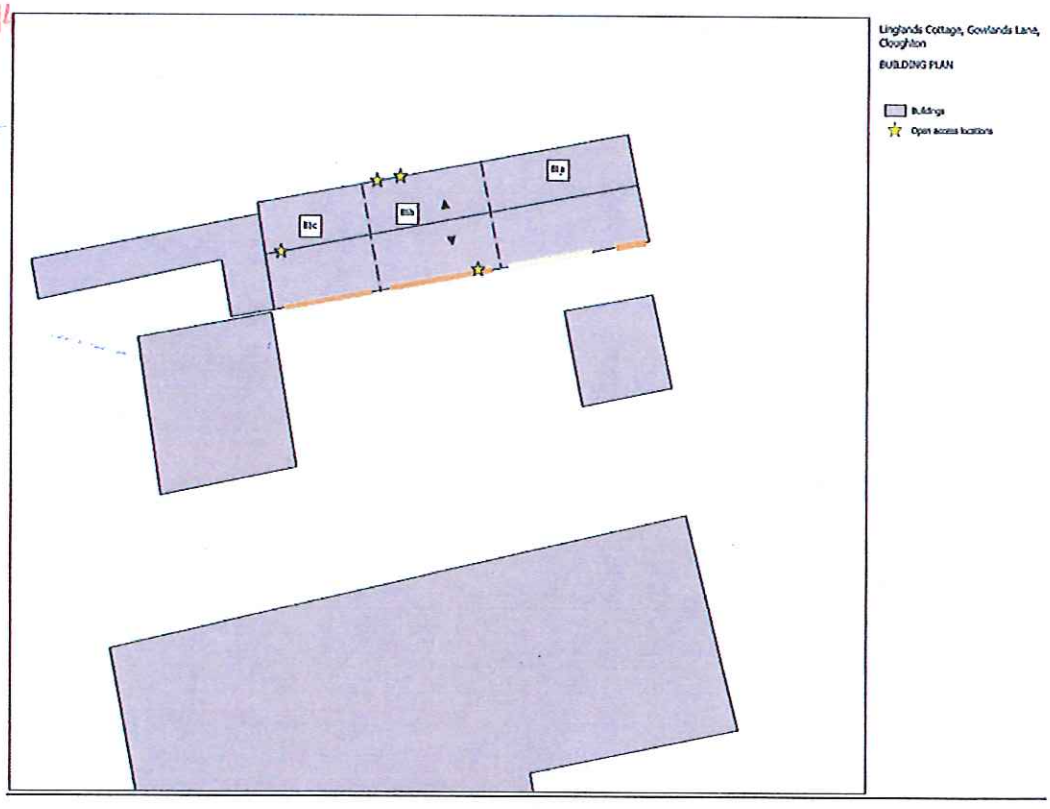


Photo Plates

Photo 1: South Eastern Aspect of the Barn

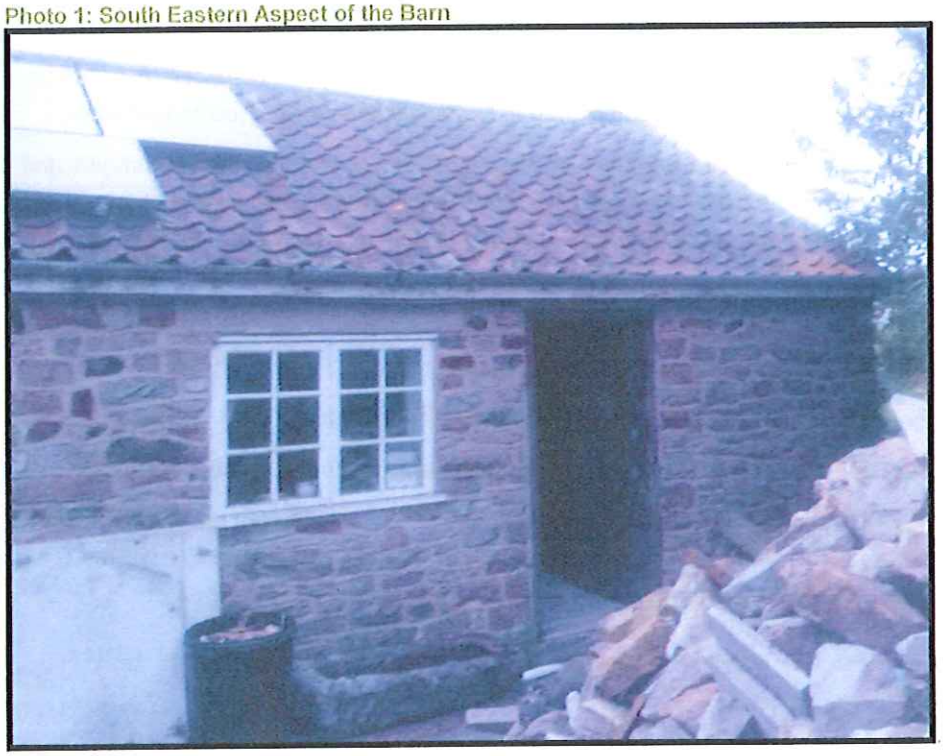


Photo 2: South Western Aspect of the Barn

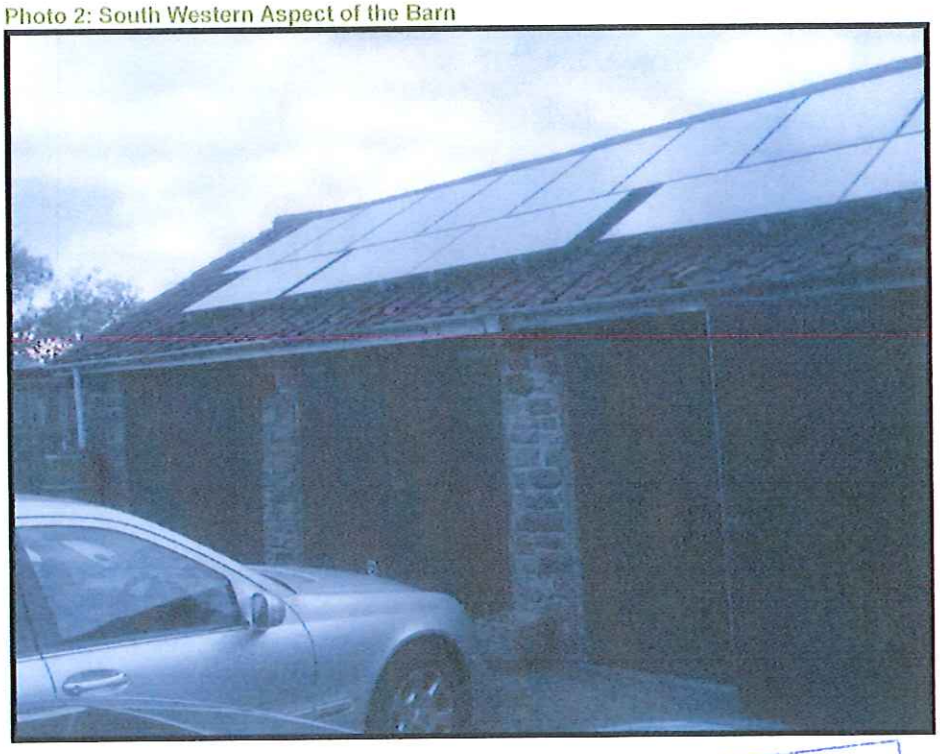


Photo 3: Western Gable with Adjoining Kennel.

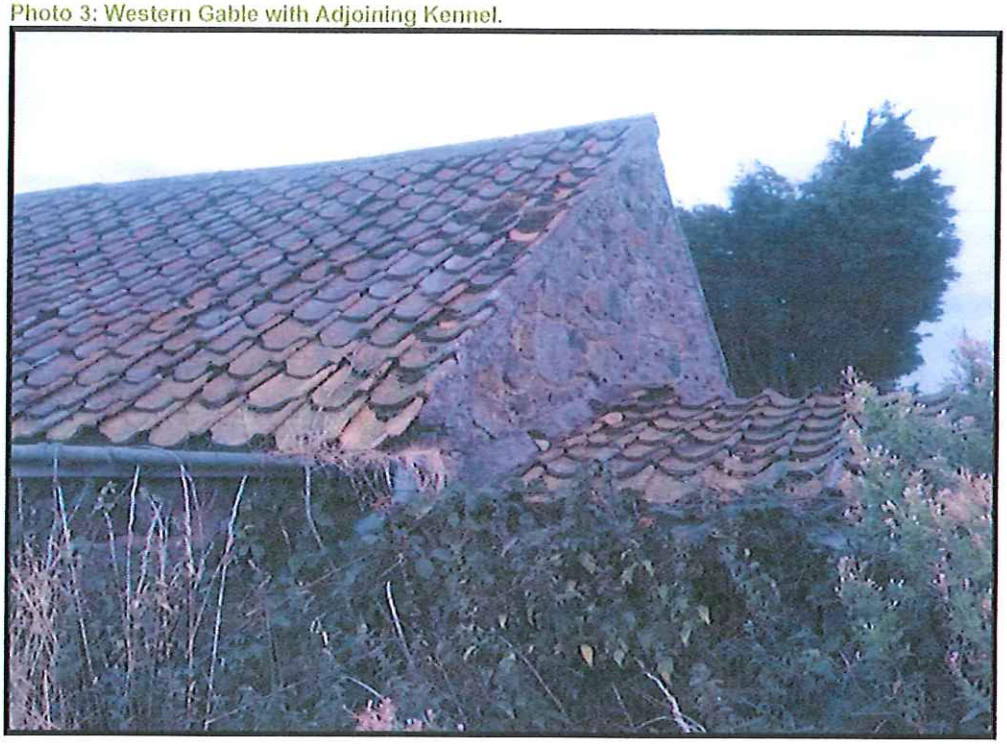


Photo 4: Northern Aspect and Eastern Gable.

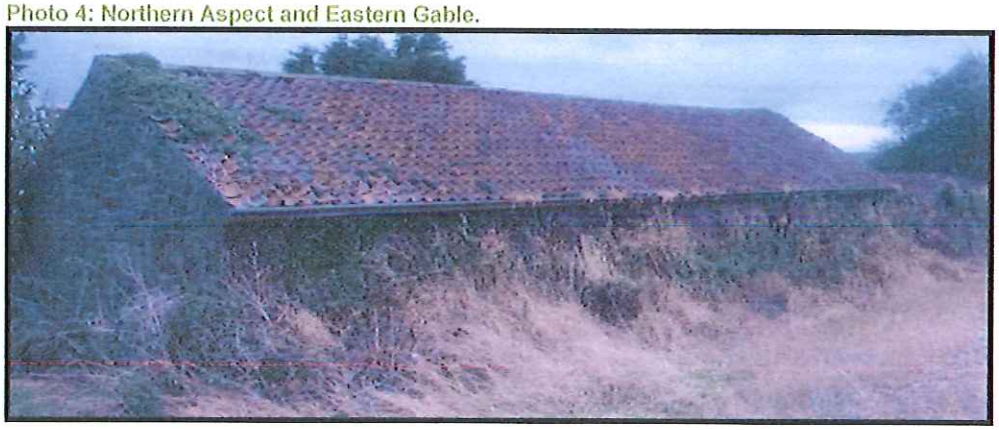


Photo 5: Inside Western Room.

Photo 6: Inside Central Room.

Photo 7: Inside Eastern roof Void.

Nocturnal Building Assessments

4.10 It was considered that the building offered moderate potential for roosting bats, as such a series of nocturnal surveys were undertaken to assess the presence/ likely absence of bats. The series of surveys comprised 2 dusk surveys undertaken during August 2014.

Survey 1 – 15/08/14

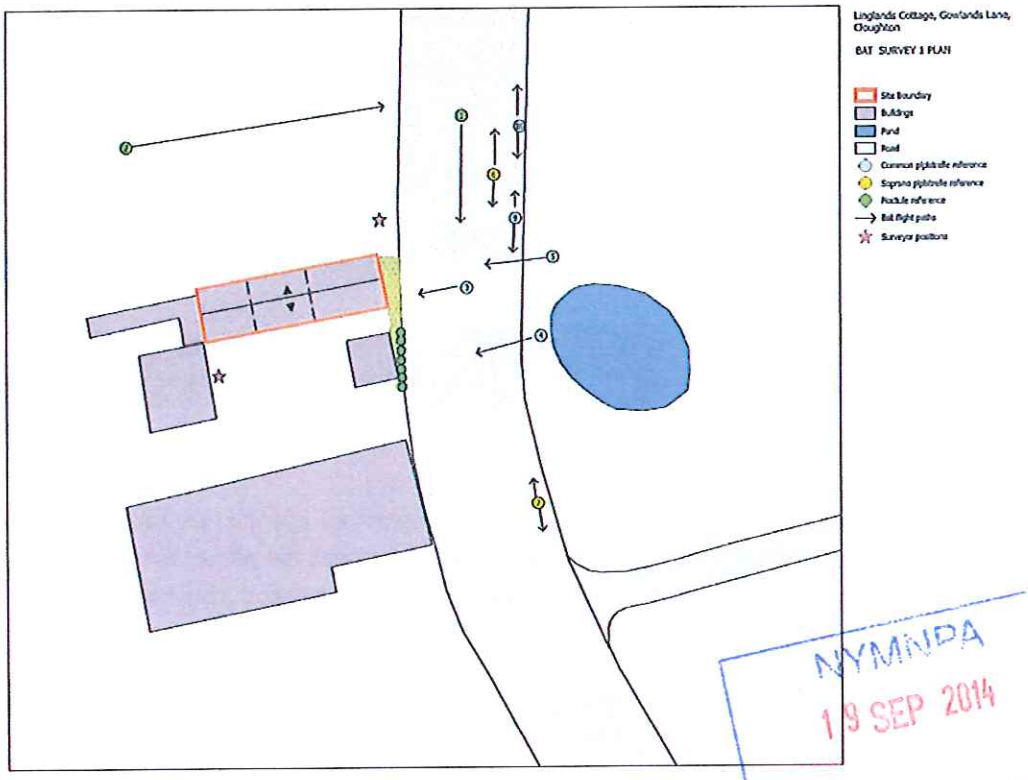
4.11 No bats were observed emerging from the building during the survey. A number of common pipistrelle *Pipistrellus pipistrellus,* Soprano pipistrelle *Pipistrellus pygmaeus* and noctule *Nyctalus noctula* bats were observed foraging and commuting during the survey. The first bat was a noctule which was observed 39 minutes after sunset commuting southwards. A further Noctule was observed commuting eastwards over an arable field soon after. Three individual common pipistrelles were observed commuting from the west before foraging over the road for much of the remainder of the survey. Figure 3 and Table 2 below provides the results of the survey

Table 2: Results of Survey 1

Ref	Time	Species	Behaviour	Passes	Habitat
1	20:48	Noctule	Commuting	1	High
2	20:49	Noctule	Commuting	1	Arable
3	21:12	Common pipistrelle X 2	Commuting	1	Over Barn
4	21:16	Common pipistrelle	Commuting	1	From over road

Ref	Time	Species	Behaviour	Passes	Habitat
5	21:17	Common pipistrelle	Commuting	1	From over road
6	21:17	Soprano pipistrelle	Foraging	4	Road
7	21:20	Soprano pipistrelle	Foraging	3	Trees
8	21:23	Soprano pipistrelle	Pass	1	No visibility
9	21:30	Common pipistrelle	Foraging	2	Road
10	21:33	Common pipistrelle X 2	Foraging	2	Road

Figure 3: Nocturnal Bat Survey 1 Plan



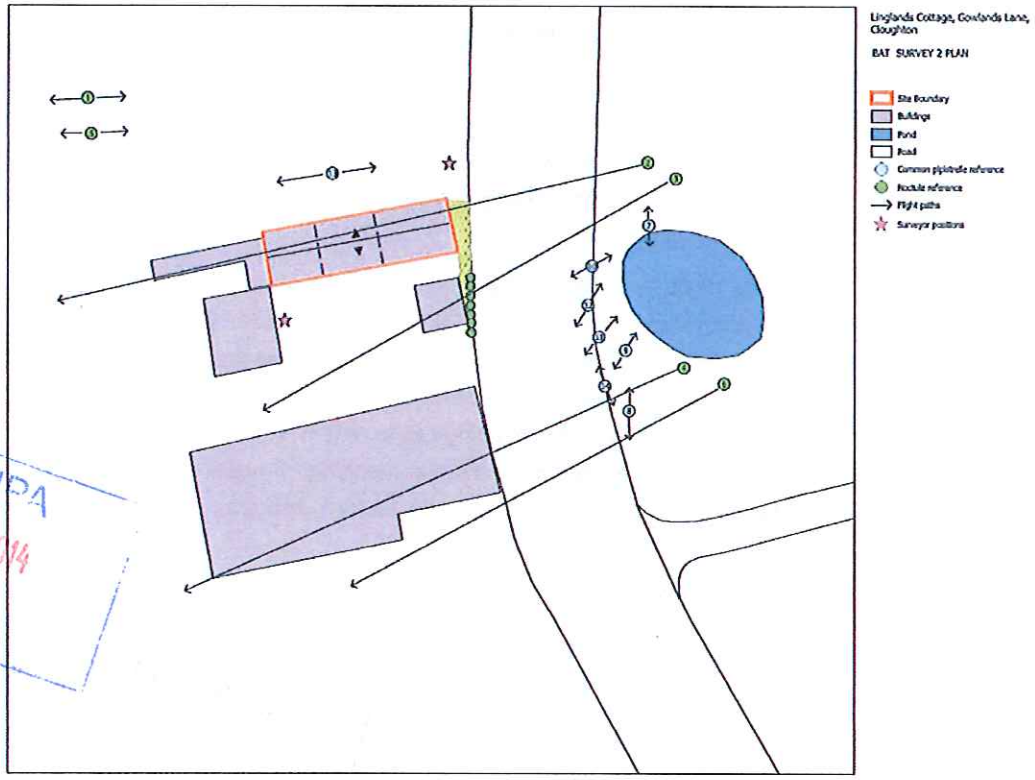
Survey 2 – 31/08/2014

4.12 No bats were observed emerging from the building during the survey. A number of common pipistrelle and noctule bats were observed foraging and commuting during the survey. The first bat was a noctule which was observed 17 minutes after sunset, foraging over an arable field to the north of the barn. Further Noctule bats were observed commuting westwards from an adjacent property soon after. Subsequent activity comprised common pipistrelle bats foraging over the road and along the edge of the arable field. Further common pipistrelle bats were heard but not seen foraging in the vicinity of the road. Figure 4 and Table 3 below provides the results of the survey

Table 3: Results of Survey 2

Ref	Time	Species	Behaviour	Passes	Habitat
1	20:15	Noctule	Foraging	4	Arable
2	20:17	Noctule	Commuting	1	From over road
3	20:18	Noctule	Commuting	1	From over road
4	20:20	Noctule	Commuting	1	From over road
5	20:23	Noctule	Foraging	4	Arable
6	20:26	Noctule	Commuting	1	From over road
7	20:28	Common pipistrelle	Foraging	3	Garden over road
8	20:34	Common pipistrelle	Foraging	2	Yard
9	20:38	Common pipistrelle	Foraging	2	Garden over road
10	20:38	Common pipistrelle	Foraging	3	Road
11	20:41	Common pipistrelle	Foraging	3	Road
12	20:41	Common pipistrelle	Foraging	3	Road
13	20:47	Common pipistrelle	Foraging	2	Field edge
14	20:58	Common pipistrelle	Foraging	2	Road

Figure 4: Nocturnal Bat Survey 2 Plan



5.0 DISCUSSION & RECOMMENDATIONS

5.1 It is not considered that proposed redevelopment of the barn will impact upon any statutory sites.

5.2 Bats and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010. In summary this makes it an offence to damage, destroy or obstruct any place used by bats for breeding and shelter, disturb a bat, or kill, injure or take a bat. Seven bat species including noctule (but not common pipistrelle) are listed as Species of Principal Importance under the provisions of the NERC Act 2006.

5.3 During the internal/ external assessment and the two nocturnal surveys, no evidence of roosting bats was identified in association with the barn. The Bat Survey Good Practice Guidelines suggest that two surveys undertaken within the optimal survey period on a building with moderate potential will be sufficient to provide confidence in a negative survey result. As such it is not considered that the proposed conversion of the barn is constrained by roosting bats.

5.4 Some bat activity by common species was observed in the survey area during the nocturnal surveys. Based on flight paths of commuting bats, it is likely that these bats roost in areas beyond the scope of survey. It is not considered that the works to the barn will impact the habitat that was observed to be used for foraging or commuting.

5.5 To further enhance the site for bats, and therefore contribute to the requirements of NPPF through enhancement of biodiversity, it is recommended that consideration be given to the provision of roosting opportunities on the external walls of the new building. Suitable designs would include maintenance-free Schwegler 1FF. Alternatively boxes could be placed upon trees or other nearby buildings.

5.6 A number of bird nests were observed within the buildings during the internal and external surveys. All nesting birds and their nests are protected under the Wildlife and Countryside Act, 1981 (as amended). It is therefore recommended that works to the building that may affect nesting birds are undertaken outside of the breeding bird season (March to August) to minimise the risk of disturbance to breeding birds. If this is not possible then the barn should be checked for nesting birds prior to works commencing. If nests are found to be active then commencement of works should cease until chicks have fledged.