



UPPER BELLE CLIVE FARM.

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ECOLOGY SURVEY.

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1. INTRODUCTION.

1.1. There are plans to reconstruct and develop a derelict building and associated surrounding land within Thurlstone, Sheffield. Proposed plans can be found in Appendix IV of this report.

1.2. Whitcher Wildlife Ltd has been commissioned to carry out an ecology and bat survey of the site to establish whether there are any issues that may affect the proposed works.

1.3. The initial site survey was carried out on 11th May 2016 with a subsequent bat dusk emergence survey conducted on 28th June 2016. This report outlines the findings of those surveys and makes appropriate recommendations.

1.4. Appendices I and II of this report provide additional information on specific species and are designed to assist the reader to understand the contents of this report.

2. SURVEY METHODOLOGY.

2.1. Prior to visiting the site the survey area was cross referenced to maps and aerial photographs to give a general idea of the habitats and potential issues within the area and to identify potential access and walking routes.

2.2. The survey area and immediate surrounding area was thoroughly searched for evidence of badger (*Meles meles*) activity by looking for the following signs in line with Harris S, Cresswell P and Jefferies D (1989). *Surveying Badgers*. Mammal Society:-

- * Badger setts.
- * Badger latrines or dung pits.
- * Badger snuffle holes and evidence of foraging.
- * Badger paths.
- * Badger prints in areas of soft mud.
- * Badger hairs caught on fencing.

2.3. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of water vole (*Arvicola amphibius*) activity by looking for the following signs, in line with Rob Strachan, Tom Moorhouse and Merryl Gelling (2011). *Water Vole Handbook: Third Edition*:-

- * Water vole burrows.
- * Water vole faeces and latrines.
- * Water vole feeding stations.
- * Water vole runs.
- * Water vole prints in areas of soft mud.
- * Water vole lawns.
- * Predator field signs.

2.4. The survey area was searched for watercourses and where found all watercourses within the survey area and for approximately 50m in each direction were thoroughly searched for evidence of otter (*Lutra lutra*) activity by looking for the following signs in line with the P Chanin (2003). *Monitoring the Otter and Conserving Natura 2000 Rivers: Monitoring Series No10 Guidelines*:-

- * Otter prints in soft mud.
- * Otter spraints.
- * Otter Holts.

2.5. The survey area was searched for watercourses and waterbodies. Where found, and where safe to enter the water, all were thoroughly searched for the presence of crayfish, for approximately 50m in each direction of the site, by searching under rocks and logs. Where stated, crayfish traps were also deployed into the watercourse. All survey work was carried out in accordance with the *Conserving Natural 2000 Rivers Monitoring Series No 1, Protocol for Monitoring the White Clawed Crayfish*.

2.6. The survey area was searched for mature trees and derelict buildings and where found these were checked for potential bat roosting sites in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn) by looking for the following signs:-

- * Holes, cracks or crevices.
- * Bat Droppings.

2.7. The land immediately adjacent to the survey area was assessed for bat roosting potential and bat foraging potential. Connective routes and flight lines were also assessed whilst on site and using maps of the area.

2.8. This was followed by a dusk emergence survey carried out in line with Collins, J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3rd edn). Surveyors were equipped with suitable equipment including Anabat SD2 static bat detectors and Batbox Duet bat detectors.

2.9. The area within 500m of the survey site was cross referenced to maps to highlight all ponds close to the site. Where possible, all ponds identified were accessed using agreed access or public rights of way to assess the potential for great crested newts (*Triturus cristatus*) to be present.

2.10. The survey area was assessed for the potential for reptiles and suitable reptile habitats. Where applicable the area was also searched for the presence of reptiles.

2.11. Where appropriate, the habitat within and surrounding the survey area was searched for species such as hazel, oak, honeysuckle, bramble and other species which may provide potential habitat for hazel dormice (*Muscardinus avellanarius*). Field signs such as feeding remains and nests were also searched for where possible, in line with P Bright, P Morris and T Mitchell-Jones *The Dormouse Conservation Handbook 2nd Ed*.

2.12. Where appropriate, the area within and surrounding the survey area was assessed for its potential to house habitat for red squirrels. Field signs of red squirrels

were searched for at least every 50m, looking for any dreys, feeding signs or sightings of red squirrels.

2.13. All surveys were carried out in line with the Chartered Institute of Ecological and Environmental Management (CIEEM) survey standards and advice.

2.14. This survey was carried out by Laura Hobbs BSc, MRes, MCIEEM. Since 2013 Laura has had experience in a professional capacity carrying out ecology, protected species and phase 1 habitat surveys. Laura holds degrees in Zoology (BSc) and Evolutionary Biology (MRes); Natural England, Scottish Natural Heritage and Natural Resources Wales survey licences for Great Crested Newts and Bats; a Natural England licence for Schedule 1 Birds; and is a full member of CIEEM. Laura has also completed numerous professional courses run by National Biodiversity Network (NBN), Field Studies Council (FSC), Yorkshire Wildlife Trust (YWT), Bat Conservation Trust (BCT), CIEEM and others in relative protected species and phase 1 survey methodologies; and has completed a traineeship with YWT focusing on conservation and survey methods for water voles.

3. SURVEY RESULTS.

3.1. Data Search Results.

3.1.1. Data searches were carried out with Barnsley Biodiversity Records Centre, South Yorkshire Bat Group and Barnsley Badger Group in order to identify any records of designated sites and/or protected species within close proximity to the site.

3.1.2. Spring Meadows, Alderman's Head and Cow Croft Meadows, SSSI (Site of Special Scientific Interest), covers three areas of land to the south of the surveyed area, the closest of which lies 425m to the south east, adjacent to Brock Holes Local Wildlife Site (fig 1). Additional two site locations were identified to the south of the first between Hollins and Spring Woods. These sites were designated in 2005 for the presence of areas of species-rich unimproved neutral grassland. The site provides the largest and finest example of traditionally managed unimproved neutral hay meadows in South Yorkshire.

3.1.3. Little Don Stream Section, SSSI was identified over 1.2km to the south of the site (fig 1). This site is of importance for geological reasons.

3.1.4. Dark Peak, SSSI, was identified 2.4km to the south west of the site (fig 1). This is a large site which was designated in 1993 and is the main moorland area of the Peak District. The site is more or less continuous moorland broken by Trans-Pennine roads with habitats such as wet and dry heaths and acid grassland. The site supports the full range of moorland breeding birds in the South Pennines, with numerous breeding assemblages of regional and national importance.

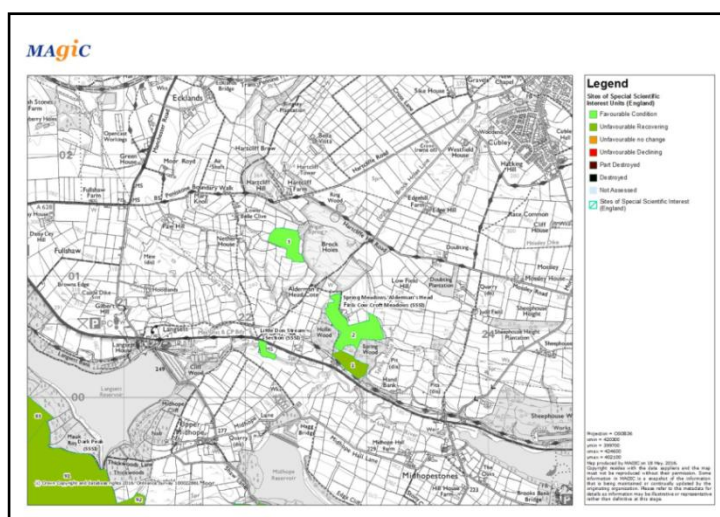


Figure 1. Aerial view of SSSI's in area surrounding site.

3.1.5. Hartcliff Hill, a Local Wildlife Site (LWS) was identified within 100m to the north east of the surveyed area (fig 2). This site is identified to contain deciduous and broadleaved woodland with some species indicative of ancient woodland habitat. Yellowhammers and brown hares (Species of Principal Importance) have previously been identified on site, along with evidence of badger.

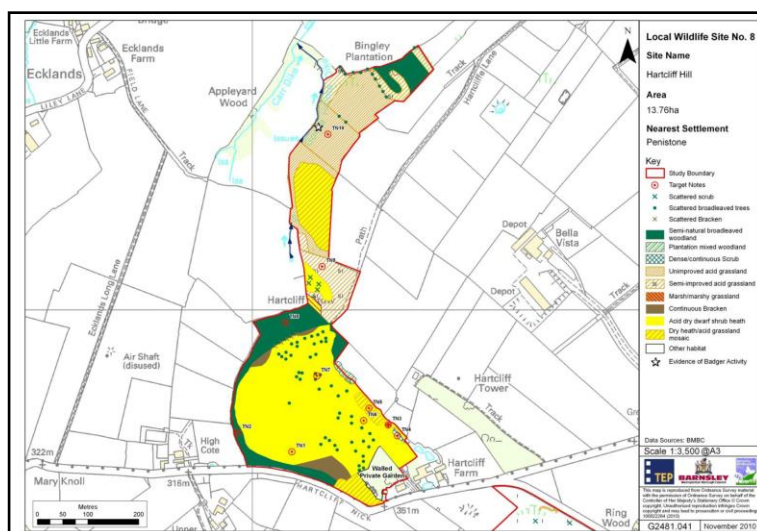


Figure 2. Map of Hartcliff Hill, LWS.

3.1.6. Brock Holes and Hollin and Spring Woods, Local Wildlife Sites, were also identified to lie within 1000m to the south east of the surveyed area (fig 3). Brock Holes is dominated by improved and semi-improved grassland with areas of broadleaved woodland and marshy grassland. The site supports a number of nationally important bird species including lapwings, linnets and green woodpeckers and Species of Principal Importance such as yellowhammers. Hollin and Spring Woods, comprises a series of ancient and semi-natural woodlands towards the Little Don River with numerous notable ancient woodland indicator species present.

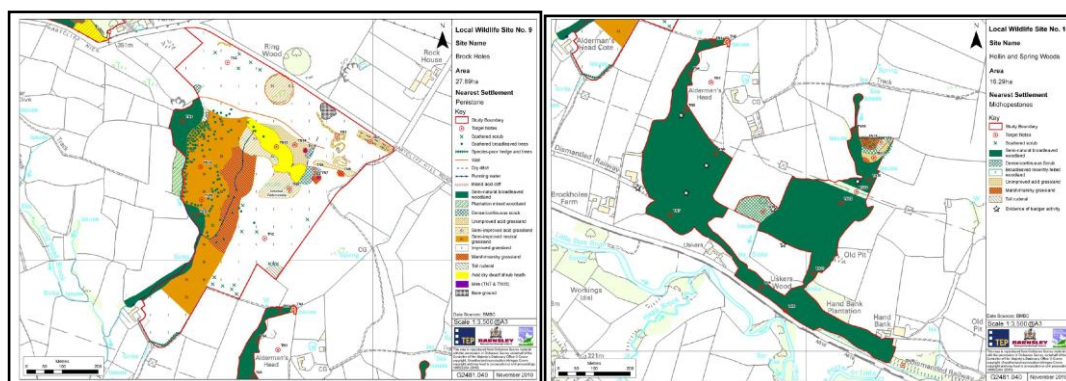


Figure 3. Maps of Brock Holes and Spring and Hollins Wood LWS's.

3.1.7. Small Shaw and High Bank were identified over 2000m to the north of the site (fig 4). The site is dominated by dry dwarf shrub heath and unimproved acid

grassland. Breeding populations of linnet and yellowhammer (Species of Principal Importance) have been identified on this site.

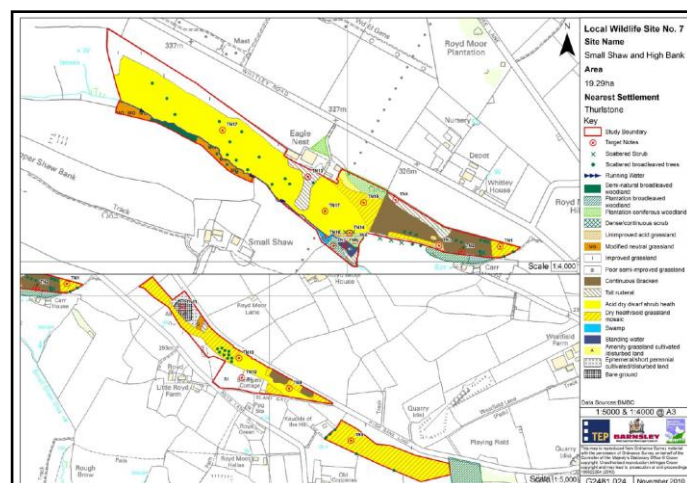


Figure 4. Map of Small Shaw and High Bank, LWS.

3.1.8. Western Moors, a LWS, lies on the extremity of the 2km data search from BBRC to the west of the site (fig 5). This site is comprised of seven separate sites of varying habitats, including conifer plantation of Langsett Woods, acid semi-improved grassland of numerous fields along with heather moorland, marshy grassland and standing water associated with Winscar, Harden and Snailsden Reservoirs. The site consequently has a number of varying habitats across its extent with various species identified including Species of Principal Importance such as common toads, common lizards, water vole, brown hare and mountain hare, along with numerous notable bird species as field fare, mistle thrush, lapwing and linnet. Badgers and bats have also been identified on site.

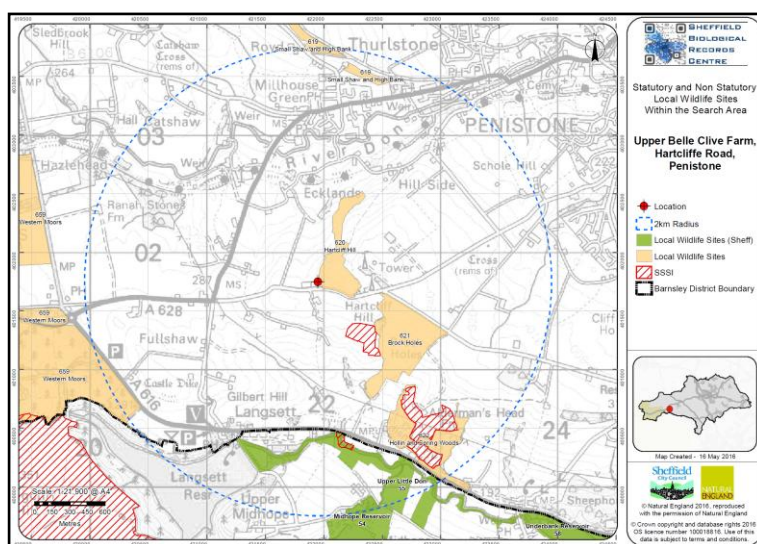


Figure 5. Map showing designated sites surrounding site.

3.1.9. Many of the habitats identified on these sites are listed as a Habitats of Principal Importance in accordance with Section 41 of the NERC Act, this include upper heathlands, running water and various types of woodland.

3.1.10. Other designated sites in the area included:

- Midhope Reservoir, a Biological SINC (Site of Important Nature Conservation), a large area of standing water and upper heathland with features important for wintering birds was identified to the south of the site
- Upper Little Don (also a Local Geology Site and RIGS) to the south of the site, with areas of wet woodland, semi-natural woodland, acid grassland and running water. The site is of interest for important bird species such as yellowhammer, curlew and linnets (Species of Principal Importance) along with golden plover, curlew, lapwings, linnets, kingfishers and skylarks.

3.1.11. BBRC had records of otters, red squirrel (both dated from 1976; brown hares, hedgehogs, mountain hares, daubenton, myotis and pipistrelle bats, as well as records of badger found within Langsett Plantation, Hollin and Spring Woods, Western Moors and Hartcliff Hill.

3.1.12. South Yorkshire Bat Group held records of two bat roosts; these both lie over 1.3km to the south of the site.

3.1.13. Full SYBG and BBRC data search results are available on request. South Yorkshire Badger Group results have not yet been received; however this report will be updated with their results in due course.

3.2. The Surveyed Area.

3.2.1. The surveyed area covered a field with a derelict and collapsed two storey stone building (fig 6). The remainder of the field contained areas of piled rubble and other forms of debris such as corrugated roofing sheets, brash and a disused telegraph pole. The field was surrounded by a dry stone wall.

3.2.2. The grassland species within the field were dominated by common grass species such as Yorkshire fog, with a dominance of ephemeral and ruderal species such as broadleaved dock, nettles and thistles. Occasional trees were present around the boundary of the site, dominated by horse chestnut.



Figure 6. View of site.

3.2.3. The site lies within Thurlstone, Sheffield and consequently lies in an open, elevated, exposed area, surrounded by numerous other open pastoral fields (fig 7). Numerous SSSI's and LWS's surrounded the site, the closest being Hartcliff Hill, a LWS and woodland area which lies to the north east of the site. Occasional residential properties associated with farmland also surround the site.



Figure 7. Aerial view of site and surrounding land.

3.3. Ecology Survey Results.

3.3.1. No badger setts or other badger field signs were identified within the surveyed area. No evidence of rabbit or hare was identified on site.

3.3.2. No watercourses were identified within close proximity to the site to provide any potential for water voles, otters or crayfish.

3.3.3. Two partially collapsed buildings were present on site, with the site boundary comprised of a dry stone wall. Both buildings were also stone built.

3.3.5. The main building on site was a two storey stone built building. Only two walls remain of the building which are currently in an unsafe condition and likely to collapse (fig 8). The remaining walls contain piles of rubble adjacent to the building and a tree has recently been removed from its centre, the root ball still present.



Figure 8. Main building on site.

3.3.6. The building contained gaps between the stone, the majority of which are very large and exposed extending through to both sides of the wall (fig 9). The location of the site and openness of all cracks and crevices within the walls means that there will be very little protection from the elements, with wind and rain likely to penetrate through the structure.



Figure 9. Large, open crevices within walls of main building.

3.3.7. The building has consequently been assessed to provide very low potential for roosting bats in accordance with BCT Good Practice Guidelines, with that potential limited to opportunistic crevice dwelling bats and no opportunities for established or hibernation roosts. No bats or bat field signs were identified at any point on site. Section 3.4. outlines the results of the bat dusk emergence survey.

3.3.8. The second building on site was in a further state of deterioration and contained walls little higher than those of the surrounding dry stone wall (fig 10). The building was very small with two walls partially intact and did not contain any significant cracks or crevices assessed to provide any potential for roosting bats. This building has therefore been assessed to provide negligible potential for roosting bats.



Figure 10. Second building on site.

3.3.9. The trees present on site were all small and semi-mature, dominated by horse chestnut (fig 11). The trees were assessed to hold no potential roosting features for bats, hence have been assessed to provide negligible potential for roosting bats.

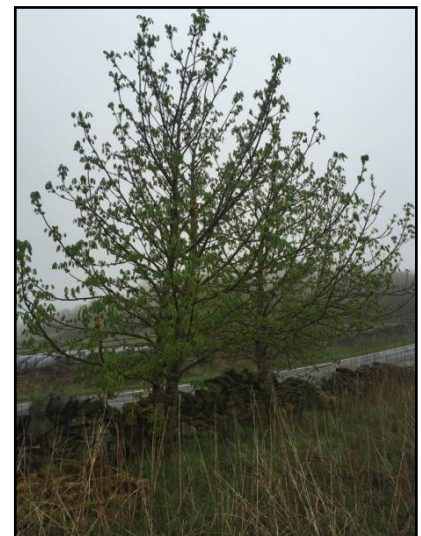


Figure 11. Trees on site.

Table 1. Roosting potential definitions taken from BCT Guidelines Ed 3.

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^a 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^b). 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.^c	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.

3.3.10. The area surrounding the site has been assessed to provide low value foraging habitat for bats due to the exposed location and dominance of the landscape by open fields and dry stone walls, with no areas of connective commuting or foraging features such as hedgerows or watercourses. Hartcliff Hill lies to the north east of the site which will provide the best foraging opportunities in the area due to the presence of woodland edges. Further suitable foraging habitat will lie to the south of the surveyed area in areas associated within designated sites such as Hollin and Spring Woods LWS and Spring Meadows, Alderman's Head and Croft Meadows SSSI.

3.3.11. Four ponds were identified within close proximity to the survey area (fig 12). Three of these are large ponds associated with Hartcliff Farm and lie over 250m away from site on the opposite side of Hartcliff Hill LWS. These ponds could not be assessed at the time of the survey as they lie on private land.



Figure 12. Map showing ponds in surrounding area.

3.3.12. The fourth pond (fig 13) lies to the north of the site. No access was available to this pond at this time; however an assessment from the road shows this pond to be a small pond, with a very low level of water present after heavy rainfall the previous night. Additional visits to site in the days following the initial survey found this pond to be consistently dry. It has therefore been assessed as unsuitable for great crested newts.



Figure 103. Pond immediately to north of site at time of survey, found to be dry on subsequent surveys.

3.3.13. There is some suitable terrestrial habitat within the area surrounding the pond, with this limited to the small area of vegetation surrounding the pond. The dry stone walls, piles of rubble and other debris on site will also provide suitable areas of refugia for newts.

3.3.14. Occasional horse chestnut trees were identified on site. This vegetation along with the crevices within the walls of the building on site will provide suitable nesting opportunities for birds during the nesting season, although these locations are very exposed limiting the species which will take advantage of these areas. No nests were identified during this survey of the site.

3.3.15. The site contains numerous piles of rubble and other debris such as corrugated roofing sheets which will provide suitable habitat for reptiles (fig 14). The immediate surrounding area of highly grazed fields will provide limited potential with suitable areas limited to dry stone walls only. The wider landscape provides more extensive suitable habitat in the form of woodlands and moorlands, although these areas lie away from site. No reptiles were identified during this survey of the site.



Figure 114. Piles of rubble on site.

3.3.16. No suitable habitat for hazel dormice or red squirrels was identified within close proximity to the surveyed area. Hartcliff Hill LWS may provide some potential for these species, although it is an isolated woodland which is not connected to the site or any other nearby suitable areas of habitat for these species.

3.3.17. No non-native invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were identified during this survey of the site.

3.4. Bat Dusk Emergence Results.

3.4.1. On 28th June 2016 a bat dusk emergence survey was conducted by one surveyor of the buildings identified on site.

3.4.2. The weather at the time of the survey was cloudy, with occasional showers prior to the commencement of the survey, and very still with the occasional gust of wind to around 1mph. The temperature recorded at 21:20 was 15°C.

3.4.3. The surveyor (S) was equipped with a Batbox Duet bat detector. In addition two stand alone Anabat SD2 bat detectors, (A1 and A2) were placed around the buildings as shown in figure 15.

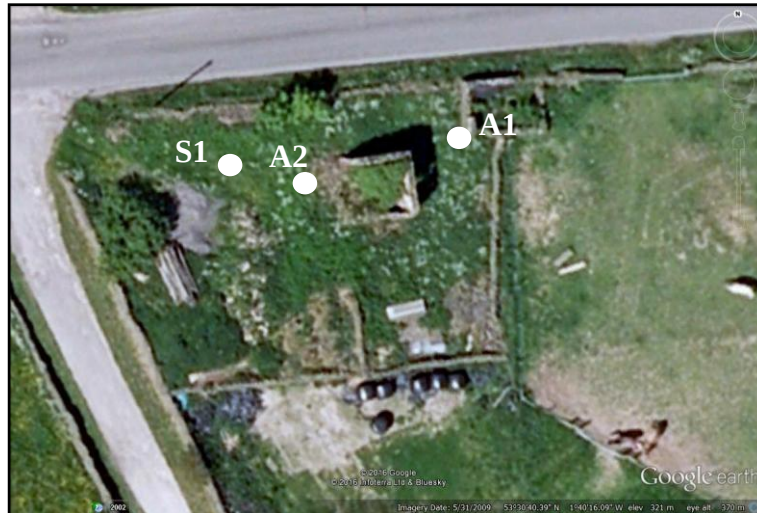


Figure 125. Location of Anabats (A) and Surveyor (S).

3.4.4. Below is a brief outline of the bat activity recorded by the surveyor.

22:12 – A bat flew over site from North East to South West.

22:13 – A bat was heard quietly but not seen.

22:15 – A bat was heard quietly but not seen.

22:30 – A bat was heard quietly but not seen.

22:23 – A bat was heard quietly and seen to be foraging up and down the track to the west of the site.

22:24 – A bat was seen to fly from the south, forage over the site then fly south along the track to the west of the site.

22:29 – A bat was seen to fly from the south to the north foraging over the building on site before flying back south.

22:31 – A bat was heard but not seen.

22:32 – A bat flew from east to west over the site.

22:33 – A bat was heard but not seen.

22:34 – A bat was seen to fly from the west to the east over the site and to forage around the building and other areas on site.

22:42 – A bat flew from the west foraging over the site.

22:45 – A bat flew from east to west across the site.

22:49 – A bat flew from south to north across the site.

The bats which were heard but not seen are assumed to be foraging along the track to the west of the site and along tree lines to the south west which lie behind the surveyor.

3.4.5. A brief outline of the bat activity recorded by each of the Anabats is included below. A full copy of the data is included in Appendix IV of this report.

3.4.5.1. Anabat 1.

Anabat 1 recorded a total of 32 bat calls throughout the survey from 22:10 to 22:47.

- 5 Myotis species calls from 22:28 to 22:43.
- 1 Noctule call at 22:33.
- 26 Common Pipistrelle calls between 22:10 and 22:47.

3.4.5.2. Anabat 2.

Anabat 2 recorded a total of 26 bat calls throughout the survey from 22:10 to 22:47.

- 3 Myotis species calls from 22:34 to 22:41.
- 4 Noctule calls from 22:07 to 22:33.
- 25 Common Pipistrelle calls from 22:10 to 22:47.

As bats were in open flight across the site, which is predominately an area of open farmland, it was not possible to accurately identify which Myotis species was passing over as bats were calling infrequently.

4. EVALUATION OF FINDINGS.

4.1. BBRC identified numerous designated sites within the area surrounding the site. These included a number of LWS and SSSI's although they all remain a distance from site with the closest being Hartcliff Hill within 100m to the north east. The sites are primarily designated for the presence of notable habitats such as woodland and moorlands, and notable populations of breeding birds. The proposed development on site would be confined to a small area of grassland assessed to be of poor quality with no notable flora or breeding bird species present. It is therefore assessed that the development of this site will have negligible impact upon the surrounding habitats, flora or fauna associated with these areas.

4.2. BBRC identified numerous records of badger activity within the area surrounding the site, along with a presence of mountain and brown hare within LWS. The closest badger records lies away from site within Hartcliff Hill LWS and no badger, hare or rabbit field signs were identified anywhere on or near to the site during this survey. It is therefore assessed that there will be no impact upon these species during proposed development works.

4.3. No watercourses were identified nearby the surveyed area to be impacted upon during works or to allow works to impact upon the species present within. There will therefore be no impact upon any water voles, otters or white clawed crayfish or any other species present within the surrounding watercourses.

4.4. The buildings and trees on site were assessed for their potential for roosting bats, although no known roosts are present within the area surrounding the site. The main building on site was a collapsed two storey stone built building with only two walls currently present. The building has been assessed to provide potential only for individual opportunistic crevice dwelling bats due to the elevated and exposed location of the site, and the large open cracks and crevices within walls of the building. It was not possible to thoroughly assess each individual crack safely at the time of the survey; hence it has been assessed to provide very low potential for roosting bats. The dusk emergence survey on 28th June 2016 did not identify any bats emerging from any building on site. Bats were seen to occasionally forage over the site; however these were in low numbers with only a handful of bats observed during the survey. There will therefore be no impact upon bats during proposed works.

4.5. The second building has been assessed to provide negligible potential for roosting bats due to its lack of structural integrity and opportunities for a roost to establish. No bat activity was observed around this building during the dusk emergence survey of the site.

4.6. The trees on site have also been assessed to provide negligible potential for roosting bats due to their small size and lack of potential roosting features. No bat activity was observed around any trees on site during the dusk emergence survey of the site.

4.7. Any works to the second building or to the trees will not impact upon roosting bats.

4.8. The site has been assessed to provide negligible potential for foraging bats due to the lack of suitable vegetation or other features within the surrounding area such as hedgerows or watercourses. There is a small area of vegetation immediately north of the site which may provide some features for foraging bats, however it is assessed that more suitable and sheltered foraging habitat lies to the north east of the site, associated with Hartcliff Hill (LWS) and to the south east of the site towards Hollin and Spring Wood and Brock Holes (LWS's). All bats identified to be foraging around the site during the dusk emergence survey on 28th June 2016 were identified to be favouring tree lines away from site. Works will not remove any suitable foraging habitat for bats; hence there will be no impact upon them during proposed works.

4.9. Four ponds were identified within 500m of the surveyed area. Three are large ponds associated within Hartcliff Farm, at least one of which is thought to be an ornamental garden pond with water features which would not provide suitable habitat for great crested newts. However these ponds could not be assessed at this time as they lie on private land outside of the surveyed area. The fourth pond was found to be consistently dry and to hold water only after periods of heavy rain. Although no records were identified within the BBRC data search, previous work by Whitcher Wildlife in 2008 on behalf of Fennel, Green and Bates identified a single GCN (small population) on a site 995m to the south west of the surveyed area.

4.10. The site itself provides suitable terrestrial habitat for GCN due to the presence of refugia provided by the rubble of collapsed buildings, although little suitable habitat in the surrounding landscape due to the presence of highly grazed fields. It has

therefore been assessed as extremely unlikely for newts to be present on site and impacted upon by works.

4.11. The vegetation on site, along with the crevices within the walls of the building will provide suitable nesting opportunities for birds during the nesting season, although these locations are very exposed limiting the species which will take advantage of these areas. Any works carried out during the nesting bird season may therefore impact upon any birds which may be present on site.

4.12. The site contains numerous piles of rubble and other debris such as corrugated roofing sheets which will provide suitable habitat for reptiles. The immediate surrounding area of highly grazed fields will provide limited potential with suitable areas limited to dry stone walls only. The wider landscape however, provides more extensive highly suitable habitat in the form of woodlands, moorlands and unimproved grassland. Despite this high quality habitat in the wider area, no reptiles are known within 2km of site by BBRC. However, common lizards have been identified within four widely spaced localities within Western Moors LWS. These locations include, Upper Windleden Reservoir, Snailsden Reservoir, Winscar Reservoir and Hordron, the closest of which lies over 3.5km to the south of the site, the other three sites around 7km to the west of the site. Due to the lack of records of reptiles within managed and thoroughly surveyed designated sites which contain highly suitable habitat for various reptile species, it is assessed as very unlikely for reptiles to be present on site which is a very small and relatively isolated area of suitable habitat surrounded by areas of low suitability farmland. It has therefore been assessed that works are very unlikely to impact upon any reptiles.

4.13. No suitable habitat for hazel dormice or red squirrels was identified within close proximity to the surveyed area. Hartcliff Hill LWS may provide some potential for these species, although it is an isolated woodland which is not connected to the site or any other nearby suitable areas of habitat for these species. It is therefore very unlikely for these species to be present in this woodland and less likely for them to be present on site and impacted by works. One record of a red squirrel was identified by BBRC data search, although this was a single record dated from 1976 approximately 2km from site with no records since.

4.14. No non-native invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981) were identified during this survey of the site. There will

therefore be no impact upon the spread of any non-native invasive species during works.

5. RECOMMENDATIONS.

5.1. It is recommended that the removal of all buildings, debris or vegetation is conducted outside of the nesting bird season which extends from March to September each year. Any works to take place during this time must be preceded by a nesting bird survey carried out by a suitably experienced person no further than a week in advance of works. Any nests identified must be left undisturbed until the young have fledged.

5.2. It is recommended that all buildings, debris and other materials on site are dismantled and removed careful by hand where possible to ensure no animals which may be seeking refuge within/below are harmed during works and are allowed to move away from site unharmed and of their own accord. All materials stored on site should be raised from the ground to ensure no further refugia habitat is created during works. In the circumstance that a number of one species is identified, professional advice should be sought.

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Derek Whitcher. BSc, MCIEEM, MCMI.	Date: 30 th June 2016.

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Appendix I. BAT INFORMATION.

It is necessary to understand a little about bats, their basic nature, ecology and legal protection in order to evaluate the findings of this report.

18 species of bat currently reside in Britain, 17 of which are known to breed here. They are extremely difficult to identify in the hand and even more so in flight.

All appear to be diminishing in numbers, probably due to shortage of food, caused by pesticides, as insects are their sole diet, and habitat change.

As their diet consists solely of insects, bats hibernate during the winter when their food source is at its most scarce. They will spend the winter in hollow trees, caves, mines and the roofs of buildings.

Certain species, particularly the pipistrelle (the commonest and most widespread British bat) can quickly adapt to manmade structures and will readily use these to roost and to rear their young.

Bats are protected under the Wildlife and Countryside Act 1981, Regulation 41 of The Conservation of Habitats and Species Regulations 2010, and the Countryside & Rights of Way Act 2000.

It is an offence to intentionally or recklessly kill, injure or capture or disturb bats or to damage, destroy or obstruct access to any place used by bats for shelter or protection.

A breeding or resting site of any bat is known as a bat roost. A bat roost is therefore any structure a bat uses for shelter or protection. Because bats tend to use the same roosts each year, legal opinion is that the roost site is protected whether or not the bats are present at that time.

Bat roosts can be identified by looking for:-

- Suitable holes, cracks and crevices.
- Bat droppings.
- Prey remains.
- By carrying out night observations using a bat detector.

Where development proposals are likely to affect a bat roost site, a licence is required from Natural England.

The person applying for that licence has to be suitably qualified and experienced in bat matters. That person is then responsible for ensuring that the measures contained in the licence are carried out.

Appendix II. NESTING BIRD INFORMATION.

It is necessary to understand a little about the legal protection offered to nesting birds in order to evaluate the findings of this report.

Part 1.-(1) Of the Wildlife and Countryside Act 1981 states that:-

If any person intentionally:-

- (a) kills, injures or takes any wild bird;
 - (b) takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
 - (c) takes or destroys an egg of any wild bird,
- he shall be guilty of an offence.

Part 1.-(5) of the Act states that:-

If any person intentionally:-

- (a) disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on, or near a nest containing eggs or young; or
- (b) disturbs dependant young of such a bird,

he shall be guilty of an offence and liable to a special penalty.

The Countryside and Rights of Way Act 2000 amends the above by inserting after “intentionally” the words “or recklessly”.

The nesting season will vary according to the weather each year but generally commences in March, peaks during May and June and continues until September.

It is also worth remembering that some birds nest in trees, scrub and buildings but others are ground nesting.

The best way to avoid this issue is to plan for vegetation clearance to be carried out outside the bird-nesting season.

Appendix III. ANABAT DATA.

Table 1. Anabat 1.

Time	Myotis species	Noctule	Common Pipistrelle	Total
22:10			1	1
22:11			1	1
22:14			1	1
22:19			1	1
22:23			1	1
22:28	1		1	2
22:30			1	1
22:32			2	2
22:33		1	3	4
22:34			4	4
22:35			1	1
22:37			2	2
22:38			1	1
22:40	1		2	3
22:41	2		2	4
22:43	1		1	2
22:47			1	1
Total	5	1	26	32

Table 2. Anabat 2.

Time	Myotis Species	Noctule	Common Pipistrelle	Total
22:07		1		1
22:10			1	1
22:11		1	1	2
22:14			1	1
22:18			1	1
22:23			1	1
22:27			1	1
22:30			1	1
22:32			2	2
22:33		2	4	6
22:34	1		4	5
22:37			1	1
22:38			1	1
22:40			2	2
22:41	2		2	4
22:43			1	1
22:47			1	1
Total	3	4	25	32

Appendix IV. PRELIMINARY PROPOSED DEVELOPMENT PLANS.

