

Bat Survey to Helm Farm

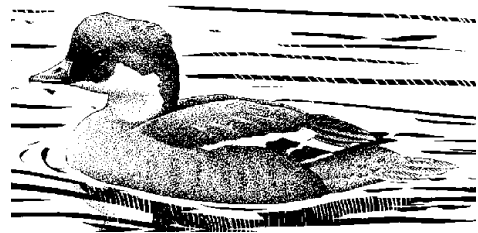
Helm Lane
Colne Bridge
HD5 0PU

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1. Summary

- 1.1 A bat scoping and activity survey has been carried out to barns and agricultural units at Helm Farm, Colne Bridge to determine if the building is being used by roosting bats or barn owls. The survey is required as part of an application for change of use. The survey was undertaken towards the end of the optimal time for bat occupancy and aimed to establish the presence or absence of bats in the building. The application seeks to convert the buildings to residential.
- 1.2 There are several buildings on site and are a mixture of period stone barns and modern agricultural units. For the purpose of the report, the buildings have been numbered 1-9 (shown in Figure 3, Section 8) and assessed individually as to their suitability to support roosting bats and to identify potential roost features (PRFs). Buildings 1-4 are modern agricultural units comprising blockwork walls to around 1.8m and then walls of corrugated sheeting and corrugated sheeting to the roof. All buildings numbered 1-4 are assessed as being of 'negligible' interest to bats. Buildings 5-9 are all stone buildings with stone roof tiles with the exception of building 7 which has a composite roof and is a low stable block built around an open fronted older unit. This was assessed as being of 'low' roost potential but there were several active swallow nests within the stables. Buildings 6, 8 and 9 are all period barns, double height with large stone tiles to the roof. All exhibit a wide variety and diversity of PRFs having gaps to the walls, sound roofs without slipped or missing tiles, large original timber frames with deep mortice joints and large ridge sections. Building 8 was not accessed due to a very dense patch of brambles preventing access to the external stone staircase but was assessed as being of high bat roost potential due to the roof construction and the gaps in the stone walls. Buildings 6 and 9 both had collections of bat droppings, less so in building 6, while building 9 had a large collection of droppings and was confirmed as a roost of brown long-eared bats. There were also signs of long-term use by barn owl though no owls were present during the survey.
- 1.3 An activity survey was carried out on the same evening as the daytime survey on (24th August 2022) and recorded several species of bats. Common pipistrelle was on the wing first and could have come from building 6, though a second bat from the same direction appeared to come from the dwelling on the site which is not part of this application. Only small numbers of common pipistrelle were recorded which is slightly surprising given the location, though the survey timing may account for the smaller numbers. Noctule bats were recorded overhead though are not using the site for roosting and a Soprano pipistrelle was also recorded. However, small numbers of brown long-eared bats were seen flying inside building 9 and the number of droppings suggest a nursery colony of this species is present. Building 9 is therefore confirmed as a roost.
- 1.4 Barn owl was not seen during the survey, but there were large amounts of whitewash and pellets within building 9 suggesting long-term use of this building by barn owls. Several active swallow nests were noted within building 7, the small stable block. Mitigation and compensation will be required for both these species.
- 1.5 The scoping and single activity survey confirm that bats are present on the site and that there is likely to be roosts of more than one species. Roosting brown long-eared bats was confirmed, and roosting pipistrelle was suspected. Building 6 and 9 both had evidence of use by bats with clusters of bat droppings noted and also brown long-eared bats flying inside building 9. Both these buildings are assessed as being confirmed bats. Building 9 will require a European Protected Species Mitigation Licence (EPMSL) before any building works can commence. Other buildings may also be subject to obtaining an EPMSL before work can commence but this will be determined during the data gathering of further surveys. An EPMSL will require further survey work during the optimal period for bat occupancy May-August with at least two of the surveys undertaken in mid-June and early July. There will be a need to establish the species and number of bats using the buildings, where they are roosting and where they enter/exiting the buildings. This will allow a detailed method statement to be produced detailing

compensation and mitigation measures. No work shall commence on buildings 6, 8 and 8 prior to a licence being granted by Natural England. Buildings 1-4 will not require a license and no further survey work is required on these buildings.

2. Introduction

- 2.1 A bat scoping and activity survey was carried out to barns at Helm Farm, Helm Lane, Colne Bridge HD5 0PU (NGR SE179203) to determine whether bats have or are using the buildings as a roost site. The site was also checked for the presence of barn owl and other nesting birds.
- 2.2 The current proposal seeks planning permission for partial demolition and conversion to residential dwellings.
- 2.3 The survey took place at a time considered to be towards the end of the optimal period for bat occupancy but still aimed to establish the following:
- the presence or absence of bats by undertaking a scoping survey
 - determine if activity surveys are required
 - identify any potential roosting areas
 - provide an impact assessment of the development on bats
 - define mitigation proposals where required
 - assess the requirement for a protected species licence.
 - Assess the building for use by nesting birds

3. Methodology

- 3.1 The site was surveyed in accordance with BCT best practice guidelines and surveyor experience by John Gardner, a surveyor with 41yrs field experience in searching for bats and is registered to use the Class Survey Licence WML CL20 (Level 4). The licence number is 2015-15656-CLS-CLS.
- 3.2 The interior and exterior of the buildings were inspected during daylight using torches and binoculars. All normal signs of bats were looked for including bats, dead baby bats, bat droppings, prey remains, scratching and staining of entry and exit holes.
- 3.3 The buildings were assessed for their degree of potential to support roosting bats including assessing the building design, construction, materials, and condition. This combined with an assessment of the location of the site and the surrounding habitat in terms of bat suitability allows an assessment to be made as to the potential of the building to support bats. Factors such as the proximity of good foraging areas (woodland, water bodies) and features that link the site to the wider surrounds such as linear features (hedgerows etc) were also considered.
- 3.4 This report sets out the findings of a daytime scoping and evening emergence survey carried out to the above site on Wednesday 24th August 2022. This report highlights the ecological constraints and opportunities associated with the proposed works and appraises the potential impacts. Appropriate actions to ensure the protection of bats are identified and mitigation measures detailed where appropriate.

4. Survey constraints

- 4.1 Dense brambles prevented access to the upper floor of building 8. This is not considered an impediment to the survey as bats were confirmed in other buildings and therefore the site will require further survey work which will include building 8.

5. Site Description

5.1 The site consists of several large modern barns, mostly in disrepair, and a group of period stone barns which are all in good condition. The site is in a rural location surrounded by excellent foraging habitat which includes the river Calder, woodland and pasture and the site is well connected to the wider area by a series of linear features. Bats of a local provenance are likely to be present in good numbers and there are at least six species known from the site from previous surveys.

Figure 1. Site location plan

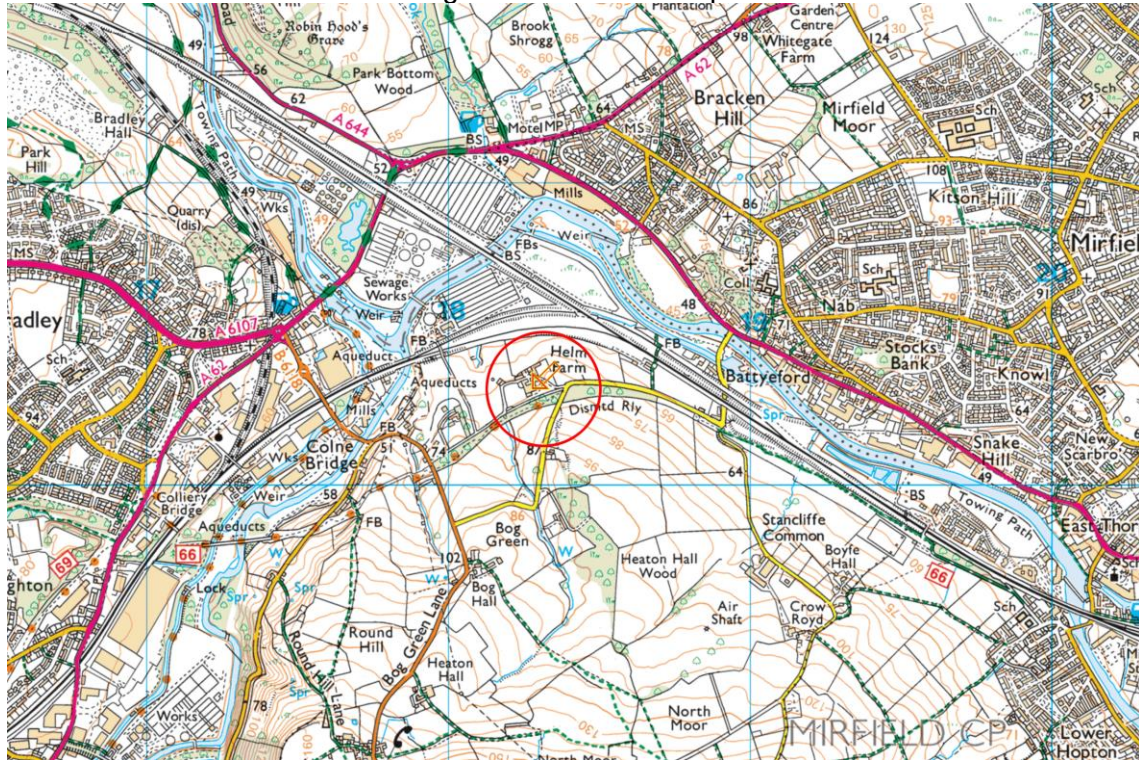


Figure 2 Aerial view of the site, surrounds and specific buildings surveyed

6. Desk Study

A previous survey on this site in 2019 recorded six species of bats including a common pipistrelle emerging from one of the barns and feeding perches of brown long-eared bats within the barn. Species identified included common and soprano pipistrelle, brown long-eared, Leisler's, noctule and Myotis species not specifically identified but, from experience, is likely to have been whiskered bat.

7. Activity surveys

7.1 As some of the buildings were assessed as being of 'high' bat roost potential and also a 'confirmed' roost and a preliminary emergence survey was carried out to confirm the presence of bats, particularly in building 9. Two very experienced surveyors covered the site which is considered too few for the size of the site. However, experience suggested there would definitely be a brown long-eared roost at least and the survey was intended to simply locate it. The main survey work will be done as part of the requirements to obtain an EPSML before works can commence.

8. Survey results

Scoping Survey

The site consists of a several agricultural buildings, many of which have fallen into disrepair, and all are no longer used. For ease of reporting, the buildings have been numbered 1-9 shown below.



Figure 3 Plan of buildings surveyed.

Building 1



A modern agricultural unit with blockwork lower walls, corrugated asbestos upper walls and roof and large, roller shutter door to the front. Very few PRFs and considered unlikely to be used by bats. This building is assessed as being of 'negligible' importance to bats. No further survey work is required.

Building 2



Large dilapidated agricultural unit built from corrugated asbestos sheeting. Wide ridge sections, single thickness sheets to walls and roof and lack of external features suggest this would not be used by bats. The building is considered to have 'negligible' roost potential. No further survey work is required.

Building 3



A very large and dilapidated agricultural unit with blockwork lower walls and corrugated upper walls and roof. The unit is held up by a wooden frame but has no PRFs and is considered to be of negligible interest to bats. No further survey work is required.

Building 4



A ramshackle building with blockwork and brick walls and a flat roof of corrugated asbestos. Considered unlikely to be used by bats and assessed as being of 'negligible' potential roost interest.

Building 5



Single storey stone coach house with three large openings to the front covered by rudimentary wooden doors. The roof is a low hipped style with stone tiles and is in good condition. The tiles are present and there appears to be no missing or slipped tiles. All ridge tiles are present but there is a section of failed ridge mortar on the west elevation. The roof is unlined and has the original timbers and ridge beam though there is a heavy build up of cobwebs along the ridge. The walls are rubble-filled and in reasonable condition with few gaps. The building is considered to be of 'low' roost potential.

Building 6



A period stone barn with stone roof tiles in very good condition. The roof is sound and has no missing or slipped tiles and the ridge tiles are in situ. The north elevation is cement rendered and has a sound dry verge. There is a lean-to extension to the west elevation which has been incorporated into the main roof creating a long, sloping pitch to that side of the roof. The roof has been stripped and turned and lined with a polyethylene liner. The timbers are original with large A-frame beams and associated mortice joints. The barn is open having a large coach house entrance to the front with no doors allowing bats to freely access the interior. An internal

search revealed a scattering of droppings on stored goods, most likely associated with bats flying through the barn rather than roosting. However, there was a small cluster of droppings at the base of one of the large A-frame timbers which indicated a possible night roost or feeding perch of brown long-eared bat.



The plate above shows the internal roof of building 6 and the location of the droppings associated with brown long-eared bats which is directly opposite the large coach doors.

Although no bats were seen to emerge from this building and no brown long-eared bats were seen in pre-emergence flight, the barn is likely to be being used by bats in some capacity and will require further survey work and possibly an EPSM licence. The barn is assessed as being of 'high' roost potential.

Building 7



This is a single storey stable block built from brick with a cement render. The building was originally open-fronted with brick peers supporting the roof but these have been walled in between with blockwork to create the stable. The roof is lined and is covered with a composite roof tile to look like stone. The building assessed as 'negligible' roost potential as the walls are

rendered and the composite tiles sit flat. All ridge tiles are present, and the dry verge is sound. Several active swallow nests were located in this building but no evidence of bats.

Building 8



This is a double height period stone barn with stone roof. The walls are rubble-filled and have had some remedial works undertaken but there are many holes which appear to go deep into the stonework. The roof has a stone tile and is sound and without slipped or missing tiles and the ridge tiles are present. The dry verges have been pointed and appear sound. It was not possible to gain access to the upper floor to inspect the roof interior as the only access is from external stone steps which were obscured by very dense brambles which will need clearing in order to gain access. It is possible to view the interior through the missing upper floor windows using a high-powered lamp and binoculars. Inspection revealed that there has been some attempt at insulating the roof by attaching insulating material to the rafters. This appears to have collapsed for the most part and hangs down from the roof creating a dense obstacle which looks as though it would impede bats flying through the building. It is not possible to view the ridge from an external check and will require further work. Even without the internal inspection, the building is assessed as being of 'high' roost potential.

Building 9



A double storey barn that is full height internally and has no upper floor. The walls are constructed from stone and the roof has stone tiles. The roof is sound and has no missing or slipped tiles and the ridges are present and reasonable well mortared though there are gaps where mortar has failed and also gaps between roof tiles. The east gable has suffered movement and has been repointed and repaired to stem this. Therefore, the dry verges are sound and well pointed and the gable wall has no gaps. Internally the roof is lined with traditional felt but, as with all the older barns here, the timbers are all original. On entering the barn, a cluster of brown long-eared bat droppings was immediately noticeable on a board on the floor, and they were adjacent to a large amount of 'whitewash' and pellets indicating the presence of a barn owl. The ridge is covered by the roofing felt and had no light ingress and the building is very dark inside. In addition to the owl pellets near the entrance, there was also a large collection of barn owl pellets indicating use over many years. Some of the pellets appeared fresh. The barn was previously used for battery chickens and has a mesh 'ceiling' with plastic insulation just above the chicken cages. This has fallen away only at the entrance of the barn, so it is only possible to view the ridge from one end of the barn by looking along the length. There were also bat droppings adhered to the gable wall. Given the style of the building and the amount of bat droppings, this building was assessed as being of 'high' bat roost potential and was later 'confirmed' as a roost. Barn owl was not present during the survey.

Emergence survey

The scoping survey indicated what had been expected; that there were roosting brown long-eared bats present and a dusk emergence survey was undertaken to confirm this. The emergence survey took place on the same evening as the daylight survey and conditions were with temperatures of 21°C, high partial cloud and humidity and no breeze. Two surveyors covered buildings 6, 8 & 9 with one person in the courtyard and the other along the west edge of there. A greater number of surveyors will be required for future surveys, but two experienced surveyors was enough to establish a bat roost is present. The survey covered the period 60mins prior to sunset until 90 mins after sunset and sunset was recorded at 20:17 with dusk around 20minutes later.

The first bat recorded was a common pipistrelle at 20:31 and appeared to come from the west side of building 6. It flew into the courtyard and began hunting in building 6 flying in and out of the building for around 10 minutes before disappearing. A second bat flew in from the west some 5 minutes later and appeared to emerge from roof tiles on the dwelling just to the side of building 6. Surprisingly, only small numbers of common pipistrelle were recorded throughout the survey with only single bats being seen at any one time. Noctules were recorded high over the

site and a soprano pipistrelle flew over the site at 21:00. Sorties into building 6 did not reveal any presence of brown long-eared bats but on entering building 9 at around 20:45, a brown long-eared bat was seen flying inside the barn. As soon as the torch light was turned on the bat, it disappeared onto the wall top at the east gable. Entering the barn again 10 minutes later also recorded brown long-eared bat flying inside the barn but again it went onto the wall top when subjected to light. Unfortunately, the barn is so dark inside, it is not possible to enter without switching on the torch which then disturbs the bats so it was not possible to get an accurate assessment of numbers of this species. It is unlikely to be a single bat given the amount of droppings on both the floor and the walls. A red filter will probably avoid this disturbance in future surveys. The presence of bat droppings and animals flying inside the barn at dusk confirm building 9 as a roost site.

9. Interpretation and analysis

The survey results established that buildings 1-4 have very limited potential to support roosting bats and are classed as being of negligible interest. Works to these buildings is unlikely to impact bats on the site. Buildings 5 and 7 are thought to be of low interest to bats but can be surveyed again as part of the future survey work required to obtain a protected species licence. Buildings 6, 8 and 9 all have high potential to support bats and bats were confirmed roosting in building 9 and potentially in building 6 given the cluster of droppings.

Surveyor experience suggested that brown long-eared bats would be present at this site even before the survey was carried out and the survey was primarily just to confirm this with further survey work required at the optimal time. Surprisingly, only small numbers of bats were recorded but this could be down to the survey period which, although still regarded as being within the optimal survey period, is getting late in the season being almost into September. Many bat roosts begin to thin out towards the end of July and into early August as the adult females disperse leaving mostly juveniles behind. However, there is no doubt that bats are present and roosting on the site and before any works commence to the main core of the buildings i.e. the stone barns, further survey work will be required in order to obtain the required protected species licence. The protected species licence **must** be obtained before any work commences and in order to achieve this, at least three surveys will be required to be undertaken during the optimal period for bat occupancy. Ideally, the surveys should be undertaken during late May and the beginning of July and be spaced two weeks apart with at least one being carried out in mid-June. There will be an emergence survey and a dawn return survey and a third survey could be either, but preferably a dawn return survey as these tend to be the most accurate when tracking bats back to the roost sites. Data gathered in this way will enable a detailed method statement to be developed which will be used to enable the works to progress without harm to bats and allow continued use of the site.

Works to mitigate and compensate for nesting swallows and barn owls will also be required.

10. Impact assessment

The proposed works to convert the buildings to residential is likely to harm or destroy bat roosts and will require further work to establish the extent of use of the buildings by bats. A detailed method statement will be required and a EPSM licence will be required before any work can commence on buildings 6, 8 and 9. Buildings 1-4 have negligible interest to bats and do not require to be part of any licencing and can be demolished at any time without impact to bats.

11. Mitigation measures

Mitigation and compensation will be created as part of the method statement required to obtain the European Protected Species Mitigation Licence that will be required before any works commence. The mitigation is likely to cover, but is not limited to, stripping all roof tiles by hand,

outside the period for bat occupancy, avoid using breathable membranes, ensuring contractors are made aware of the possible presence of bats via a tool talk, advising vigilance and careful observation before pointing holes to avoid entombing bats. A sympathetic lighting scheme will also be required.

Compensation and enhancements may include leaving parts of the attic void as a flight chamber for brown long-eared bats or creating a standalone flight chamber on site, inclusion of integral bat roosting features within walls, leaving suitable gaps in the pointing at eaves level and possibly access gaps in ridge pointing.

Timings of the works are likely to restrict certain works to be undertaken only outside the bat occupancy period.

12. Conclusion

The survey concluded that some of the buildings have no potential interest to bats and can be demolished or developed at any time and without restrictions or requirements for a protected species licence. However, brown long-eared bats were confirmed as roosting in building 9 and possibly building 8 and will require a European Protected Species Mitigation Licence before works can commence. In order to gain the licence, further survey work will be required and will need to take place between May and mid-July which is the optimal period for bat occupancy. This will allow a detailed method statement to be prepared and developed. Mitigation and compensation measure will be required. Consideration of swallows and barn owls will also be required.

Appendix 1: Photographs of the site

