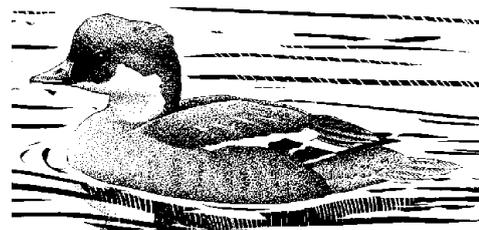


Bat Scoping Survey to  
Kexborough Hall Farm  
Churchfield Lane  
Kexborough  
S75 5DU

30<sup>th</sup> September 2020



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# 1. Summary

- 1.1 In October 2019, a bat scoping survey to Kexborough Hall Farm, Kexborough was commissioned to establish the likelihood of the buildings being used by roosting bats ahead of proposed development works. The results of the survey classified the buildings as low to medium roost potential which requires further survey work at the appropriate time of year. This report provides an update to the 2019 survey and documents the results of activity surveys in August 2020.
- 1.2 The original scoping survey was undertaken at a time of year which is considered outside the optimal season for bat occupancy and, therefore, aimed to establish the likelihood of bats using the buildings by looking for evidence in the form of droppings, scattered prey remains, noting potentially suitable roosting cavities as well as assessing the likely impact of the work on bats. The conclusion was for at least one activity survey to be carried out in the optimal activity period.
- 1.3 The site comprises a series of stone barns arranged around a courtyard and they have a mix of roof coverings from stone to corrugated tin. There are also some large agricultural units adjacent to the stone barns. The survey classified the buildings as being of low interest to bats for reasons specified in the report and summarised in the table below:

Building 1	Barn	
Feature	Description	Classification
<b>Building</b>		
Barn 1	Large, two storey agricultural unit with unlined stone roof. Potential in stone work and tiles	<b>Medium</b>
Barn 2	Single storey stone barn (probably modern construction) with hipped slate roof	<b>Low</b>
Barn 3	Period stone barn with stone walls and a corrugated tin roof	<b>Low</b>
Barn 4	Large modern unit, corrugated roof and walls	<b>Negligible</b>
Building 5	Small open fronted unit with stone roof tiles	<b>Low</b>
Barn 6	Large unit with corrugated sides & roof	<b>Negligible</b>

- 1.4 The three stone barns all have some degree of roost potential and, although there was no evidence of bats noted in any of the interiors, there is a chance bats could use the barns and not show evidence outside the optimal period. Therefore, a dusk emergence survey was undertaken and established that bats are probably not using the buildings but there was good bat activity on site of three species of bats. Common pipistrelles were observed flying into the site from the north and there were good numbers of whiskered bats in the SE corner of the site and a single brown long-eared bat was observed in the same area. The whiskered bats and possibly the brown long-eared are thought to have emerged from the adjacent period dwelling known as Jacob's Hall based on their emergence pattern.
- 1.5 In summary, there was no evidence to suggest bats are using the buildings but further survey work will be required to determine whether the whiskered bats were coming from the adjacent dwelling and also the whereabouts of the long-eared bat's roost. This will require at least three activity surveys by a qualified survey team before work can commence on the buildings. The current application is for outline planning only and therefore, there is enough data to determine this and to condition further surveys before full planning permission is submitted.

## 2. Introduction

An ecological assessment and bat scoping survey was undertaken to barns at Kexborough Farm, Churchfield Lane, Kexborough S75 5DU (NGR SE288584) in accordance with the Planning Authority's request, to determine whether bats are using or have used the property as a roost site.

2.1 The current proposal is for outline planning to convert the stone barns to residential and demolish the agricultural units.

2.2 The scoping survey took place at a time considered the outside the optimal time for bat occupancy, therefore, the survey aimed to establish the following

- the likelihood of bats using the building by undertaking a daytime scoping
- identify any potential roosting areas
- determine if activity surveys are necessary
- 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

2.3 Based on the scoping survey, a summer activity survey was also undertaken to establish the use of the site by bats

## 3. Methodology

3.1 The building was surveyed in accordance with best practice guidelines by John Gardner, a surveyor with over 38yrs 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 survey carried out to the above site on Tuesday 1st October 2019 and an activity survey carried out on 20<sup>th</sup> August 2020, highlighting the ecological constraints and opportunities associated with the proposed works and appraising the potential impacts. Appropriate actions to ensure the protection of bats are identified and mitigation measures detailed where appropriate.

## 4. Survey constraints

4.1 None.

## 5. Site Description

5.1 This site is comprised of a number of barns with three large stone barns set around a large open farmyard. There are modern agricultural barns adjacent to these and some smaller outbuildings too. The site has residential dwellings to the north side of the site and these will also offer roosting potential. Linear features connect the site to the wider landscape.

Figure 1. Site location plans

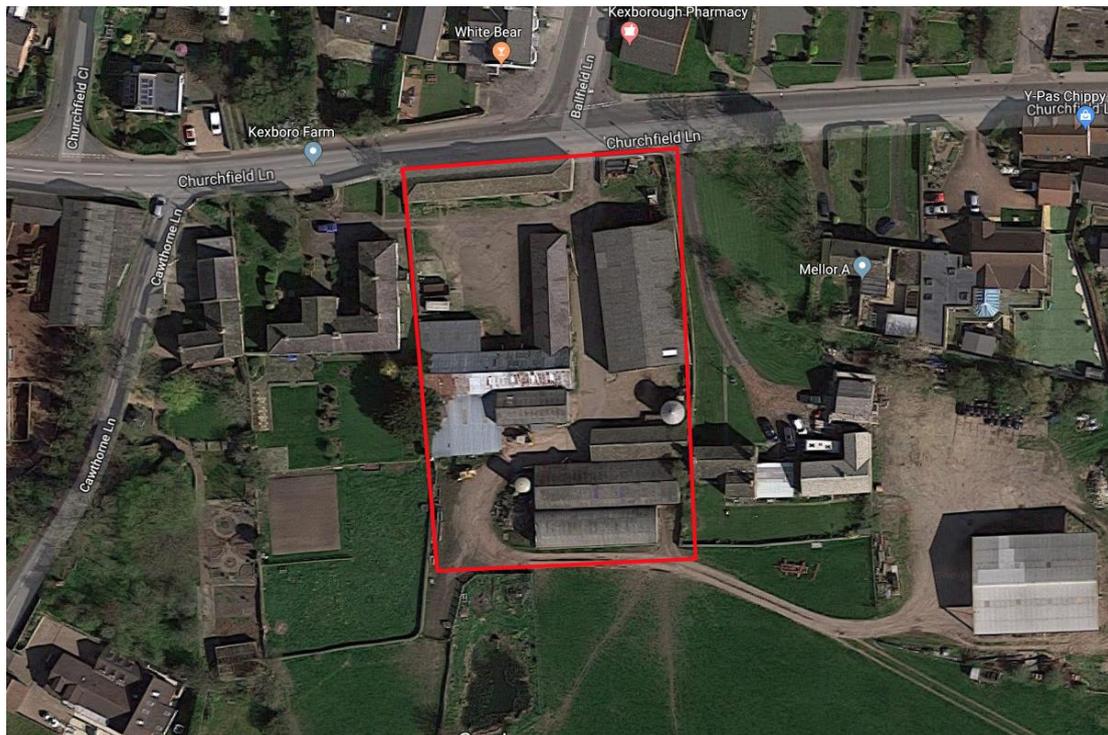
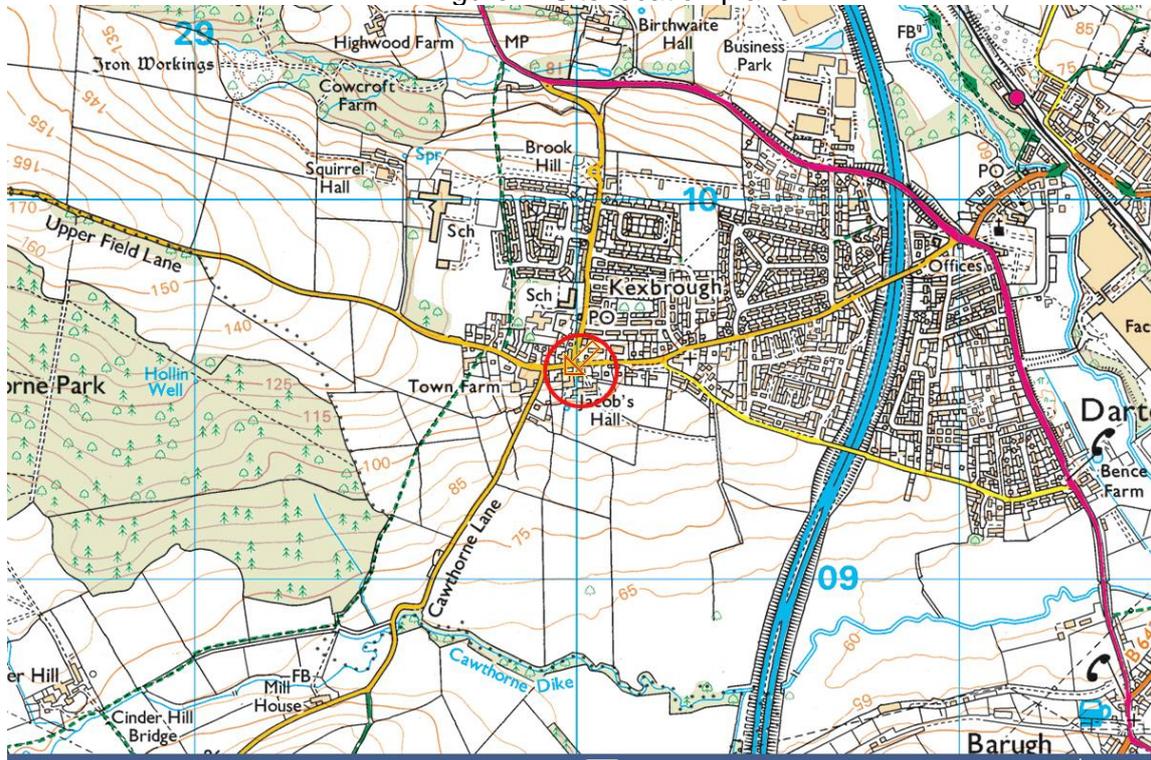


Figure 2 Aerial view of the site, surrounds and buildings surveyed

## 6. Desk Study

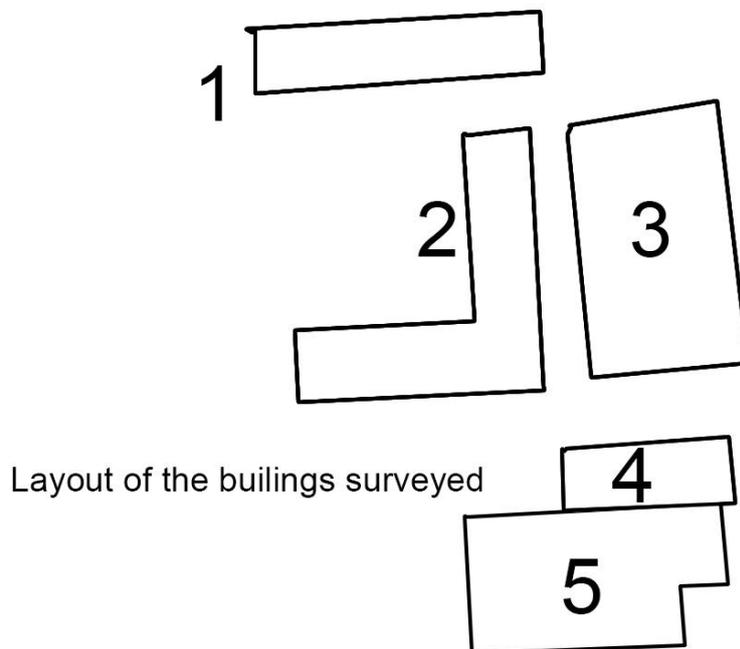
6.1 A data search covering 2km from the site centroid was requested from South Yorkshire Bat Group. This returned 158 records, none of which have any relevance to the site. The records simply plot bat worker coverage with the nearest records from Darton (c.1.5km east) and Cawthorne and Canon Hall (c.2km west). Most are historical records dating from the 80s when there was an active bat worker in Barnsley and there are very few confirmed roost sites locally with most being from Canon Hall. There are no records within 800m of the site and none from Kexborough at all which is clearly not a true reflection of the status of bats in the village. Bat records gained from this survey relate specifically to the site and supersede all other records.

## 7. Activity surveys

7.1 A single activity survey was carried out on 20<sup>th</sup> August 2020 to establish a baseline of bat activity on the site. Further surveys were planned but adverse weather prevented this before the end of the month. As the planning application is for outline permission, the data gathered is sufficient to determine the use of the site by bats and to recommend further surveys ahead of full planning permission.

## 8. Survey results

### 8.1 The daylight survey



Layout of the buildings surveyed

Figure 3. layout of buildings for reference

The site consists of three stone barns arranged around an open farmyard with two of the barns joined to form an L-shape (building 2). Along the outer edge of the site are a series of large, modern agricultural units and a small, open fronted building (building 4).

Buildings numbered 3 and 5 above are large agricultural units constructed around a steel frame with breeze block to the lower wall sections and corrugated tin or cement fibre to the sides and roof. These buildings are not considered to be of any interest to bats in terms of providing roost sites, though they will be used by bats as foraging areas, especially by any bats emerging

locally. Both common pipistrelle and whiskered bats seem to favour hunting in this kind of units just after emerging, but the buildings do not have the cavity walls or roof voids that bats require for roosting. These units are classed as being of negligible interest to bats.

The buildings with the most potential interest to bats are the stone buildings arranged around the farmyard. Building 1 is a long, two-storey building with stone roof tiles. The roof is unlined and for the most part has a heavy build-up of dirt and cobwebs on the ridge beams. The ridge tiles are all present and have had some remedial works carried out and appear to be well bedded and could be of interest to ridge dwelling species. The gable walls have also had some repointing works undertaken and have limited access points. The gable walls have a stone cap and do not have any kind of fascia other features that bats could roost beneath. The walls have some structural gaps and other minor cavities that may be used by small numbers or individual bats. Although there was no evidence to suggest use by bats, the building has some potential and is classified as being of low importance to bats.

Building 2 is an L-shaped barn consisting of a single storey unit with slate roof connected to the larger, Grade 2 listed barn which has a corrugated tin roof. The single storey section appears to be modern and has a sound slate roof which is lined with felt. It is hipped on the exposed gable and all hip and ridge tiles are present and well bedded and without gaps. The stone walls are well pointed and do not have gaps. The larger section of this barn is two storey and is a stone shell built around the original (medieval) timbers but without being connected to them. The stone roof has long been taken away and replaced with a corrugated tin roof which has gaps the whole length of the ridge. The roof is of no interest to ridge dwelling species and does not provide any kind of potential roosting site. The interior of the barn is incredibly dusty due to the presence of a milling machine that is used daily to grind fodder for the cattle. The amount of dust is likely to make this barn very unattractive to bats. It is, nevertheless, categorised as being of low interest and will require at least one activity survey.

To the rear of the farmyard is a small, open-fronted, single storey building used for storing farm machinery (building 4). This has a stone roof which appears to be relatively new and is lined and may provide either roosting potential or could be used as a feeding perch by brown long-eared bats. An activity survey would establish if the building is being used by bats.

## **8.2 The activity survey**

An evening emergence survey was carried out by three surveyors on 20<sup>th</sup> August 2020 using both heterodyne and time expansion detectors (Echometer Touch Pro). A detector was placed inside the two of the barns connected to a bluetooth speaker to alert to the presence of bats inside the buildings. The weather was perfect for the survey with temperatures of 15°C and no wind and the survey took place from 60mins prior to sunset until 60mins after sunset.

Common pipistrelle were the first bats detected and these were clearly seen to fly into the site from a north direction over Churchfield Lane and into the site from both sides of building no.1. The majority of the bats flew in from the NE corner and were thought to come from residential dwellings across Churchfield Lane. Common pipistrelles were observed on site for the first 30 minutes of the survey but only in small numbers. Within 40minutes of sunset, the greatest amount of bat activity was concentrated around the yard between building 3 and 4 and these were identified as whiskered bats. These bats hunted around this areas and inside the large steel-framed agricultural building 3 but were not thought to roost in either building 3 or 4. It was suspected that these bats were emerging from a period dwelling adjacent to the site known as Jacob's Hall as bats were clearly seen flying into the site from over the fence. Also in this area, a single brown long-eared bat was clearly seen hunting low over the ground and flying into the large steel portal unit. It was not known where this bat emerged from.

Frequent forays were made inside buildings 1 and 2 to establish if ridge or void dwellings species were present. Building 1 has an exceptionally dirty ridge section and no bats were ever

seen or recorded inside this building and it is unlikely that bats are using this to roost. It was possible that a single brown long-eared was detected in building 2 in the period building.

Whiskered bats were recorded on site until the end of the survey while pipistrelle bats gradually disappeared as the survey went on. Two barn owls flew into the site from Churchfield Lane but are not thought to be using the site to breed.

## 9. Interpretation and analysis

- 9.1 The 2019 scoping survey deemed that the modern units have no value to bats other than to possibly provide a sheltered feeding site that would probably be used just after emergence or just as bats return to roost and this proved to be the case. It is unlikely that these buildings would be used as a roost of any kind as the lower walls are solid block while the upper walls and roof are single thickness corrugated material. Whiskered bats were recorded feeding inside this building and also in the yard outside the building but they are thought to be emerging off site. Whiskered bats are widespread but uncommon and so this is a good record for the area and requires further survey work to establish their whereabouts.
- 9.2 The large Grade 2 listed barn has limited roost potential due to the tin roof with large ridge gaps and the huge amounts of dust in the interior section caused by the grinding machine. There is a slim chance individual bats could find roost sites in mortice joints in the huge medieval timbers but the dust is likely to penetrate any potential gaps. The walls have small cracks and cavities that may be of interest to individual bats. The activity survey suggested that the assessment was accurate and no bats were seen to emerge from this building but there was possibly a single brown long-eared bat recorded inside the building briefly some 45mins after sunset. This bat is likely to have entered the barn from elsewhere. The single storey building that adjoins this barn had some potential for bats to roost behind the gutter boards but no bats emerged from this area or were seen in the roof void.
- 9.3 The large range of the stone barn on the north boundary which was thought to have the most roost potential turned out to have the least potential due to the heavy build-up of cobwebs and dust along the ridges. No bats were seen inside this building or seen to emerge from it.
- 9.4 Bats are clearly present in the area in much greater numbers and varieties than the data searches suggest but this is always the case. However, three species were recorded on site though none were thought to be using the site as a roost. Common pipistrelles were observed commuting into the site from modern dwellings on Churchfield Lane and beyond and this fits with their preferred lifestyle and roosting habits. The whiskered bats were very active in the yard between buildings 3 and 4 but are unlikely to have emerged from the steel portal framed building 3 and also, seemed unlikely to have emerged from the single storey, open-fronted building 4. It seemed, from experience and the way in which the bats appeared, that these bats are emerging from Jacob's Hall adjacent to the site. The brown long-eared bat was harder to determine where it might have come from but further survey work will establish that.

## 10. Impact assessment

- 10.1 It is not thought that bats are roosting in the buildings on site but they are present in the immediate vicinity. Development of the barns is unlikely to affect the local bat population but some potential roost sites will be lost and compensation in the form of permanent roost features will be required. It would be possible to approve outline planning permission based on the data gained from this survey but before full planning and any work commencing on site, further, more comprehensive surveys must be undertaken to establish the roost site of both brown long-eared and the whiskered bats. This should take the form of at least three surveys between May and July which would be the optimal time to find the bats. This should be a mix

of emergence and return surveys as determined by the qualified surveyors performing the task.

## **12. Mitigation and compensation measures**

- 12.1 Further activity surveys ahead of full planning permission and before any work commences on site will determine a method statement and a strategy for developing the site while protecting bats and other fauna. The results of further surveys will determine whether or not a European Protected Species (EPS) licence will be required. In order to comply with Planning Policy Guidelines that stipulate an improvement in the site's potential to attract wildlife, provision of permanent bat roosts must be made which would cater for both ridge dwelling and cavity dwellings species of bats. Consideration should also be given to provide bird nesting boxes, most likely in the form of sparrow nesting terraces, starling boxes and, depending on the results of a summer survey, swallow nest platforms.
12. 2 The proposed works are subject to planning regulations and therefore, any of the above could be conditioned as part of any planning permissions that may be granted.

Appendix 1: Photographs of the survey site





roof interior (building 1)



interior building 2



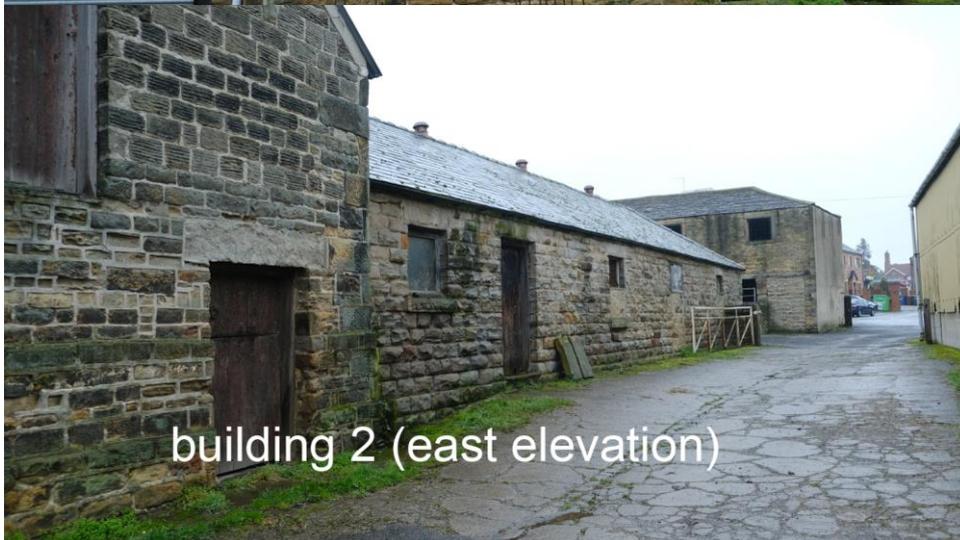
south range (Building 2)



south range (Building 2)



building 2 (east elevation)



building 2 (east elevation)



building 4 front



Building 3