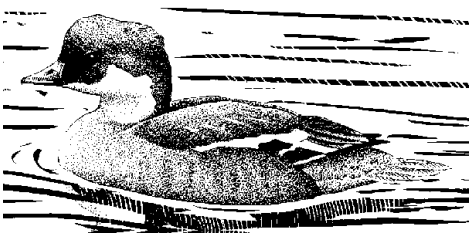
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Bat Scoping Survey to
Old Brierley Hall
Brierley
Barnsley
S72 9EA

23rd July 2019



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1. Summary

1.1 A summer bat survey to the large barn at Old Brierley Hall, Brierley was commissioned to establish the likelihood of the building being used by roosting bats ahead of proposed development works.

1.2 The survey was undertaken at a time of year which is considered the optimal season for bat occupancy and, therefore, aimed to establish the presence or absence of bats in the building 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.

1.3 The site comprises a large stone barn in the grounds of a period building with stone roof tiles and rubble-filled stone walls. The building is located in a rural area and has extensive grounds which provides excellent foraging habitat. The building is considered to have some opportunities to support roosting bats though these are limited for reasons set out in the report. The table below summarises the main features and classifies the roost potential

Building 1	Barn	
Feature	**Description**	**Classification**
Building	Large stone barn with York stone roof	
Roof interior	Unlined, original timbers, ridge section has been filled with expanding foam	**Low**
Exterior pitched roofs	Stone roof, gaps to ridges (all filled with foam). Stone capping to gable	**Low**
Walls	Large stone blocks some gaps to south gable, though many are large	**Low**
Soffits	No soffits or facia	**Negligible**
Windows	Wooden casements	**Negligible**

1.4 The roof is constructed from stone and is unlined and sits on original timbers. The ridge section has many gaps but these have all been filled with expanding foam and this will prevent use by bats. There are some gaps to the south gable but many are large enough to allow birds to enter and is partially obscured by dense ivy. The north gable is obscured by trees.

1.5 Due to the limited potential and lack of evidence of use by bats, a single emergence survey was undertaken which confirmed bats are not using the site though there is a roost of common pipistrelle close by. By adding in permanent roosting features and lining the roof and removing the expanding foam, the building is likely to be more conducive to bats post conversion.

1.6 It is considered that the proposed conversion work will not affect bats or their roosts and there are no statutory constraints to the redevelopment of the site from the presence of a bat roost.

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2. Introduction

An ecological assessment and bat scoping survey was undertaken to the barn adjacent to Old Brierley Hall, Brierley, Barnsley S72 9EA (NGR SE412108) 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 to convert to residential

2.2 The survey took place at a time considered 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
- Undertake activity surveys where 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

3. Methodology

3.1 The building was surveyed in accordance with best practice guidelines by John Gardner, a surveyor with over 30yrs fields experience in searching for bats (licence number 2015-15656-CLS-CLS).

3.2 The interior and exterior of the building 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. An evening activity and a dawn return survey were also undertaken.

3.3 The building was assessed for its 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 emergence survey carried out to the above site on Tuesday 23rd July 2019 and 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 None.

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5. Site Description

5.1 The site comprises a large stone barn with stone roof and is located close to good foraging areas comprising trees, meadow and farmland and there are other residential dwellings in the vicinity of the site that will offer roosting potential. Many linear features connect the site to the wider landscape.

Figure 1. Site location plans

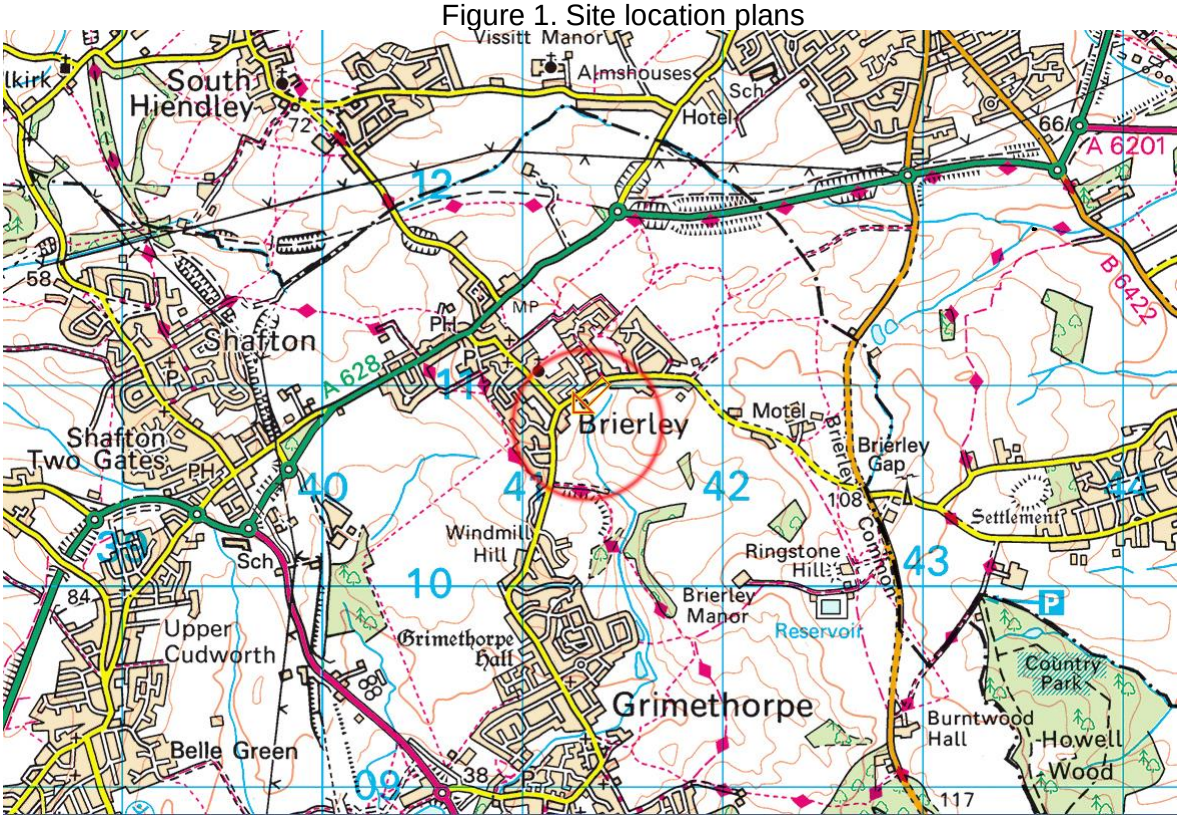




Figure 2 Aerial view of the site, surrounds and buildings surveyed

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6. Desk Study

6.1 No desk study was undertaken as a data searches are now considered to be less important where a single species is involved as the results tend to plot observer activity rather than species distribution.

7. Activity surveys

7.1 The building has limited roost potential and is considered to be of low importance to bats, therefore a single emergence survey was undertaken by two experienced bat ecologists. The results of this survey suggested that no further activity surveys are required.

8. Survey results

8.1 The daylight survey

The roof is constructed of York stone on top of original timbers. Internal inspection revealed that the roof is unlined and is reasonably sound with a good, broad original ridge beam. The ridge tiles have many gaps but the ridge has been extensively filled with expanding foam in an attempt to halt leaks. The internal ridge has a heavy build-up of dust and cobwebs and does not exhibit any signs of use by ridge dwelling species. There are no droppings or scattered prey remains on any of the stored goods and, despite the appearance of the building, it is not used by bats. Externally the roof is reasonably sound but the expanded foam is clearly visible in the ridge tiles.

The south gable wall has no facia or soffit and is capped with large stone. The dry verge has some large gaps and there are gaps in the stonework but many are considered too big for bats. The south wall is partially obscured by thick ivy. The north gable has a dry verge which also exhibits gaps but this gable is very obscured by a lime tree growing close to the building and prevents bats having a direct flight line to the wall making it less favourable.

The walls are constructed from a stone and in general are solid and without gaps apart from the south elevation. There are no gutter boards, soffits or facia and the wall tops are sealed at the roof though there are some suitable gaps. The windows are all wooden casements and may have some minor gaps that would allow individual bats to enter the rubble-filled walls.

Overall, the building is considered to be of low interest to bats and there are buildings close by which would seem to offer greater roost potential.

9 Activity survey results

9.1 An evening emergence survey was undertaken on July 23rd 2019 commencing 60 minutes prior to sunset and continued till around 60mins after sunset. The weather was good with clear skies after a warm day and temperatures around 27ºC and no breeze. Two surveyors using heterodyne and an RTE detector were positioned to cover the south, east and west elevations, the north being considered unlikely to be used by bats due to vegetation obscuring the wall.

9.2 Bat activity commenced at or just after sunset with the first pipistrelle recorded flying into the site from a NE direction from along Common Lane. Several bats were observed flying into the site and heading to the large stand of trees at the south of the site to feed. Several visits were made inside the building during the survey to determine if brown long-eared or whiskered bats were present but none were seen No bats were recorded on the west side of the site or in the south and SE in the site compound. No bats were seen to emerge from the survey building.

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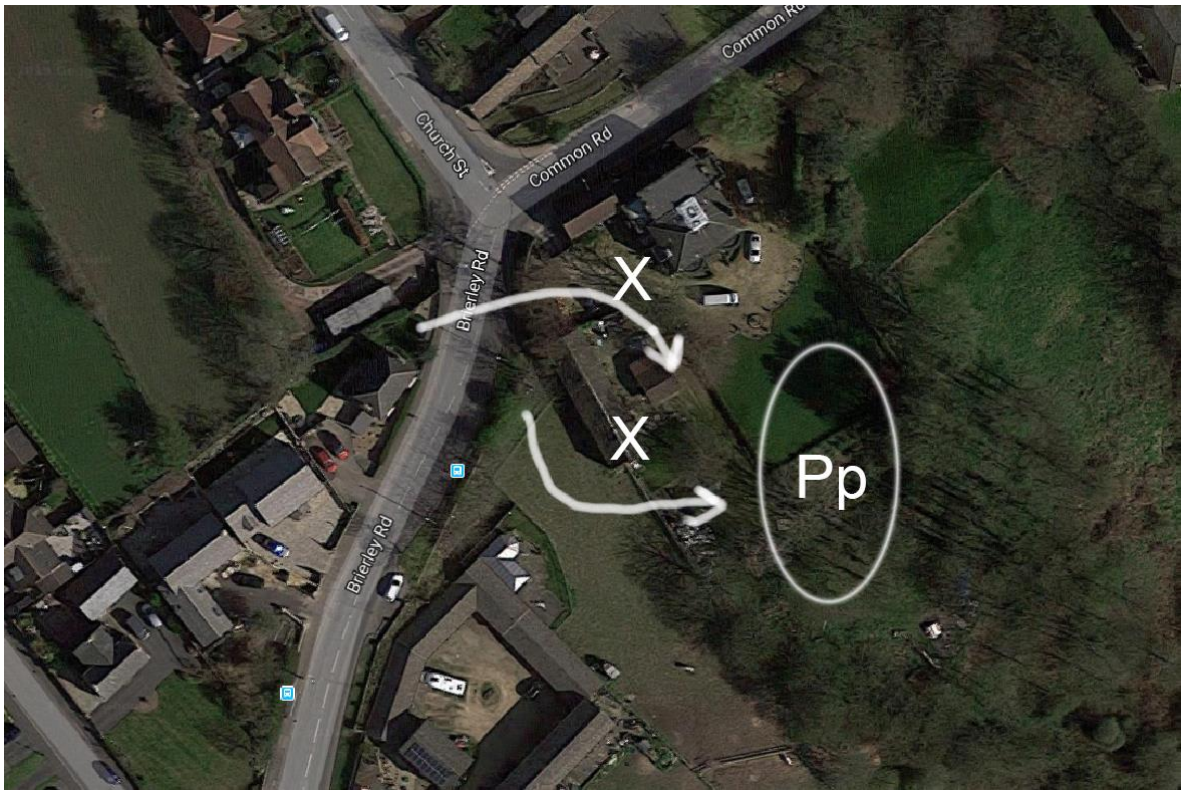


Figure 3. Bat activity immediately at sunset

10. Interpretation and analysis

10.1 Despite the appearance of the building being ideal for species such as brown long-eared or whiskered bats, there was no evidence to suggest that these species have used the roof. There were no droppings or scattered prey remains on any of the many stored goods and the open areas of the floor did not have any accumulations of droppings. The main problem appears to be that the ridge section has been injected with expanding foam in order to stem leaks and this has filled the ridge section normally occupied by bats. The north gable is obscured by a tree and the south gable is partially obscured by ivy. There are no facia on the gable wall though there are some gaps but many are considered to be large enough to allow access by birds and therefore of less interest to bats.

10.2 Common pipistrelle flew into the site from the north in the direction of Common Lane and these were thought to be emerging from nearby residential dwellings. The bats flew over the survey site and down to the extensive woodland at the south end of the survey site and were recorded foraging there throughout the survey. Bats were seen around the building for the duration of the survey but none were seen to emerge from the barn and it is considered that the pipistrelle are roosting in residential dwellings nearby.

10.3 No barn owls or swallows were recorded using the barn

11. Impact assessment

11.1 The proposed work to convert to residential is not likely to impact bats and will not damage any maternity roosts. Conversion will include stripping the roof and replacing the stone tiles once the roof has been felted and this will include new ridge tiles without the foam. Therefore, the roof is likely to be far more suited to bats post conversion. There will be no loss of roosting potential or fragmentation of habitat and the conversion is likely to increase the building's potential.

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12. Mitigation and compensation measures

12.1 The building is not thought to support bats but some precautionary measures should be followed:

- All roof tiles to be stripped by hand by lifting vertically rather than dragging. This will avoid crushing injuries if bats are present.
- All timber treatment should be undertaken using permethrin based chemicals to avoid poisoning any bats that might use the site in the future.
- Traditional bitumen 1F underfelt should be used instead of a breathable membrane as these can lead to bats becoming entangled in the membrane
- A permanent bat roosting feature in the form of a hole in the gable apex pointing is to be included in the south gable. The hole should be no more than 50mmx20mm in the dry verge and allow access through to the ridge section.
- A Schwegler 1FQ bat house should be placed on the west elevation just under the eaves
- A sparrow nesting terrace on the north or west elevation should be erected in order to increase the biodiversity of the site in accordance with the local PPG.
- Two starling boxes will be erected on the adjacent garage or on one of the large trees to the south of the barn

12.2 The proposed conversion is subject to planning regulations and therefore, any of the above could be conditioned as part of any planning permissions that may be granted.

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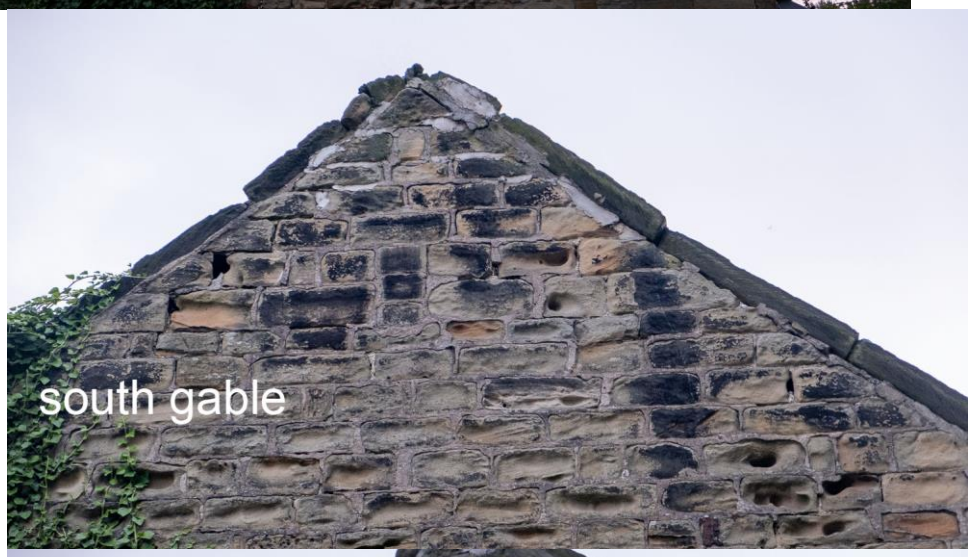
Appendix 1: Photographs of the survey site





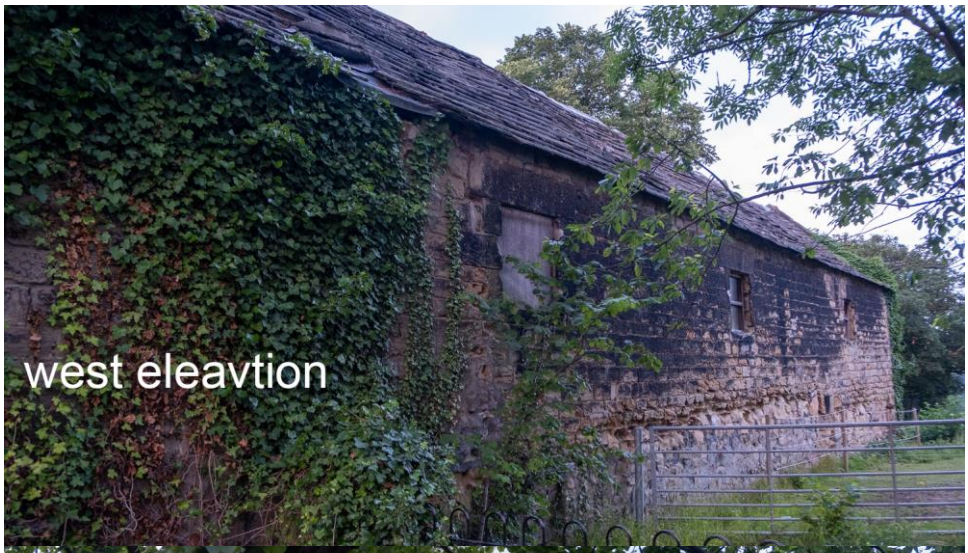
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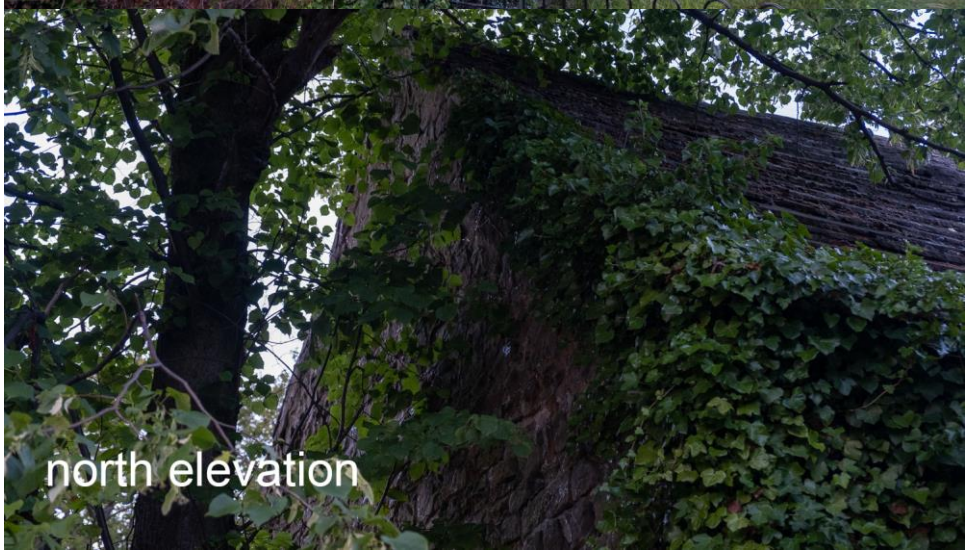

south gable


south gable

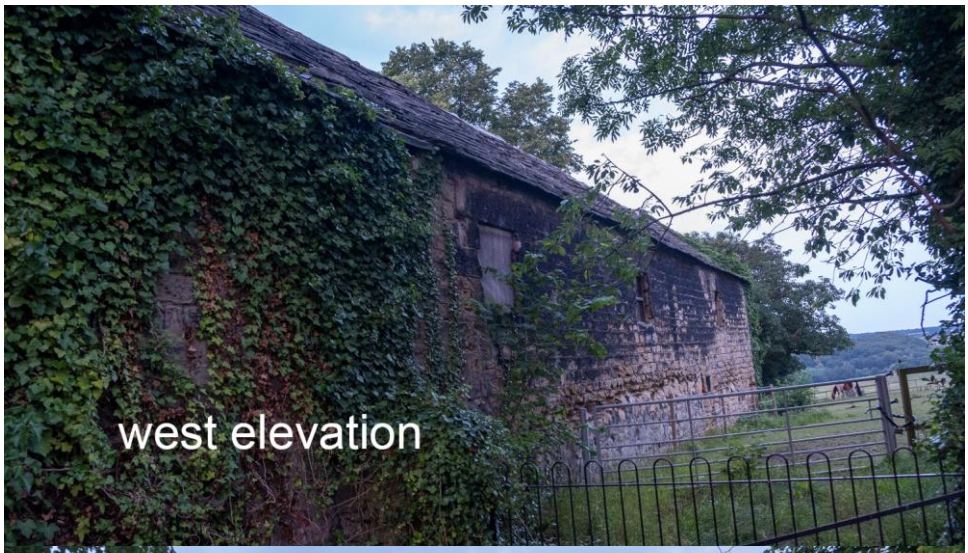

south gable

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west eleavtion


north elevation

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west elevation


west elevation