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Bat Survey to
Cardigan Works
Foundry Lane
Elsecar
S74 8EQ

5th August 2022

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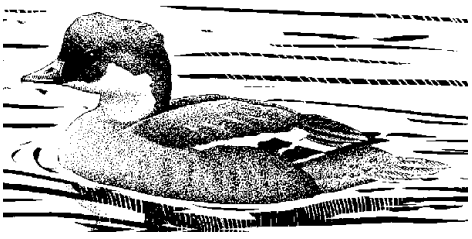

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1. Summary

1.1 A bat scoping and activity survey has been carried out to Cardigan Works, Elsecar to determine if the buildings are being used by roosting bats as part of an existing planning application. The survey was undertaken at the optimal time for bat occupancy and aimed to establish the presence or absence of bats in the buildings. The application seeks to redevelop the works into new offices and works compound with associated storage units.

1.2 There are several buildings on site most of which have negligible bat roost potential having been part demolished/vandalised and many are just shells without roof coverings or have single skinned asbestos sheeting, All walls are brick without wall cavity or are blockwork and offer no potential roosting features (PRFs). The double storey office block has been badly fire-damaged though it does have partial slate roof ridge beam still with ridge tiles. The walls are cement rendered in the main and are without cavity but there are structural cracks within the walls. The site displays a limited number and diversity of PRFs and has been assessed as being of 'negligible' roost potential except for the office which is assessed as being of 'low' roost potential requiring a single activity survey.

1.3 The single activity survey was carried out on the same evening as the scoping survey by two very experienced surveyors commencing 45 minutes prior to sunset until 90mins after sunset. Sunset was recorded at 21.00hrs and the weather was perfect with temperatures above 28^{o}C and no wind. The first bat recorded was a common pipistrelle at 21.12hrs and was observed flying into the site from the east and hunted briefly around the site before heading further west. Over the course of the next 30 minutes, around 5 common pipistrelles were recorded passing over the site or hunting along the east side of the site adjacent to the scrub woodland. No bats were observed emerging from the buildings and it is unlikely that bats are using the buildings for roosting.

1.4 There is no evidence that bats have or are using the buildings for roosting and the buildings generally have a very low number of PRFs. The design, structure and condition of the buildings suggest it is unlikely that significant numbers of bats would use the buildings and it is highly unlikely the buildings are essential for species survival. Precautionary mitigation would be appropriate.

1.5 No barn owls or evidence thereof was noted, and it is considered this species is absent from the site.

1.6 On the basis of the survey work carried out, it is considered that a European Protected Species Mitigation (EPSM) Licence will not be required. There are no statutory constraints to the development of this building from the presence of bats and no further survey work is required**.**

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2. Introduction

2.1 A bat scoping and activity survey was carried out to Cardigan Works, Foundry Street, Elsecar S74 8EQ (NGR SE381002) to determine whether bats have or are using the property as a roost site. The site was also checked for the presence of nesting birds.

2.2 The current proposal seeks to demolish the existing buildings and redevelop the site as a works compound with associated storage and office block.

2.3 The survey took place at a time considered to be the optimal period for bat occupancy therefore, the survey 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 was 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 Friday 5th 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

Access into the roof void of the office block was not possible due to the unstable nature of the floors caused by extensive fire damage.

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5. Site Description

5.1 The site consists of several buildings, which were once an active foundry, but now are mainly shells without any of the original roofing except for the office block. The site is located in a rural location and has good foraging habitat around it and there are many residential dwellings which will offer greater roosting potential.

Figure 1. Site location plan

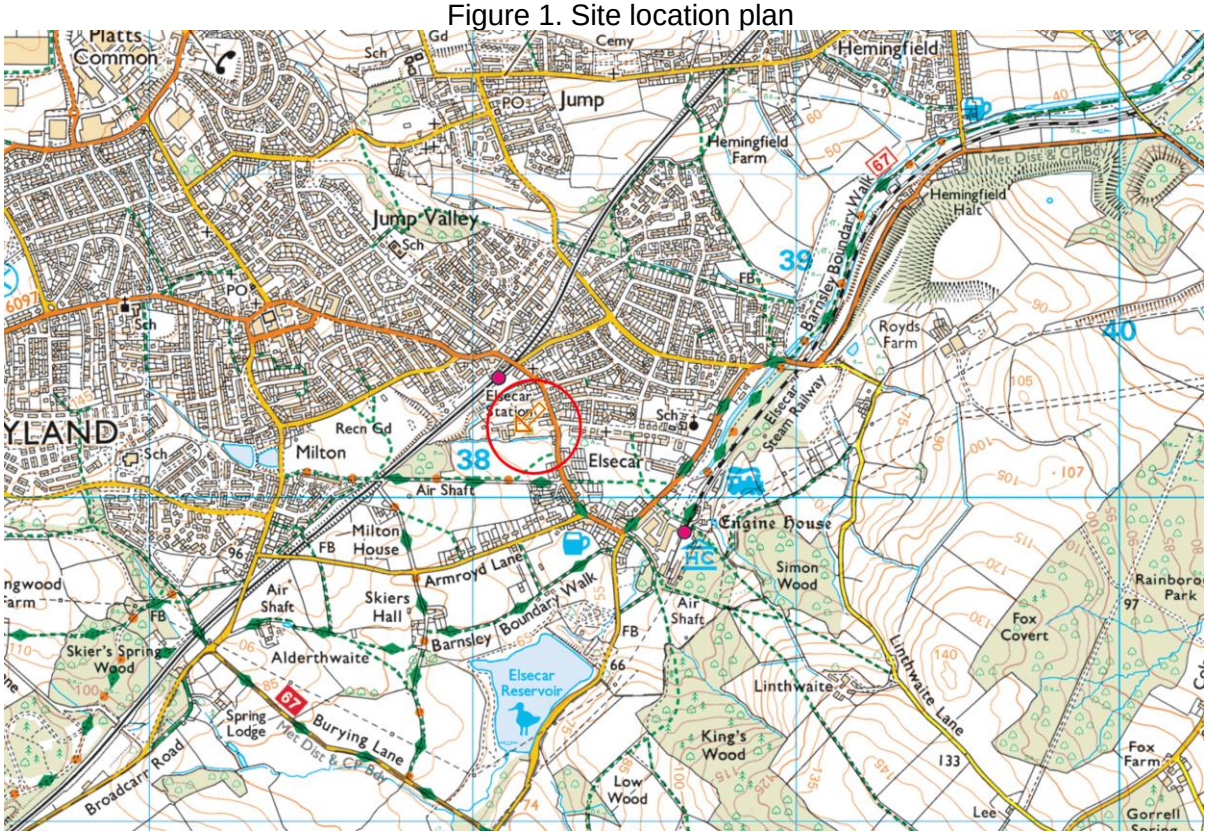

Figure 2 Aerial view of the site, surrounds and specific buildings surveyed

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6. Desk Study

There are no records relating directly to the site and many records for the 2km are historical. The scope of this project will not extend beyond the site footprint and will not affect bat roosts that might be close by (within a 2km radius). The data from this survey supersedes any previous records for this site.

7. Activity surveys

7.1 The building was assessed as being of 'low' bat roost potential and therefore, a single activity survey was carried out on the same evening as the scoping. Two very experienced surveyors covered the site, and this is considered robust for the survey.

8. Survey results

Scoping Survey

The site has a number of buildings which have been identified in figure 3 below

Building 1

A former office block constructed of brick with blue slate roof. The interior has been extensively fire damaged and access into the roof void was not possible but it can be viewed from ground level and the roof is partially missing but still has a good section of ridge tile present. The ridge is a double beam and appears clean but there is a gap between the two ridge beams which was carefully scanned but no bats were seen. The roof is extensively used by feral pigeons. Externally, the roof has blue slates and is unlined and has extensive gaps where tiles have slipped, been stripped or cracked in the fire. Bats are unable to roost beneath these single tiles and the tiles at the verges sit flat to the rendered wall tops. It is possible that individual bats could roost beneath the tiles at the wall tops.

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The walls are brick but have no wall cavity and most are covered by a cement render. There are some structural gaps, many of which are too big to be of interest to bats, and some sections where mortar has failed but these may be too shallow for bats. There are no decorate wooden fixtures to the walls (facia, soffits etc) and any gutter present is simply sitting on the brick buttresses.

This building exhibits some minor roost potential and is assessed as being of 'low' interest to bats.

Photo 1 Various aspects of building 1

Building 2

A large former foundry building in an advanced state of disrepair having most of the roof stripped of covering with the remaining roof covering being single sheet asbestos which is not regarded as being of bat roost potential. The walls are single thickness blockwork or brick with no wall cavity. There are no fixtures or features that would allow bats to roost and the likelihood of bats being present is very low. The building has 'negligible' potential to support roosting bats.

Photo 2: Various aspects of building 2

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Building 3

A low lean-to shed built entirely of corrugated asbestos or cement fibre sheets sat on top of a low blockwork wall. This building is regarded as being of 'negligible' interest to bats.

Photo 3. Building 3 at south end of the site

Building 4

A single storey lean-to set against the east elevation of building 2. The walls are constructed of brick with wall cavity and the roof is a single sheet corrugated cement fibre board over a steel portal frame. There are wooden facia along the north and south sides of this building and these were inspected with a high-powered lamp and found to be free of bats. This building is regarded as being of 'negligible' interest to bats.

Photo 4 Lean to shed identified as building 4

Emergence survey

Only the office block had any potential to support roosting bats, and this was subject to a single activity survey by two very experienced surveyors using both heterodyne and an RTE detector. The survey took place 45 minutes prior to sunset until 90 minutes after sunset. Sunset was recorded at 21:00 and the conditions were perfect with a high temperature of 28^{o}C and no wind.

The first bat recorded was a common pipistrelle bat at around 21:12 and was seen to fly into the survey site from an easterly direction having come through the trees to the east of the site where it was heard foraging prior to being seen. A second bat was detected some 10 minutes later and flew into the site from the west and was soon joined by a second bat and they

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commenced a chasing and interactive flight for around 10 minutes over the site. These bats were not feeding but were more likely involved in a mating display and their echolocation calls varied greatly from those of common pipistrelle engaged in normal flight and foraging behaviour.

Over the course of the survey, only small numbers of bats were recorded, all common pipistrelle, and likely to be less than 4 individuals. The bat activity was unremarkable, and no bats were recorded emerging from the buildings on site. The greatest amount of bat activity was recorded in the woods to the east of the site where bats were actively feeding and are most likely to have emerged from nearby residential dwellings.

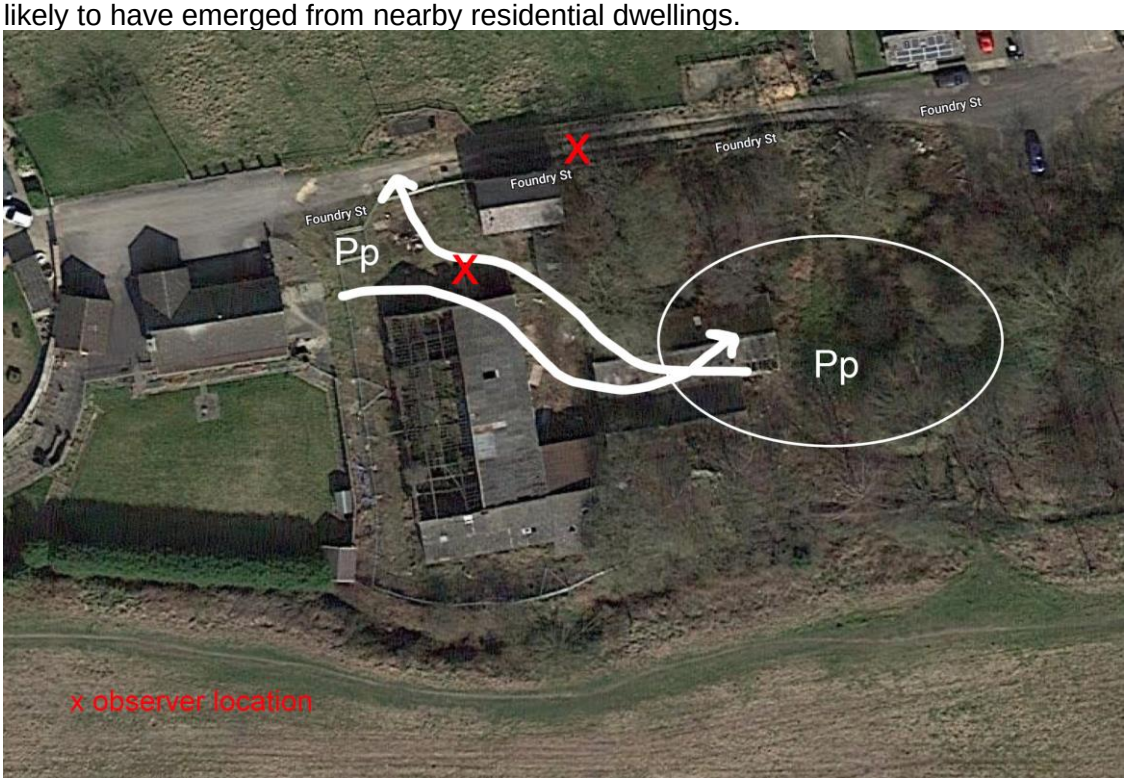

Figure 4. Illustration of bat activity at sunset

9. Interpretation and analysis

The survey results established that the buildings have a very low potential to support roosting bats. A few PRFs were noted in the roof and walls in the office block (building 1) but the other buildings are largely negligible interest to bats. The number of bats recorded was low though they were recorded very early which suggests that they emerged locally to the site but there are many residential dwellings that would support roosting bats. Bats did not emerge from the buildings on site which was as expected from experience at sites similar to this. The main office block has undergone fire damage due to trespassers being on site and even on the night of the survey, despite secure compound fencing, there were youths in the buildings. It is likely that these buildings will continue to be the focus of vandalism and possibly further fire attacks so it is unlikely that they will ever be of any importance to bats.

Given the condition of most of the buildings, it is highly unlikely that they would ever support larger numbers of bats such as a maternity roost and at best, an individual bat may use the building from time to time as a day roost, transitional roost or a mating roost, but it is unlikely that the buildings will ever be used in such a way as to be depended on by bats.

The habitat on the site is of no value to bats in terms of foraging but there is excellent quality habitat surrounding the compound and bats are passing through the site on their way to and from foraging grounds, but the majority of bat activity is in the woodland on the east boundary of

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the site. This woodland is outside the scope of the project and will not be affected by the proposals.

Replacement of these buildings with incorporated bat roosting features is likely to significantly improve the site's appeal to bats and increase the biodiversity of the site.

10. Impact assessment

The proposed works to demolish the existing buildings is unlikely to damage or destroy bat roosts and will not fragment habitat. The impact on bats of this project is likely to be negligible.

11. Mitigation measures

No bats were recorded using the building and the buildings are generally classed of being of negligible interest to bats, consequently, there are no requirements for a European Protected Species (EPSM) licence and no compulsory requirement for compensation features. However, in order to achieve a net gain in biodiversity, permanent roosting features should be incorporated in the new buildings along with a suitable nestbox scheme to compensate for any loss of nest sites.

Mitigation

- Contractors to be made aware of the small potential for bats to be present and to act with vigilance when disturbing roof tiles.

Timings

- There is no restriction on the timings of this project, however, demolition of the buildings between November and March inclusive when bats are least likely to be present would be preferable.

Features and enhancements

- At least two permanent roosting features should be installed in the new office block or workshops (1 on a south wall and 1 on a west wall) placed high up at eaves level, e.g. 2x Schwegler universal bat summer roost 1FTH.
- A Schwegler sparrow nesting terrace 1SP should be added to the north elevation of the office block.

Lighting

Lighting can have a detrimental effect on bat foraging and commuting activity and some species will actively avoid areas that are well lit. Lighting can cause habitat fragmentation by preventing bats from commuting between roost and foraging areas. The following measures could be implemented during the development to reduce indirect impacts on foraging and commuting bats caused by artificial lighting:

- Direct any task lighting used during construction away from any known roost.
- Set any necessary security lighting on short timers with a sensitivity to large moving objects only.
- Use hoods, cowls, or directional lighting to avoid light being directed at the sky and to avoid light spill.
- Limit lighting times to provide dark periods.

12. Conclusion

The survey concluded that the buildings have only a very low potential to support roosting bats and at the time of the survey, bats are not using the building, Bats of a local provenance were

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present but in very low numbers and were considered to be roosting close by the survey site. Including permanent roosting features will increase the site’s appeal to bats and consideration should be given to adding a sparrow nesting terrace on the north elevation. The proposed works are unlikely to impact the local bat population and will not harm bats or damage or destroy roosting sites.