



Bradley Road Fire Station Wrexham

Bat Survey Report

31 August 2017

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1 Introduction

1.1 Background

Kingdom Ecology have carried out a bat scoping survey of the former Bradley Road Fire Station, Wrexham, LL13 7SU (National Grid Reference SJ 331 504). Proposals at the site are to demolish the buildings present and to redevelop the site.

Field survey was undertaken on the 17th August 2017. Surveys were carried out by Richard Roe (BSc, MSc, MIEEM, CEnv). Richard has extensive experience of undertaking bat surveys as a professional ecological consultant with over fifteen years' experience. Richard is also a licensed bat worker.

1.2 Purpose of Report

This report provides and outlines the findings of initial field surveys undertaken at the site.

The field surveys examined habitats present with a focus on the existing buildings' suitability to support roosting bats. Survey also examined the suitability of the site to support breeding birds. Survey comprised of a daytime survey examining the interior and exterior of the buildings.

Following a description of the survey findings and an evaluation of habitats at the site, the report goes on to make recommendations for further works, mitigation and ecological enhancement measures where relevant.

1.3 Protected Species Legislation

1.3.1 Bats

All British bat species are fully protected under the Wildlife and Countryside Act 1981 (as amended) and through their inclusion in Schedule II of the Habitats Regulations 2010 which transpose Annex II of the Council Directive 92/43/EEC 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora ("EC Habitats Directive") which defines European protected species of animals.

British bats species are afforded further protection by the Countryside and Rights of Way Act 2000; and the Natural Environment and Rural Communities Act 2006.

Taken together, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture bats.
- Deliberately disturb bats, whether at roost or not.
- Damage, destroy or obstruct access to bat roosts.

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- Possess or transport bats, unless acquired legally.
 - Sell, barter or exchange bats.

A bat roost is interpreted as “any structure or place, which any wild bat uses for shelter or protection.” (Bat Conservation Trust 2012¹). A bat roost is protected whether or not bats are present at the time.

All species of British bat are considered a European Protected Species (EPS). The Conservation of Habitat and Species Regulations (2010) provide derogation against certain offences which could potentially affect an EPS through the EPS Licensing system.

1.3.2 Birds

All wild birds in England and Wales are protected under Section 1 of the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, or take, damage or destroy the nest (whilst being built or in use) or its eggs.

¹ Bat Conservation Trust (2012) ‘Bat Surveys: Good Practice Guidelines 2nd Edition’

2 Field Survey Methods

2.1 Survey Aims and Objectives

Survey comprised of a site visit and inspection of the affected buildings. The survey aim was to assess the site as to its suitability to support roosting bats and to identify suitable habitats for any other protected species including breeding birds.

Survey also aimed to identify opportunities for ecological enhancement and to inform potential mitigation measures if required to ameliorate any negative impacts attributable to the proposed works.

2.2 Survey Methods

2.2.1 Daytime Bat Inspection

Each building was assessed as to its suitability to support bats following standard methodologies prescribed in English Nature's *Bat Mitigation Guidelines* (Mitchell-Jones 2004)² and the Bat Conservation Trust's *Bat Surveys: Good Practice Guidelines* 3rd Edition (BCT 2016)³.

Survey, comprising of an inspection of the interior and exterior of each building, was undertaken during daylight conditions using binoculars, endoscope and a high-powered torch. The survey was undertaken during daylight hours on the 17th August 2017.

In addition to searching for evidence of an actual bat roost the survey also aimed to assess the suitability of each building to support bats and consequently the likelihood of a bat roost being present but with no obvious field signs.

Survey assessed each building's roost suitability by examining structural features and the surrounding habitat. Structural features that will influence the suitability of a building to support roosting bats include the presence of a roof void; access points into a building including gaps beneath barge boards, gaps under lead flashing, gaps within masonry, loose tiles etc, complexity of any roof void, daytime light levels in roof void etc.

² Mitchell-Jones, A.J. 2004. *Bat Mitigation Guidelines*. English Nature, Peterborough.

³ Bat Conservation Trust (2016) *Bat surveys – Good Practice Guidelines* 3rd Edition. Bat Conservation Trust, London.

Important habitat features surrounding the structures which could influence roost potential include: whether the structure is in a semi-rural or parkland location, proximity to a significant linear feature (e.g. watercourse, mature hedgerow, wooded lane) or an area of woodland etc.

Taking account of these architectural and habitat features, each building was assigned a level of roost suitability based upon professional judgement.

3 Survey Results

3.1 Site Description

The site comprises of the former Bradley Road Fire Station. The site comprises of a complex of brick-built, buildings located around areas of hardstanding located within Wrexham city centre. The fire station buildings are of mid-20th century origin.

The fire station complex comprises of 5 discreet buildings. These are:

- Building 1- Fire Station Control Room/Fire Engine House (flat roofed)
- Building 2- Fire station Residential Block (hipped roof)
- Building 3- Mechanic shop (flat-roofed)
- Building 4- Drill Tower (flat-roofed)
- Building 5- Extension to Building 2 (flat-roofed)

The Fire Station closed in early 2016 and has remained largely vacant although some parts of the main building are currently occupied by squatters. The site is currently fenced with Heras fencing.

In terms of habitats, the site comprises principally of buildings plus areas of hardstanding with some scattered, self-seeded buddleia. There is also a small garden area at the front (west side) of the fire station. The garden comprises of an area of mown lawn with ornamental shrubbery. Semi-natural habitats at the site are considered to be very limited.

Surrounding habitats are considered to be of low value to bats comprising of extensive areas of hard standing carpark, large retail units and other buildings associated with the commercial centre of Wrexham. Areas of semi-natural habitat within proximity to the site are very limited.

The site's location is shown on Figure 1 in the Appendix. Figure 2 in the Appendix shows the site layout. Photographs of the site are also shown in the Appendix.

3.2 Field Survey Results

In summary, the buildings were all found to offer limited bat roosting suitability with very few suitable bat roosting features identified.

No field signs indicative of roosting bats were found associated with any of the buildings, either internally or externally.

No recent or historic evidence of breeding bird activity was found associated with the buildings, either internally or externally. However, ornamental shrubbery in the small garden area (See Figure 2) could offer suitable nesting habitat during the breeding season.

3.2.1 Building 1- Fire Station Control Room/Fire Engine House

This section of the Fire Station would have formerly housed the fire engines on the ground floor whilst the upper floor was used as the station control room.

The building is brick built with a single storey section at its western end whilst the eastern end is two storey.

The building is flat-roofed with short brick parapets around the edges of the roof. The eastern end of the building is clad in corrugated metal.

Internally the building does not have a loft void. The internal rooms are considered unsuitable for bats as they are both brightly lit and have well plastered walls and ceilings. The building does not offer any obvious potential bat roosting features internally.

Externally, the building was found to be in good condition with intact brickwork and pointing and no obvious potential access points into the buildings cavity walls. The building does not offer any obvious potential bat roosting features externally.

Building 1 was assessed as offering **negligible** bat roosting potential.

3.2.2 Building 2- Fire Station Residential Block

This building housed the Fire Station kitchen, common room and dormitories. The building is a two-storey, brick-built structure with a hipped roof clad in slate. The building is linked internally to Building 1. The internal rooms are considered unsuitable for bats as they are both brightly lit and have well plastered walls and ceilings.

The building has a large roof void above the upper floor rooms. The roof void measures approximately 18m x 10m in area and is approximately 3m tall.

The roof is supported on a steel frame and the internal faces of the roof tiles have been torched with lime mortar. The lime mortar was observed to be intact providing a barrier to bats between the roof void and the underside of the tiles. The loft space has been lined with fibrous loft insulation and was found to be dark and warm.

The ridge beam was found to be cobwebbed and further cobwebs were present spanning the roof void. The cobwebs indicate that no bats or birds have flown within the interior of the roof void in the recent past.

No obvious potential bat access points to the loft interior space were identified.

No bat droppings or other bat field signs were found internally.

Externally, the building was found to be in good condition with intact brickwork and pointing and no obvious potential access points into the buildings cavity walls. The building has a concrete soffit running beneath the eaves which was observed to be intact and tightly fitted.

The roof and ridge tiles were also observed to be in good condition with no loose tiling or significant areas of missing mortar. Two slightly raised ridge tiles were identified on the roof, however such features are considered to offer only limited value potential bat roosting habitat (locations shown on Figure 2).

The building does not offer any obvious high value potential bat roosting features externally.

Building 2 was assessed as offering **negligible-low** bat roosting potential.

The building has a small two-storey and single storey, brick-built extension with a flat roof (Building 5). This building was found to be in a good condition both internally and externally with no obvious potential bat roosting features identified.

Building 5 was assessed as offering **negligible** bat roosting potential.

3.2.3 Building 3- Mechanic shop (flat-roofed)

This building comprises of a brick-built, single-storey building with large, corrugated, metal doors at its west face. The building has a flat, concrete roof. The building does not have a roof void.

Internally the building comprises of three large rooms which would have formerly housed the mechanic's workshops. They are now used for storage and as a gym. The internal rooms are well plastered with no obvious potential bat roosting features.

Externally, the building was found to be in good condition with intact brickwork and pointing and no obvious potential access points into the buildings cavity walls. The building does not offer any obvious potential bat roosting features externally.

Building 3 was assessed as offering **negligible** bat roosting potential.

3.2.4 Building 4- Drill Tower

This building comprises of an approximately 20m tall, brick-built, drill tower with a flat roof.

The drill tower is six stories tall and has windows at its 1st-5th floors. The windows are all sealed with wire mesh grill (the mesh comprises of approximately 2cm x 2cm squares). Consequently, the interior of the drill tower is unlikely to be accessible to bats.

The interior of the drill tower was not accessible during survey as it has been sealed to prevent trespass. However, the surveyor was informed that the interior of the drill tower just comprises of a staircase with concrete floors. The interior of the drill tower is unlikely to offer suitable bat roosting habitat as it is likely to comprise of sheer walls and is likely to be brightly lit during daylight hours. As previously stated, no obvious potential access to the towers interior were identified.

Building 4 was assessed as offering **negligible** bat roosting potential.

3.3 Evaluation

No field signs indicative of roosting bats were found associated with any of the buildings either externally or internally. Furthermore, the buildings are considered to support very limited bat roosting features with the only locations identified where two ridge tiles on the roof of Building 2 are slightly raised. Such features are considered to offer only limited potential bat roosting habitat.

Buildings 1, 3, 4 and 5 all have flat roofs and so do not have a separate loft void. These buildings were all assessed as offering **negligible** bat roosting potential.

Building 2 has a large loft void however it appeared to be completely inaccessible to bats with no potential access points identified during either the internal or external searches. Building 2 was assessed as offering **negligible-low** bat roosting potential.

Given the buildings' limited suitable bat roosting features and that the site is located within an area which predominantly comprises of poor quality bat foraging habitat, it is consequently considered to be very unlikely that the site supports a bat roost.

No evidence of breeding birds was found either internally or externally however ornamental shrubbery within the gardens on Bradley Road could be used by nesting birds during the breeding season.

4 Recommendations

Development proposals at the Bradley Road Fire Station are to demolish the existing buildings and redevelop the site.

The daytime inspections did not identify any field signs indicative of roosting bats. Furthermore, suitable bat roosting features are restricted to very minor gaps beneath two ridge tiles on the roof of Building 2.

Buildings 1, 3, 4 and 5 were all assessed as offering **negligible** bat roosting potential. Whilst Building 2 was assessed as offering **negligible-low** bat roosting potential. Surrounding habitats are considered to be of poor value to bats.

Taking the survey findings into account, it is considered to be very unlikely that the buildings support an active bat roost.

Nevertheless, it is recommended that a precautionary approach is adopted during demolition works. It is recommended that prior to demolition, the ridge tiles of Building 2 are carefully removed by hand and the ridge is checked for bats prior to mechanical demolition.

In the unlikely event that any evidence of roosting bats or breeding birds is found at any stage of the development, works should immediately halt and further advice be sought from a licensed bat ecologist.

No evidence of breeding birds was found either internally or externally however ornamental shrubbery within the gardens on Bradley Road could be used by nesting birds during the breeding season.

It is therefore recommended that clearance of the garden area is carried out outside of the breeding bird season (March-August inclusive).

If this is not possible, a check for nesting birds should be carried out by an appropriately qualified ecologist no more than 48 hours prior to the start of vegetation clearance.

5 Appendix

Figure 1- Site Location



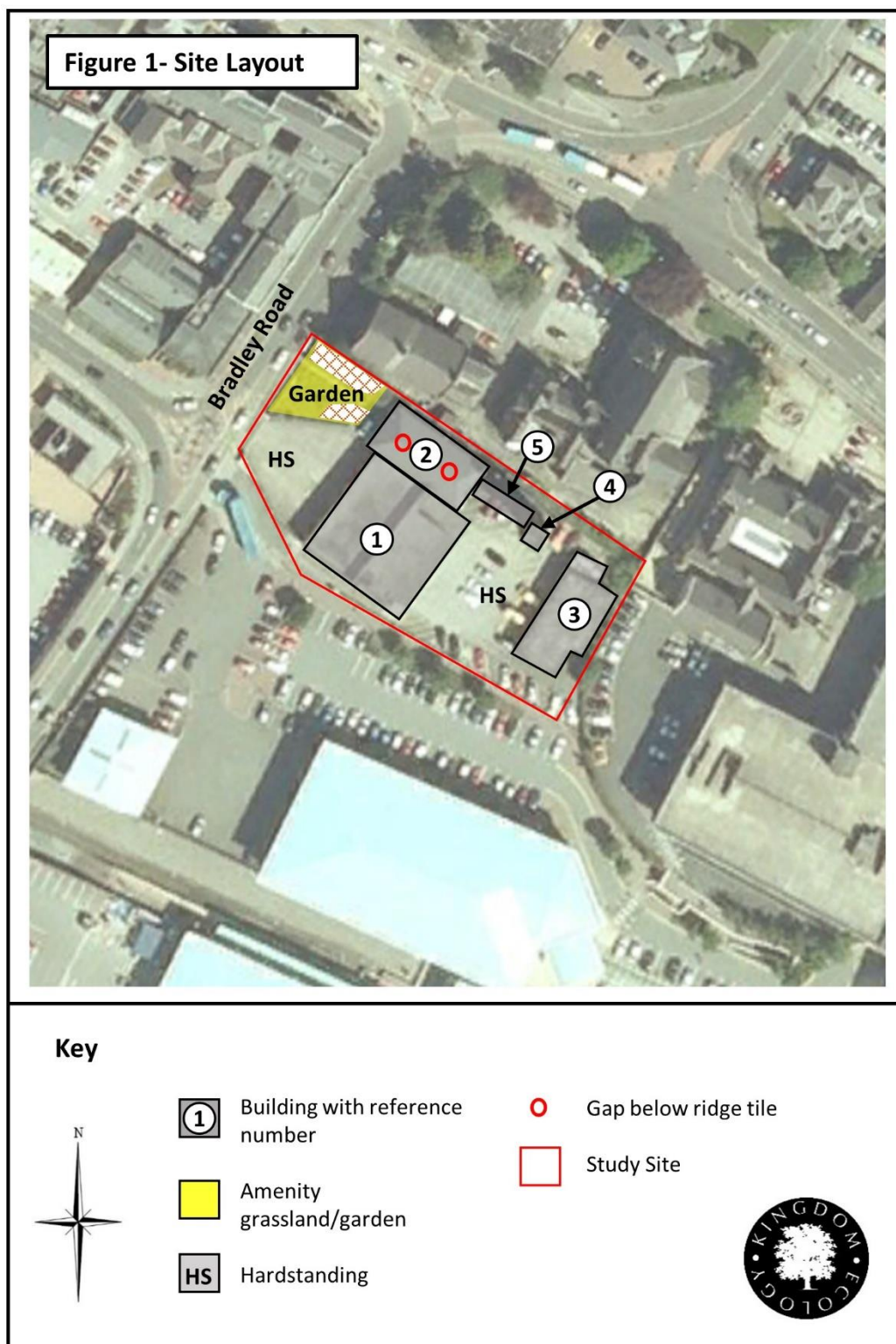
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Ordnance Survey 100054686



 Study Area





Photograph 1- West Face of Building 1 (Building 4 in background)



Photograph 2- East faces of Buildings 1 & 2



Photograph 3- West face of Building 2



Photograph 4- West face of Building 3



Photograph 5- Building 5



Photograph 6- Ground floor of Building 1



Photograph 7- First floor of Building 1



Photograph 8- Loft space of Building 2

