



BRYMBO MACHINE SHED, NESTING BIRD SURVEY

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Contents	
Contents	2
1.0 Introduction	2
2.0 Location and surrounding habitat.....	3
3.0 Methodology	5
4.0 Building Description	6
5.0 Building inspection survey results	9
6.0 Conclusions	10
7.0 Recommendations	10

1.0 Introduction

- 1.1 Enfys Ecology Limited were commissioned by Gary Brown on behalf of Brymbo Heritage to undertake a nesting bird survey the Machine Shop at the Brymbo Steelworks site. Planning permission is being submitted to carry out major works on this building to convert it in to an educational resource and visitor attraction.
- 1.2 The survey was commissioned to accompany the application for planning permission to Wrexham County Borough Council. The works to the building are planned to commence in summer 2018.
- 1.3 A visit to the site was carried out on 18th July 2017 to inspect the building for any nests present. The building had already been assessed for use by bats in liaison with the council and it was agreed that a bat survey would not be needed for the works to this building, as it has negligible potential following the 2016 bat survey guidelines (Collins, 2016).
- 1.4 Under Section 1 of the Wildlife and Countryside Act 1981 (as amended), wild birds are protected from being killed, injured or captured, while their nests and eggs are protected from being damaged, destroyed or taken. In addition, certain species such as the barn owl are included in Schedule 1 of the Act and are protected against disturbance while nesting and when they have dependent young.
- 1.5 The survey work to inform this report was carried out on the 17th July 2017 and this report is valid for a period of two years from this date in accordance with best practice.

2.0 Location and surrounding habitat

- 2.1 The building surveyed, Brymbo Machine Shop, (hereafter referred to as “the site”) is a large industrial building from the 1920’s. Currently the building is open to the roof, with some offices, facilities and meeting room built within this large building. The site is situated within the village of Brymbo, approximately 5km to the north west of Wrexham, the site is centered on approximate grid reference SJ295 535. The habitat surrounding the site includes numerous buildings in varying state of repair, woodland, grassland, bare ground and hedgerows.



FIGURE 2.1. AERIAL VIEW OF THE SITE, THE MACHINE SHOP IS THE LARGE BUILDING CIRCLED IN RED
IMAGE © GOOGLE 2017

- 2.2 The site is located adjacent to the Brymbo Fossil Forest SSSI which was designated in July 2015. There are no other designated sites within 1km of the site. The planned works will not have a negative effect on the Fossil Forest SSSI.



FIGURE 2.2. AERIAL VIEW OF THE SITE WITH THE SURVEYED BUILDING OUTLINED IN RED
IMAGE © GOOGLE 2017

3.0 Methodology

3.1 *Site Inspection and survey details*

The building was assessed for any signs of birds by Rhian Hughes, a suitably qualified ecologist, on 18th July 2017. The building was searched for any nests or signs of nesting bird activity for example staining of the structure below nesting sites, remains of chicks, eggs or nesting material. Binoculars were used to view potential nesting sites and photographic evidence was taken where necessary.

3.2 *Limitations*

Due to the height of the building, and the structures within it it was not possible to inspect all areas. There were many ledges present within the building which could not be viewed properly, and it is therefore possible that some nests may have been present which could not be seen. As the survey was carried out on 18th July 2017, relatively late in the season it is also possible that birds may have already fledged, therefore they would not have been as obvious to see.

4.0 Building Description

4.1 Exterior

The Machine Shop is a large building, currently this is all open to the roof with a lower ground floor covering approximately one third of the building. The building is approximately 15 – 20 m high to the apex.

The initial proposed works are to re-roof the structure including adding insulation within the roofing structure, and to install new windows throughout. Therefore following the renovation the building will be sealed, not allowing access into the building for birds. Pictures 1 and 2 illustrate the exterior of the building from the north and west. The glass is missing from a large amount of the window frames throughout the building allowing easy access for birds at present. As well as this there were also large gaps present between steel beams and walls providing ample access opportunity and nesting potential and gaps surrounding the wooden doors providing access.



PICTURE 1. EXTERIOR FROM THE NORTH SIDE.



PICTURE 2. WEST ELEVATION FROM THE NORTH.

Externally there were large metal gutters present on both the north and south side of the building, these created a large ledge which could provide nesting opportunity,

however it is likely that these would be too exposed to the weather. On the southern side there was a large metal sheet, acting as a “barge board” below the gutter for approximately 2/3rd of the length of the building, this could also have provided nesting potential for birds. This was examined with binoculars and no nests were seen, however if they were high up underneath this it would be difficult to see.

On the two gable ends of the building there are metal sheets which appear to be vents on the tallest section of the building. This would again provide nesting opportunity, or access to the interior.



PICTURE 3. VENTS ON THE GABLE END

4.2.1 The exterior walls of the building were generally in good condition. Although there was some vegetation growing on the southern side, this was not dense enough to provide cover for nesting birds. There were some small gaps in the mortar of the bricks, but none observed were large enough for nesting birds.

4.2 *Interior*

Currently the interior of the building is largely open plan with some inbuilt meeting rooms, offices and toilets which have their own walls and roof (picture 4).



PICTURE 4. MEETING ROOM WITHIN THE MACHINE SHOP

The walls within the main building are painted brick with much of the paint flaking off. There was one section of the building which could be inspected at a height due to the presence of the old crane. From here a good view of the west gable was possible.

Although access into the whole building was obtained, due to the height of the building there were many areas which could not be definitely ruled out as having nests present due to the ledges from the steel which made “platforms” where birds could nest upon.



PICTURE 5. OLD CRANE PROVIDING ACCESS TO THE GABLE

PICTURE 6. EXAMPLE OF GAP BETWEEN THE METAL WORKS AND ALSO LEDGES PRESENT WITHIN THE BUILDING

The buildings within the Machine Shop also had their own barge boards (see picture 7) however, none of these provided nesting potential.



PICTURE 7. BUILDINGS WITHIN THE MACHINE SHOP AND METALWORK PRESENT

The lower ground floor of the building was very draughty due to the broken glass in the gable end windows. This section of the building also had stone walls. There was one gap present in the stone wall where a pipe emerges out of the gap, the remains of an old birds nest were present within this gap.



PICTURE 8. OLD BIRDS NEST WITH GAP IN THE WALL

5.0 Building inspection survey results

- 5.1 During the survey no nests were observed on the outside of the building, the gable ends were both clearly free of any nests, and the only nests which it may not have been possible to see were nests high up along the north and south sides.
- 5.2 One House martin *Delichon urbicum* was seen within the building, initially at the western gable and then later flying in the building to the eastern gable. This bird was observed landing on a small metal support platform which the beams are bolted into. Once it had landed on the platform it was no longer visible, it was only possible to know the location the bird as it landed as it was being observed. Droppings were also present in large quantities on a tarpaulin covering the kitchen area (under the western gable) suggesting that birds had been nesting here. One of the staff members also reported seeing house martins in this area. One dead wood pigeon *Columba palumbus* (along with some long decayed skeletons) was also observed when on the crane in the western section of the building.
- 5.3 One old birds nest was observed in a hole in the stone work on the lower ground floor.
- 5.4 Due to the height and the presence of many ledges within the building, it is possible that bird nests may have been present but unable to be seen.

6.0 Conclusions

- 6.1 From the survey it can be concluded that birds are using the building, as shown by the presence of a house martin and the droppings associated with this, and also observed by staff on site over the summer. A dead wood pigeon was also observed and the remains of an old nest in the lower section of the building.
- 6.2 No active bird nests were found, however the building has high potential with many nesting features present for them. Therefore the entire building must be considered suitable bird nesting habitat.

7.0 Recommendations

- 7.1 As there is potential for birds to be nesting in the building, works should ideally be constrained by the bird nesting season (from March to September [inclusive]). However, if works must be conducted during this period then a thorough search for any nesting birds should take place immediately prior to the commencement of works. Due to the size of this building it is recommended that a survey be undertaken soon after dawn in the summer when birds are at their most active so birds can be seen leaving and returning to their nests.

If any nest is recorded then all works to that section of the project would have to cease until the nestlings have fledged.

- 7.2 As house martins have been observed and thought to be nesting in the building, as this nesting site will be lost to them, mitigation should be provided on surrounding buildings to enhance these for house martins and swallows *Hirundo rustica* (which were also observed flying round in the vicinity of the area). Artificial nests should be erected on the adjacent buildings near the eaves, prior to the works to encourage them to use alternative sites. Swallow nests are best installed within enclosed structures or the interior of the surrounding buildings, these other buildings were not visited as part of this survey, however it is likely that these buildings will offer suitable locations.

Examples of both house martin and swallow nests are available online from several suppliers, including NHBS (www.nhbs.com, The RSPB and others.) the following being one example of swallow nests: <http://www.nhbs.com/title/158625/no-10-schwegler-swallow-nest> and <http://www.nhbs.com/title/195378/house-martin-nests> for house martins.

The project ecologist will be available to provide advice on the construction and siting of nest boxes.

A minimum of eight house martin boxes should be erected on site and six swallow nests, the exact location will be determined in liaison with the project ecologist.