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Preliminary Roost Assessment

Survey site:

Wallington Farm, Worthenbury, Wrexham, LL13 0AL

Client:

Doreen Manning

Survey date:

30.04.2024

Project:

This report is prepared to inform a planning application for the conversion of an existing outbuilding to residential housing.

PRA survey methodology and legislation can be found in the Arbtech Supplement: PRA Methodology and Legislation - 2024.

The site survey was undertaken by Kayleigh Davies, BSc (Hons), MSc, Graduate Ecologist (Accredited Agent on Natural Resources Wales Licence: S092694/1).					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
30/04/2024	14	57	10	5	None

PRA Survey Factor	Detailed using desk study and site survey. Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.
See PRA plan in Appendix 1, location plan in Appendix 2, proposed plans in Appendix 3 and photos in Appendix 4.	
Background and Site Location	
Summary of site and desk Study	Site description The site is centred on SJ 41362 45112 and has an area of ~1ha. It is formed of two barns and one residential dwelling set in a rural area. The survey focused on one building; a barn situated in the middle of the site which will be affected by the development. The immediate area consists of two other farm like settlements, one to the north and one to the west. Beyond the immediate area are large patches of farmland/agricultural fields with dividing hedgerows and some solitary trees. The loft within building B1 is a bat mitigation bat, built in 2015, after a preliminary roost assessment and bat emergence and re-entry report was conducted by CES Ecology in July 2015. The results of the 2015 preliminary roost assessment found bat droppings within the loft of an onsite building, located to the north of the site, ~30m from B1. The follow up bat emergence surveys confirmed a small roost of common pipistrelles and Natterer's bats. Additionally the report detailed high levels of bats foraging within the local

	area. There was an EPSL (69527: 0THEPS:2016) for the destruction of a Natterer's roost and a common pipistrelle roost, and under this EPSL, a bat loft was created as mitigation within one of the neighbouring barns, the building which is subject of this assessment (CES Ecology, 2015). No statutory sites with bat qualifying interests were within 2km radius of the site boundary. There is one Special Area of Conservation within 10km of the site boundary. River Dee and Bala Lake (SAC) is located ~1,703m to the west of the site. this is not designated for bats but houses habitat of high value to support foraging and commuting bats. <u>Biological Record Data from COFNOD (2km radius)</u> There are 22 records for bat species within a 1km radius of the site over the past 10 years. These are all situated on site: • There are 2 records of commuting brown long-eared bats situated on site. • There are 12 records of common pipistrelle including a day roost situated on site. • There are 2 records of commuting unspecified myotis species situated on site. • There is 1 record of a Natterer's day roost situated on site. • There are 2 records of commuting noctule situated on site. • There are 3 records of commuting soprano pipistrelle situated on site.
Field survey results	
Summary of Survey Findings	<u>Foraging Habitats</u> There are high value foraging habitats on site for local bat populations. The arable fields, hedgerow boundaries, scattered trees and shrubs all provide habitat to support foraging bats. Furthermore, the site

	is further connected to high value habitat with surrounding arable land, and pockets of woodland and linear hedgerows. There were no limitations for the site visit. <u>B1</u> B1 is a gable ended, agricultural outbuilding. The building is currently utilised for storage. The roof is of slate tile construction, with brick walls. There is a small extension to the west of the property, that has a metal corrugated roof with brick walls and wooden doors. The building is in overall poor condition. ➢ There are twelve bat access tiles on the southern and northern elevations of B1 with access points into the interior of the loft through sections of damaged lining. ➢ There are several lifted tiles on both elevations of the building, also allowing roosting features for crevice dwelling bats. ➢ There is missing mortar between the bricks on all elevations of the building that allow suitable crevices for bats. There are also some missing bricks within the walls that allow internal access to the ground floor void of the building for bats. ➢ There are integrated bat boxes on the western and eastern elevations of the building, with both boxes showing signs of use by birds, but these were not endoscoped during the survey. There is an additional bat box on the southern elevation of B1 that showed signs of use by bats, with scratches and staining observed. <u>Interior of B1.</u>

	There is one loft space within B1. The loft space was created as mitigation for previous development on the site which compensated for the destruction of a confirmed day roost of Natterer's and common pipistrelles within another building. The loft is ~25m in length and ~7m wide and ~2m in height. The median of the loft is boarded with wooden boards, with the sections close to the eaves unboarded with no floor insulation present. The void is an open space with wooden beams throughout the walkway. There is bitumen felt lining present, wooden timber beams and two openings (~0.5m in height and width) on the western and eastern walls of B1. ➢ The lining is bitumen felt and in poor condition, with several sections of damage and tearing allowing for pockets and crevices suitable for roosting features for crevice dwelling bats. ➢ There are four bat boxes designated for crevice dwelling species in the loft which were also inspected with a torch but not endoscoped. These boxes are located on wooden beams within the loft space (see figure 2). These boxes were not observed to show signs of use, with no scratches, or oil staining present. ➢ There are >100 bat droppings throughout the loft. The droppings are of mixed age, with some appearing to be recent. The droppings were scattered throughout the entirety of the loft space. All similar in size and shape (figure 1). A sample of these were taken for DNA. ➢ There is an opening to the west and east of the building, allowing internal access for bats. ➢ The interior temperature was recorded on the day at 8°C and the relative humidity 58%. This was considered cooler than outside (14°C), and the humidity was 1% higher than recorded exteriorly (57%). ➢ ~2 droppings were also found within the ground floor void of B1, these were not taken for a sample.



Figure 1 – example of droppings within the loft space.



Figure 2 – bat boxes within B1.



Figure 3 – close up of the lifted tiles and bat access tiles on the southern elevation.



Figure 4 – the bat box on the southern elevation with scratches and staining, indicating regular use by bats.

Foreseen Impacts	The proposals include the conversion of B1 to residential use. No drawn plans are currently in place for the property, but conversion to the property will likely impact on the roosting features discussed, such as the missing mortar of the bricks and may include the lifted tiles on the roof. The bat mitigation loft is not planned to be impacted, as is planned to be kept in the same condition as found during the survey. The plans only involve work to the ground floor. However, conversion works will cause disturbance to the bat roosts present, and the potential to damage or alter the roost present and the potential to kill or injure bats present during the works. The change of use of this building to residential use will also cause an increase in lighting used and this could spill on surrounding high value bat foraging habitats.
Recommendations	NRW and/or the previous ecologist will need to be contacted to find out the details of the previous bat licence. This will need to be requested by the current landowner. It may be a that new licence is required for the works, but it may be possible to modify the existing licence. B1 is a confirmed roost and therefore, three bat emergence/re-entry surveys are required on B1 during the active bat season (May – September) to characterize the roost present. This will be required to inform any planning applications and any bat licence modifications/new licence. These survey visits should be completed during the optimal survey period mid-May to August inclusive. The survey visits should be at least three weeks apart. Sub-optimal: early May and September. Would require greater justification of timing e.g., weather conditions, known local bat activity.

	Two surveyors are required to provide full coverage of the building's elevations to look for emerging/re-entering bats. An infrared camera should also be employed on every elevation as part of the survey to see where any specific roost locations are located. Lighting mitigation will be required after the bat emergence and re-entry surveys. An EPSL (European Protected Species License) application to Natural Resources Wales is required before any development can begin on B1. All previous details from the 2015 EPSL will be required to understand how this will be undertaken. Biological Record Data is also required to be obtained from COFNOD for this application and the sample obtained from the loft of bat droppings from the roost assessment is required to be sent off for DNA analysis. The EPSL is applied for with the help of a class 2 licensed bat ecologist after planning permission is granted, but before commencement of works. Enhancements and mitigation are dependent on the outcome of further surveys. A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://www.bats.org.uk/our-work/buildings-planning-and-development/lighting-2

	Habitat creation could be considered to enhance opportunities at the site for foraging and commuting bats post development: night scented flowers, native trees and native flowering shrubs, relaxed mowing regimes along lawn edges.
Nesting Birds	
Summary of Survey Findings	Six nests were observed within the loft space of B1. Five of which were swallow nests on the brick walls and wooden beams throughout the loft and a sparrow nest in a damaged section of the bitumen felt lining. Three of these nests were observed to be active during the survey, including the sparrow nest. The integrated bat boxes on the western and eastern elevations also show signs of use by birds with droppings present within the cavity.  *Figure 5 – location of bird droppings.*



Figure 6 - active sparrow nest.



Figure 7 - example of one of the swallow nests.

Foreseen Impacts	The proposed development could result in the disturbance and subsequent abandonment of active bird nests.
Recommendations	Any building work should be undertaken outside the period 1st March to 31st August. If this timeframe cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 3-5m buffer should be created between any machinery and active nests until the young have fledged. The installation of two bird boxes on mature trees around the site boundaries or on retained buildings will provide additional nesting habitat for birds e.g. Schwegler No 17 Swift Nest Box (buildings), Bark Boxes Blue Tit 25mm (trees), Woodstone Nest Box (buildings or trees), or a similar alternative brand.

Appendix 1: PRA plan



Appendix 2: Location map



Appendix 3: Proposed plan

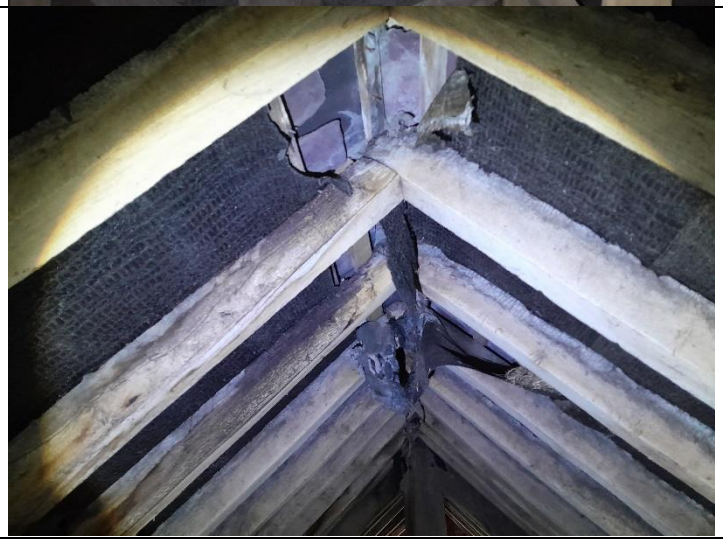
Plans to be include here once finalised.

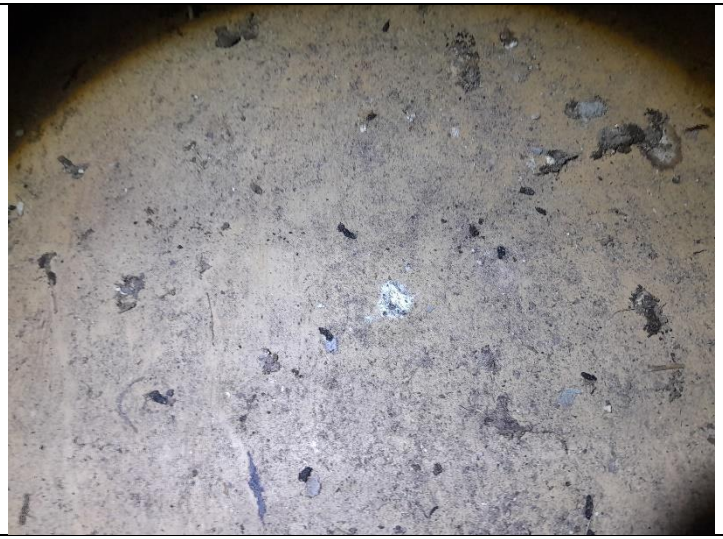
Appendix 4: Photos

PHOTO	DESCRIPTION
	Overview of B1.
	Example of the roof structure on the northern elevation and the bat access tiles.

	The western elevation with the attached storage void. Visible damage to the mortar between the bricks and the integrated bat box location beneath the internal access window for bats.
	Overview of the eastern elevation with integrated bat box and second access window for bats.

	The southern elevation of B1. Bat box location circled.
	Close up of features on the southeastern corner of B1.

	Overview of the interior of B1.
	Example of the damage to the lining creating crevices suitable for roosting bats.

	Close up example of bat droppings within the void.

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Version control			
Status	**Issue**	**Name**	**Date**
Draft	0.1	Kayleigh Davies, Graduate Ecologist (Accredited Agent on Natural Resources Wales Licence: S092694/1)	03/05/2024
Proof	0.2	Nicole Gullan BSc (Hons) MRSB TechArborA, Senior Ecological and Arboricultural Consultant	12/05/2024
Review 2	0.3	Natalie Evans BA (Hons), MA, MRSB, Principal Consultant	16/05/2024
Draft	0.4	Kayleigh Davies, Graduate Ecologist (Accredited Agent on Natural Resources Wales Licence: S092694/1)	05/07/24
Review	0.5	Natalie Evans BA (Hons), MA, MRSB, Principal Consultant	10/07/2024
Final	1.0	Kayleigh Davies, Graduate Ecologist (Accredited Agent on Natural Resources Wales Licence: S092694/1)	16/07/2024
Updated	1.1	Kayleigh Davies, BSc (Hons), MSc, Graduate Ecologist	19/07/2024