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**PROPOSED DEVELOPMENT
LAND TO REAR OF WILLOW COTTAGES
GLAN-LLYN ROAD
BRADLEY
WREXHAM
LL11 4AY**

Bat Surveys

- The Cofnod (Local Ecological Records Centre) website was accessed (www.cofnod.org.uk) and a Cofnod Data Request [E08020] was made for a data search for Priority Species and designated wildlife sites within a 1km radius of the site. There are records of Common Pipistrelle and Pipistrelle spp. bats within 1km radius of the survey site according to the data search.
- The rendered block single-storey garage has a pitched roof covered with cementation tiles whilst the adjoining workshop has a flat roof covered with corrugated galvanised roofing sheets. The roof of the garage is quite tight, with a few gaps beneath tiles, ridge tiles, wooden eaves/bargeboards. The garage was assessed as having a low potential for roosting bats and the workshop negligible potential for roosting bats.
- A further emergence survey of the garage was carried out on 14 July 2022. No bats were observed emerging from the garage. Common Pipistrelle and Soprano Pipistrelle bat species were observed foraging in the vicinity.
- Sections of hedge, some trees and some grass vegetation will need to be removed, to facilitate the proposed development, which will result in some loss of habitat. New tree/shrub/hedge planting will compensate for any loss of habitat. There will be no loss of connectivity to the site. The predicted impact of the proposed development on bats is low, provided that Reasonable Avoidance Methods (RAM) are implemented and followed, in order to minimise the impact on locally recorded bats.



PRO3755



UK/I 0343A

Reasonable Avoidance Methods

Site Induction

- As part of the site induction process, all staff working on site will be made aware of the potential presence of bats within the immediate landscape, and their status as a UK Protected Species. Bats are protected in the UK under the Wildlife & Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations, 2010.
- The toolbox talk will set out what measures are being implemented to avoid affecting bats.
- Contractors will be instructed to cease work in the unlikely event that they discover a bat within the site, and to contact a licenced ecologist and NRW (Buckley Office). Contact details will be displayed alongside the photographic identification sheets.
- A site log should be kept to ensure that all these precautionary measures are implemented, with dates and names of who implemented them.

General Recommendations

- Timing of the development works is crucial. The optimum time for work potentially involving bats is 1st October -1st May.

Demolition work

- During the proposed work to strip the roof, great care should be taken when removing any materials, to ensure no harm is caused to bats. Extreme caution must be exercised when removing old roofing materials especially where two materials meet as there is potential for finding bats. The individual tiles should be gently lifted by hand before removal and checked underneath for bats. Check for bats also in timber joints, behind mortar fillets etc. A similar precautionary approach should be taken by checking around window frames, lintels, lintel bearers, doorframes, structural members, wall plates, gaps in blockwork etc., before proceeding with any work, to ensure no bats are injured during the development work.
- The amendments to the European Habitat Regulations came into force in August 2007, which means that the 'incidental result defence', which previously covered acts that were the incidental result of an otherwise lawful operation, such as a planning permission, has now been removed. Therefore if any bats, or signs of bats (droppings etc.), are encountered, work should stop immediately and not resume until advised by an ecologist. If any bats are discovered that do not fly, they will be carefully taken by hand by the ecologist and released immediately at the site into the bat box already installed. If this is not possible they will be rehabilitated at a suitable centre with later release at site. In the event of bats being discovered, NRW will be informed as to what species, numbers and what action was taken.



Biodiversity improvements

- Biodiversity improvements could be made by installing bat boxes in some of the mature trees, or installing them on the exterior walls of the proposed new dwelling. Bat boxes should be orientated towards the South or West, to benefit from maximum solar warming. The bat boxes should be installed at a minimum height of 3m, to avoid predation by cats.
- Planting new trees and hedgerows would provide suitable habitat for foraging bats and this new vegetation could be used as bat flight-lines.
- Bats can be disturbed by bright, artificial lighting at night (ALAN). Where lighting is essential in the vicinity of any proposed new development, subdued lighting should be used and the illumination should be directed downwards to where it is needed (upward light ratio 0%) and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only. The light should be as low as guidelines permit. If lighting is not needed in any particular area, do not light.
- LED luminaires should be used where possible, with a warm white spectrum (<2700Kelvin) to minimise blue light component. Luminaires should have peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats. Alternatively, the use of low pressure sodium lamps or high pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics. The use of motion sensor-triggered security lighting with short (1 min) timers, is preferable to permanent lighting. If roosting opportunities are to be incorporated into the new development, it is essential that roost access points and flightlines used for foraging/commuting (e.g. hedgerows, lines of trees) are not illuminated. The use of soft landscaping and fencing [supported by concrete posts to ensure long-term contribution] can be used to screen light spill. The latest Guide Note 08/18 can be downloaded at www.theilp.org.uk/documents/guidance-note-8-bats-and-artificial-lighting/
- Hilclare Lighting (www.hilclare.com) provide suitable lighting products to avoid illumination shining upwards (e.g. the Elmira and Madrid models).

