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**The Shippon, Village Walks, Marford, Wrexham, LL12 8SZ
(Grid Reference: SJ 3597 5620)**

**Inspection & Assessment in Relation to Bats & Breeding Birds
Including Dusk Survey Results**

Prepared for:

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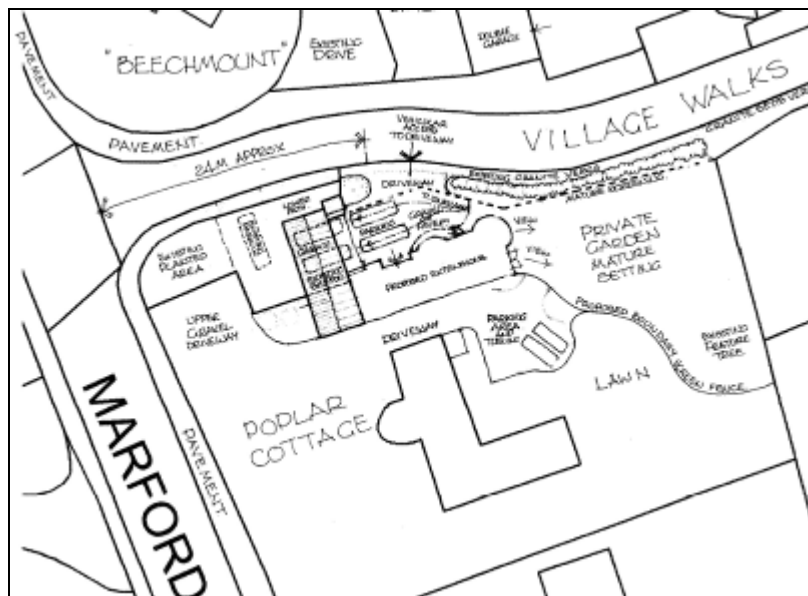
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1.0 Introduction & Reason for Survey

- 1.1 As part of a proposed planning application at The Shippon, Marford, Wrexham, an inspection and assessment was undertaken in relation to bats and breeding birds. Harvey Homes (Wrexham) Ltd commissioned the inspection and report, and it is understood that the proposals for the site involve the conversion and extension of a former Shippon into residential use. As part of the Local Authority's Planning Policies ecological surveys are generally required, particularly where a specially protected species is or may be present and could be affected by the proposals for which the Application seeks consent.



Site plan showing proposed extension

- 1.2 The aim of the inspection was to initially ascertain if the building is of value to bats or breeding birds; if it was found to be suitable for bats, signs of use were located or the survey was inconclusive then more detailed surveys would be recommended i.e. dusk/dawn emergence/re-entry surveys during the main active season of bats which is May – August. If bat/s or their roost/place of rest/shelter is subsequently affected by the work then a Welsh Assembly Development License would be required to proceed with the development.
- 1.3 The optimum time to investigate any structure for evidence of a bat roost is May – August, however that is not to say they cannot be inspected and assessed outside of that time and frequently the results can be conclusive, which can save time and expense for Planning Applicants. It should be borne in mind that equally the inspection can be inconclusive.

2.0 Protected Species

- 2.1 All British bats and their **roosts are afforded protection under the 1981 Wildlife & Countryside Act (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2010 (as amended). When dealing with cases where a European Protected Species (all UK bats) may be affected, a planning authority is a competent authority within the meaning of the Regulation 7 of the 2010 Regulations and therefore has a statutory duty to have due regard to the provisions of the Regulations in the exercise of its functions.



- 2.2 *Planning Policy Wales* (PPW) (2002) sets out the land use planning policies of the Welsh Government (WG). It is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in National Assembly for Wales / Welsh Office circulars. PPW, Ministerial Interim Planning Policy Statements (MIPPS), the TANs and circulars together comprise national planning policy to which local planning authorities in Wales must have regard in the preparation of development plans.
- 2.3 Detailed advice on the preparation of unitary development plans (UDPs) is contained in *Unitary Development Plans Wales*, 2001. Detailed advice on the preparation of Local Development Plans (LDPs) under the Planning and Compulsory Purchase Act 2004 is given in *Local Development Plans Wales*, 2005.
- 2.4 Technical Advice Note (TAN 5 2009) provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. This guidance note should be read in conjunction with *Planning Policy Wales* (2002), in particular with Chapter 5 *Conserving and Improving the Natural Heritage and Coast* which sets out the Assembly Government's objectives for the natural heritage and the land use planning policies which support these.

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:-

If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused

2.5 Use of Buildings by Bats

- a) Summer breeding roost.
- b) Hibernation.
- c) Transitional or temporary roost.

Roost selection is often closely correlated to suitable foraging habitat within a reasonable commuting distance from the roost and different sites are used depending upon insect densities and abundance, climatic conditions can also affect their ability to successfully forage. All British bats are insectivorous.

** The term roost is generically referred to as a place that bat/s use for the any of the above reasons, however it should be noted that under the Conservation of Habitats & Species Regulations 2010 (Regulation 41) the term roost is not used but refers to "a *breeding site or resting place of such an animal*" and is afforded legal protection. The roost, breeding site or resting place of bats, which ever terminology is used is legally protected whether or not bats are in occupation.

- 2.6 All wild birds (with only minor exceptions) and their nests whilst being built or containing eggs or dependant young are protected under the Wildlife & Countryside Act 1981 (as amended). Birds listed on Schedule 1 e.g. barn owls are afforded a greater level of protection. Where nesting birds are present then work should be timed outside of the nesting season (March – August) so as to avoid disturbance.



3.0 Bat Species in North Wales

- 3.1 Up to eleven bat species have been recorded in North Wales most of which use built structures, notably occupied residential properties, for roosting. The most frequently encountered species is the Pipistrelle bat (*Pipistrellus*) and its abundant status in North Wales is reflected throughout the UK.
- 3.2 Barn owls are regularly recorded within North Wales where an agricultural matrix that includes suitable bank sides of drainage ditches or rough pasture that will provide habitat for their main prey i.e. small mammals; however they are constantly under threat from loss of habitat and nest sites, which is a situation that is mirrored throughout most of the UK.

4.0 Survey Methodology

- 4.1 The daytime survey was conducted on 24th February 2015 when the building that will be converted was inspected for potential places that may be of value to bats and if evidence of use was present. The external elevations were investigated from ground floor level with close focussing binoculars for places that are frequently used by bats as roosts or ingress points providing access into roost chambers; the upper floor was inspected with the aid of a high powered torch. Two subsequent dusk emergence surveys were undertaken on the 11th May and 09th June 2015.
- 4.2 The daytime survey was conducted by Mrs K Wilding a highly experienced surveyor who holds a current Natural England Class 2 bat licence but more relevant to the site location is an accredited agent on a Natural Resources Wales bat license (Mr S Irwin: 51880: OTH: CSAB: 2014). The inspection was undertaken at a time when bats are within their hibernation season.
- 4.3 The inspection for birds was conducted in tandem with the investigation for bats; external elevations and the interior of the buildings were inspected for signs indicative of nesting birds such as nests, accumulations of nesting material and droppings. The overall potential of the site including the surrounding habitat to meet the basic requirements of nesting birds was also assessed during the site visit.
- 4.4 The results, conclusions and recommendations are based on a number of factors i.e.
- Practical experience of surveyor
 - Knowledge of bat species relevant to the site location and geographical distribution
 - Nature of the immediate and surrounding habitat in relation to foraging opportunities
 - Condition of the buildings
 - Presence/absence of a loft space
 - Presence/absence of roost/nesting potential
 - Value of roost/nesting potential – if present
- 4.5 During the survey the surrounding habitat was evaluated in relation to bats/breeding birds as very often roost/nest selection is closely correlated with the surrounding habitat.



5.0 Constraints

- 5.1 The daytime inspection was undertaken at a time when bats are outside of their active/breeding season and are within their hibernation period, similarly most bird species will not have reached their main breeding season, although on occasions nesting outside the main season can take place.
- 5.2 Taking into consideration the above there were no significant survey constraints present that would prevent the gathering of information on which to base conclusions and recommendations.

6.0 Daytime Results - Bats

- 6.1 The building proposed for conversion/extension is located within a small residential settlement (grid reference SJ 3597 5620) on the outskirts of an urban environment approximately 1.90 kilometres north east of Gresford town centre. The structure is situated on a corner position between Marford Hill and Village Walks and is contained within Marford Conservation Area; Marford is situated approximately 4 miles to the north east of Wrexham on the former main Wrexham to Chester Road. The village developed around Marford Hill rises upwards marking the junction between the low-lying Cheshire Plain and the Welsh hills. The immediate surroundings are represented by a number of residential dwellings and gardens with associated semi mature trees and ornamental specimens.
- 6.2 Adjacent to the building the habitat noted at Marford Quarry provides connecting linear features to extensive woodland within Marford Wood and Gresford Park, and as a result the landscape contains a level of suitable habitat for the species for which the survey was undertaken i.e. bats and breeding birds. Where such habitat is present close to buildings then the percentage use of those buildings, by bats increases given that roost opportunities are available and vice versa.
- 6.3 The open pasture and agricultural land within the wider landscape provides a high level of favourable hunting grounds for barn owls, and where this landscape is present close to buildings the percentage use of those buildings, by barn owls increases given that roost/nesting opportunities are available and vice versa.



Location of building within the immediate & extending habitat

- 6.4 The building for which the survey was undertaken is currently unoccupied and on the day of the survey is considered to be in a reasonable condition for a building of its era, however an extensive remedial programme will be necessary to restore the building to any previous use. The Shippon is of modest proportions and consists of a detached brick property with a slate pitched roof with two Grade II listed “privies” to the west of the structure.
- 6.5 During the internal investigation an upper floor is evident and was found to be to maximum dimensions of 5 metres long x 3.5 metres wide x 2 metres high; it was noted that internally the area is partially light filled due to gaps around a first floor door and ventilation gaps to the west elevation, however, the illumination levels are not considered to be to a significant level to reduce the potential for loft dwelling bat species, such as the Brown Long Eared (*Plecotus auritus*) or Lesser Horseshoe bats (*Rhinolophus hipposideros*), both of which tend favour undisturbed loft spaces where unhindered flight is possible and external access is available.

During the inspection a maximum of 15 droppings indicative of the Brown Long Eared bat were noted at the north end of the building at ground floor level; additionally, the immediate and extending habitat, notably at Marford Quarry and Marford Woods are regarded as offering favourable potential for this species specific foraging requirements. From the conditions within the Shippon and the evidence observed the structure is not considered to offer breeding potential and thus it is hypothesised that it is being used on occasions by a singular bat as a night roost; evidence of typical feeding remains that would suggest it is being used as a feeding station was absent during the investigation.

- 6.6 Throughout the interior investigation it was ascertained that roof lining, such as a bitumen underfelt or sarking boards are absent beneath the roof slates, which will significantly decrease breeding potential for crevice dwelling bats, such as Pipistrelle, (*Pipistrellus*), as this is a species that can often be found roosting between the two materials providing that external access is available.



Furthermore, no evidence to suggest recent or historic use by this species was observed during the inspection; additionally, roost opportunities for crevice dwelling bats are limited with potential confined to areas above the ridge beam or at wall plate level. Notwithstanding this, the habitat would meet the foraging needs of this species which are often associated with the previously mentioned habitat, and are the most frequently encountered urban and rural dwelling British bat species. The breeding roosts of Pipistrelle bats are proportionally higher in occupied residential dwellings where the warm, dry conditions favour the requirements of a maternity colony but other structures are also used, especially for hibernation or by male bats which do not need the same conditions as a maternity colony.

- 6.7 Typical places favoured by crevice dwelling bats such as barge/fascia/soffit boards were found to be absent to all elevations of the structure; roof slates and ridge tiles are also noted as being tight fitting with no potential ingress opportunities for bats. Notwithstanding this, access for bats is available via ventilation gaps to the west aspect of the building and around a first floor door on the north elevation.
- 6.8 Two “privies” are located to the west of the Shippon and are similar in style to that of the Marford Trevalyn estate buildings; it is understood that these structures were given the status of Grade II listed during 1996, and they date to the early 19th century. It is understood that the “privies” will be retained as part of the development; however, some remedial work may be required to ensure their future integrity.

During the investigation, both roof turrets of the privies have sustained large crevices, with some minor internal gaps, both of which were investigated on the day of the survey and revealed an absence of bats or evidence of use, however, potential is considered to be extremely limited for both loft and crevice dwelling bat species.

- 6.9 Although the surrounding habitat is suitable for barn owls no recent or historic signs of use were observed in relation to breeding/roosting. The building and the privies are considered absent of opportunities for nesting. Signs of other nesting birds that rely upon built structures, e.g. House martin (*Delichon Urbica*), Swallow (*Hirundo rustica*) or Swift (*Apus apus*) was absent.

7.0 Daytime Conclusions

- 7.1 From the survey results it can be concluded that the former Shippon offers potential for singular or small numbers of loft dwelling bats, which was subsequently confirmed by the small numbers of droppings noted within the structure. No evidence was present to suggest use by this species for breeding purposes or as a feeding station. The immediate habitat is considered as being particularly suitable to meet this species specific foraging requirements, and thus, the scheduled conversion/extension work may have an impact upon this species.
- 7.2 Minor and limited potential has been identified in relation to crevice dwelling bats at both the Shippon and the two “privies” to the west, thus, the conversion/extension/remedial works may have an impact upon this species should they be present. The building relative to bat roost potential is classified as “Low-Moderate.”



- 7.3 There are no current implications in relation to barn owls or breeding birds that would prevent the conversion work at the building taking place and the proposals would not result in the loss of a site that is used by barn owls or any other birds for breeding or roosting purposes.

8.0 Daytime Recommendations & Implications

- 8.1 Taking into consideration the combination of evidence of bats, the immediate and surrounding habitat and the level of bat roost potential; it is recommended that in order to establish whether or not bats are using the building and if present how they are using it, dusk emergence or/and dawn surveys should be undertaken. The surveys will need to be conducted during the active season of bats i.e. between May – August as bats, particularly Pipistrelle bats often alternate between roosts and do not necessarily use one roost over their active season. Two dusk surveys are generally accepted as being a reasonable level of survey effort where low to moderate potential has been identified but need to be spaced between those months.

(See Figure1: Extract from Bat Conservation Bat Surveys: Good Practice Guidelines)

Table 8.5 Minimum number of presence/absence survey visits required to provide confidence in negative preliminary roost assessment results from buildings, built structures and trees in summer

High roost potential	Low to moderate roost potential	Low roost potential
3 dusk emergence and/or pre-dawn re-entry surveys during May to September Optimum period May – August	2 dusk emergence and/or pre-dawn re-entry surveys during May to September Optimum period May – August.	1 dusk emergence and/or pre-dawn re-entry survey during May to September Optimum period May – August.
If bats are discovered emerging from any of the buildings during surveys, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information can be collected. Note: two surveys carried out within the same 24 hour period constitute 1 survey		

- 8.2 It should be noted that where bat/s or their roost/place of rest/shelter will be affected by the proposed works, then to allow work at the site to legally commence, an application for Welsh Assembly Development Licence will be required and subsequently granted. Notwithstanding the granting of a licence works that would affect a roost cannot take place if a maternity colony is in occupation. It should also be noted that before a licence can be applied for all Planning issues including Consent and any pre-commencement Planning Conditions relative to bats should be resolved.
- 8.3 Natural Resources Wales provides information and guidance about licensing however, it is not their role to provide mitigation which should be undertaken by a suitably experience bat ecologist.

NB: ***Were more detailed bat surveys are recommended, following an initial investigation, then Local Authorities on the advice of their ecological advisors, may not determine the application until such time that all relevant information is gathered, i.e. by conducting dusk/dawn surveys. The advice that is provided by the ecological advisors is also in accordance with the obligations placed upon Local Authorities by way of its duties under the Conservation of Habitats & Species Regulations 2010 (as amended). Therefore it would be prudent to make enquiries to the relevant departmental Planning Officer before submitting a Planning Application that includes an ecological survey report that recommends more detailed surveys.***



9.0 Dusk Survey Results

- 9.1 The dusk emergence observations undertaken on the 11th May and 09th June 2015 by Mr S Irwin, a highly experienced surveyor who holds a current Natural England Class 2 bat licence and a Natural Resources Wales bat license (51880: OTH: CSAB: 2014).
- 9.2 The surveys were aided with an Anabat electronic bat detector, to locate and record the high frequency calls that are emitted by bats; furthermore, an additional Anabat device was deployed within the structure itself to record any activity by bats internally during the survey period. Echolocation calls were then analysed with computer software to verify field observations.

Times of Survey	Date	Weather Conditions
Dusk survey 2100 - 2230	11 th May 2015	Sunset: 2057: Dry, light breeze, 95% cloud cover. Start temp: 13 °C End temp: 13 °C
Dusk survey 2120 - 2245	09 th June 2015	Sunset: 2138: Dry, still, clear sky. Start temp: 13 °C End temp: 09 °C

Survey	Date	Results
Dusk survey	11 th May 2015	Summary: No emergence from building during observation period. No recordings on deployed Anabat device. 2127 hrs: One Common Pipistrelle bat entered site from a southerly direction, which then proceeded to forage to the west of the site until 2135 hrs. No further activity recorded or observed for the duration of the survey period.
Dusk survey	09 th June 2015	Summary: Pre-dusk inspection revealed no increase in the number of droppings identified during the daytime inspection. No emergence from building during observation period. No recordings on deployed Anabat device. 2208 hrs: One Common Pipistrelle bat entered the site from a southerly direction with continuous foraging activity to the rear of the building within an adjacent residential garden

		No further activity recorded or observed for the duration of the survey period. The building was inspected pre and post dusk observations which revealed an absence of bat presence.
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-  Location of surveyor during dusk observations
-  Direction bat(s) entered the site
-  Foraging activity during survey observation period

10.0 Dusk Conclusions & Recommendations

- 10.1 From the 2015 dusk survey results it can be concluded that whilst using best practice survey methodology no bat emergence at the building was identified; minor foraging and commuting activity was recorded within the vicinity of the building by a single Common Pipistrelle bat on both occasions.
- 10.2 Due to the presence of bat/s within the vicinity and favourable habitat in close proximity it is recommended that the roof slates are removed under the supervision of a licensed bat ecologist prior to the buildings conversion, which will allow inspection of internal areas which could offer opportunities for bats.

- 10.3 As bats are a highly transient species and can use buildings at any time of the year, it should be noted that if bat/s is/are or evidence of use is located during the proposed work (see Appendix 1) or any other time then as a legal requirement the work at the site should immediately cease and bat ecologist contacted for further advice. If bat/s or their roost will be affected then a Natural England Mitigation licence will be required to legally continue with the work. Notwithstanding the granting of a licence works that would affect a roost cannot take place if a maternity colony is in occupation.
- 10.4 As part of Wrexham's Council's obligations to enhance biodiversity it is recommended that bat roost provision is incorporated into the proposed new construction, either in the form of integral bat boxes and/or provision behind any cladding/soffit/barge/fascia boards; following the final design of the proposed conversion The Tyrer Partnership can advise the most productive way forward to incorporate bat roost opportunities within the new dwelling. Whilst the conversion is taking place, it may also be of benefit for a 2 F bat box to be erected 4-5 metres high within the tree located in close proximity to the structure (see below); prior to obtaining agreement from the homeowner in this adjacent plot.



APPENDIX I –

Supplementary Photographs



Plate 1: Pipistrelle droppings



Plate 2: Pipistrelle bat

APPENDIX II – Site Photographs



Shippon proposed for conversion/extension – upper floor present



Ingress opportunities to the west elevation

Droppings indicative of Brown Long Eared bat



Adjacent “Privies” located to the west of the building