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Formby Business Centre, 42 Duke Street, Formby, Merseyside, L37 4AT

Tel: 01704 875781 Mobile: 07719 108429

Email address: [stan@tyrer-ecologicalconsultants.co.uk](mailto:stan@tyrer-ecologicalconsultants.co.uk)  
[kylee@tyrer-ecologicalconsultants.co.uk](mailto:kylee@tyrer-ecologicalconsultants.co.uk)

**Maes y Llan Farm, Wrexham, LL14 6AD**

**Grid Reference: SJ 30572 43931**

**Inspection and Assessment in Relation to Bats, Including Dusk Survey Results**

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**Prepared for:**

Blueprint Architectural Services  
Office 3K4  
Redwither Business Tower  
Abbey Road  
Wrexham  
LL13 9XT

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## **Summary**

A planning application regarding Maes y Llan Farm, Wrexham, proposes to demolish three existing former farm buildings followed by the construction of a residential development (Figure 1). The Tyrer Partnership was therefore commissioned by Blueprint Architecture to undertake a daytime assessment of the site in relation to bats which was conducted during November 2016.

The internal inspection revealed that the main building B1, a residential dwelling features a loft space, which is extensive and free from draught and luminance and B2 features an upper storey with the same attributes thus as a consequence both could meet the requirements of loft dwelling bats, typically Brown Long Eared Bats (*Plecotus auritus*) or Horseshoe bats (*Rhinolophus*) subject to access being available. No evidence was found to suggest the recent or historic presence of these species; however the extending environs offer adequate foraging habitat.

Lining of any description is absent underneath the roof slates within B1 and under corrugated sheeting to B2. The presence of lining or underfelt could not be determined within B3. The absence of such insulating materials reduces opportunity for crevice dwelling species, whereby they often roost between slate and roof lining materials subject to external access being available. During the inspection of the buildings numerous crevices within the stonework were noted to the interior of both B1 and B2. No visible signs of use by crevice dwelling bats such as the Pipistrelle was found, however, this can often be the case due to their crevice dwelling nature.

During the external assessment it was noted that numerous opportunities for bats are present under roof slates, roof verges, under ridge tiles and in stonework adjacent to the chimney on B1 whilst at B2 numerous gaps are present within the stonework; furthermore large gaps are present to the gable elevation walls within stonework on B3.

Due to the aforementioned potential ingress opportunities, buildings B1, 2 and 3 are categorised to possess moderate bat roost potential according to current BCT guidelines.

Owing to the categorisation of the buildings in combination with the immediate and surrounding habitat being of value to bats, the report will recommend further survey work at the site in the form of dusk emergence and/or dawn re-entry surveys.

As per the recommendations contained within the report two dusk emergence surveys were subsequently undertaken on the 09<sup>th</sup> May and 30<sup>th</sup> May 2017. The surveys identified the emergence of four Common Pipistrelle bats emerging from two buildings at Maes-Y- Llann farm. It is concluded that the buildings B1 and B2 are being used as a day roost by a small number of individuals of this species. As such, the presence and destruction of bat roosts will need to be addressed from both a conservation and legal perspective along with appropriate mitigation prior to the undertaking of any proposed works as addressed in sections 10 and 11 of this report.

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**APPENDIX I - Site Photographs**

## **1.0 Introduction & Reason for Survey**

- 1.1 As part of a proposed planning application regarding Maes Y Llan Farm, Wrexham, an inspection and assessment was undertaken in relation to bats; Blueprint Architectural Services commissioned the inspection and report on behalf of the site owner. It is understood that the proposals involve the demolition of the three redundant buildings on the site, followed by the construction of a residential development (Figure 1). 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.



**Figure 1** – Proposed site layout at Maes Y Llan Farm site



**Figure 2** – Surveyed buildings (Buildings 1 -3) within the site boundary

- 1.2 The aim of the inspection was to initially ascertain if the three buildings at Maes Y Llan Farm are of value to bats; if they were found to be suitable for bats, signs of use were located or the results of the survey were 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 will be subsequently affected by the work then a Natural Resources Wales Development Licence would be required to legally 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 but 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.

## 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 reflected throughout the UK.

## **4.0 Survey Methodology**

### **4.1 BCT Survey Good Practice Survey Guidelines state:-**

*The guidance should be interpreted and adapted on a case-by-case basis, according to the expert judgement of those involved. There is no substitute for knowledge and experience in survey planning, methodology and interpretation of findings, and these guidelines are intended to support these. Where examples are given they are descriptive rather than prescriptive.*

- 4.2 In context with the above the survey was conducted by Ms K. Swift MSc Conservation Management, an experienced ecologist and bat surveyor, who holds a Class 2 Natural England Bat Licence (22801-CLS) but more relevant the site is an accredited agent on the NRW bat licence held by Mr S Irwin (73156:OTH:CSAB:2016). The results, conclusions, and recommendations have been assessed by Mr Irwin who is director of The Tyrer Partnership with 30 years of bat ecology experience and his assessment of the site concurs with that of Ms Swift.
- 4.3 The daytime survey was conducted on the 15<sup>th</sup> November 2016 when the three buildings at Maes Y Llan Farm were inspected for potential places that may be of value to bats and if evidence of use was present. The former dwelling features a loft space which was inspected with the use of high powered torch for the presence of bats or evidence of use such as droppings or prey remains as was the only upper section of the outbuildings. In addition B2 and B3 (see figure 2) were investigated in the same manner. The external elevations of all buildings 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.
- 4.4 Trees located within the development area were inspected at a time when tree foliage is largely absent, which is the within of the optimum time to identify bat roost potential as foliage, when present can impede the surveyors view. They were assessed from ground level using high powered torch for features that are frequently utilised by bats as roosts or the presence of ingress points such as natural/woodpecker holes splits of fissures that may provide access into further cavities within the tree/s.

Criteria for roost assessment are based upon the following determinant which is based upon the Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' (2016):

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| <b>Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Suitability</b>                                                                                                                                                                                                      | <b>Description<br/>Roosting habitats</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Commuting and foraging habitats</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Negligible                                                                                                                                                                                                              | Negligible habitat features on site likely to be used by roosting bats.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Negligible habitat features on site likely to be used by commuting or foraging bats.                                                                                                                                                                                                                                                                                                                                                                                               |
| Low                                                                                                                                                                                                                     | A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions <sup>a</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation <sup>b</sup> ).<br><br>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. <sup>c</sup> | Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.<br><br>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.                                                                                                          |
| Moderate                                                                                                                                                                                                                | A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions <sup>a</sup> and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).                                                                                                                                                                   | Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.<br><br>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.                                                                                                                                                                                    |
| High                                                                                                                                                                                                                    | A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions <sup>a</sup> and surrounding habitat.                                                                                                                                                                                                                                                                                                  | Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.<br><br>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.<br><br>Site is close to and connected to known roosts. |

<sup>a</sup> For example, in terms of temperature, humidity, height above ground level, light levels or levels of disturbance.

<sup>b</sup> Evidence from the Netherlands shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for larger numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

<sup>c</sup> This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

**Figure 3 – BCT guidelines for assessing bat roost potential of a structure**

- 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

Nature of the immediate and surrounding habitat in relation to foraging opportunities

Condition of the structure

Presence/absence of roost potential

Value of roost potential – if present

- 4.4 During the survey the surrounding habitat was evaluated in relation to bats as very often roost selection is closely correlated with the surrounding habitat.

## 5.0 Constraints

- 5.1 The daytime survey was conducted outside of the bat breeding season, at a time when bats are in their hibernation period. Access into the loft space of the residential dwelling (B1) was achieved; however due to the restrictive nature and internal barriers its furthest extent could not be inspected.
- 5.2 B3 could not be accessed and so an internal inspection in relation to bats could not be made into this structure.
- 5.3 Taking into consideration the above it is deemed that there were no significant survey constraints that would prevent the gathering of information on which to base conclusions and recommendations.

## **6.0 Results**

- 6.1 Maes Y Llan Farm is located on the north easterly peripherals of Ruabon which is a small village and community in Wrexham County approximately 6.5 kilometres south of Wrexham town centre and is located within a semi-rural setting on the peripherals of the village. Notwithstanding the semi rural nature location the building has recently been encompassed by a number of residential properties with associated gardens incorporating ornamental trees/shrubs. Beyond the site a large area of woodland lies to the south where the more rural land use features abundant hedge lines and the River Eitha 600 metres in the same direction. To the east an active railway line with associated vegetation will provide additional foraging/commuting habitat. The aforementioned semi-natural habitats in combination with local ecological networks are anticipated to provide connectivity and suitable habitat for bats.



**Figure 4** – Location of Maes Y Llan Farm within the surrounding landscape

- 6.2 Within the broader environment, the landscape continues in similarity, however, becomes more variable with the addition of a number of named features which include established and mature woodland and water bodies; notably woodland at Wynnstay Hall (1 kilometre south east of the site) and Rhoysmedre Park 1.75 kilometres to the south west.
- 6.3 The habitat as described can be considered to be of value for bat species which commonly inhabit suburban and semi/rural landscapes, for example the Pipistrelle species. Where such habitat is present close built structures then the percentage use of those structures, by bats increases, given that roost opportunities are available and vice versa.

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- 6.4 Maes Y Llan Farm comprises of a former farm house with two additional buildings that form a traditional farm courtyard. The farm has long since ceased its previous purpose i.e. producing for the food chain, with large sections of the land and other outbuildings sold off for development which are evident immediately to the east of the farm. Table 1 provides a description of each building and their value in relation to bat roost potential.

| <b><u>Building</u></b> | <b><u>Description</u></b>                                                                                       | <b><u>Interior</u></b>                                                                                                                                                                                                                                                                                   | <b><u>Exterior</u></b>                                                                                                                                                                       | <b><u>Result</u></b>                                                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| B1- Farm House         | Stone, detached, two storey dwelling with slate multi-pitched roof and loft space.                              | Loft free from illumination and draughts. Access constrained due to its construction and presence of water tanks. Flight space for bats restricted in accessible section of loft but suitable in non-accessible section. Deep crevices present on internal stone walls. Underfelt and insulation absent. | Exterior features with potential for roosting bats observed by way of crevices within stone walls. Gaps present across slate roof and at ridge tiles. Gaps also present under fascia boards. | Moderate bat roost potential for crevice dwelling and loft dwelling species.<br><br>evidence of roosting bats absent where inspected.                    |
| B2- Stone Barn         | Detached two storey barn building of stone construction. Pitched corrugated roof, timber beams and lintels.     | Upper section free from illumination and draughts. Ample dimensions of to full extent with no clutter. Lining material absent under roof covering. Minor crevices to interior stonework at wall-plate level.                                                                                             | Exterior features with potential for roosting bats present throughout. Gaps present within stonework at wall plate and around window/door features. Large gaps at stone lintels.             | Bat roost potential moderate for crevice dwelling and loft dwelling species.<br><br>Potential for maternity colony Low<br><br>No evidence of bats found. |
| B3 - Garage Building   | Sealed single storey building of stone construction used as a garage with a shallow pitched slate covered roof. | Interior absent of an upper floor but interior could not be accessed.                                                                                                                                                                                                                                    | Exterior features with potential for roosting bats present in the form of minor gaps within stone work and at the slate roof.                                                                | Moderate potential for crevice dwelling bats<br><br>Potential for maternity colony absent.<br><br>No evidence located                                    |

**Table 1** – Description and assessment of buildings B1-B3 in relation to bats

- 6.5 As established, B1 features a loft space which is dark and draught free with numerous crevice opportunities within the internal stone work but one section is slightly constrained. B2 features an upper floor which is also free from draught and luminance; as such, B1 and B2 offer a degree potential for loft dwelling bats such as the Brown Long-Eared bat (*P. auritus*). B3 could not be assessed internally however due to its size is unlikely to have potential for a maternity colony.
- 6.6 During the inspection it was noted that underfelt or equivalent insulation material is absent throughout B1 and B2; but its presence or absence could not be determined in B3. The presence of such materials beneath a primary roof cover (e.g. roof slates) can provide opportunity for crevice dwelling species, whereby they often roost between primary cover and roof lining materials, provided external access exists. During the internal and external inspections of B1 and B2 numerous ingress opportunities were located for crevice dwelling bats to seek refuge especially within stonework and under slates. Crevice situations providing potential refuge for bats were also noted at B3 especially within the stonework.
- 6.6 During the inspection no visible sign of use by crevice dwelling bats such as the Pipistrelle (*P. pipistrellus*) was identified in any of the three inspected buildings, however, this can often be the case due to their crevice dwelling nature. 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 Trees on site were devoid of bat roost potential, however are likely to provide a commuting / foraging resource for bats that may be present within the vicinity, thus, where possible it will be of benefit to retain such features for wildlife in general.

## **7.0 Conclusions**

- 7.1 As identified within the survey results no physical evidence has been identified which would suggest the current or recent presence of loft dwelling bats within B1 or B2 (B3 not accessed). However potential roost opportunities have been identified at B1 and B2. Additionally the surrounding habitat has been identified to be productive for this species specific foraging requirements thus the proposals may impact on this species; if present and this report will outline further recommendations.
- 7.2 In relation to crevice dwelling bat species no evidence of use by Pipistrelle bats was located within B1 or B2 (B3 not accessed) during the day time investigation of the buildings. The assessment of B1, B2 and B3 however, resulted in its “moderate categorisation” due to numerous features present within the interior and/ exterior which could provide roosting opportunities for this species, within a productive habitat. Combining the above factors the proposals in relation to B1, B2 and B3 have the potential to impact on bat roost opportunities and bat species if present; thus this report will outline recommendations for further surveys.

## 8.0 Daytime Survey Recommendations

- 8.1 All of the assessed and inspected buildings have opportunities for bats and have been categorised as offering moderate to potential according to current BCT guidelines (see figure 5 below). It is therefore recommended that in order to establish presence/absence and how bat(s) are using the buildings dusk emergence or/and dawn surveys should be undertaken.
- 8.2 These surveys will need to be conducted and suitably spaced apart during the active season of bats, i.e. between May – September but the optimum time being May-August. Two separate dusk and/dawn surveys are generally accepted as being a reasonable level of survey effort where moderate potential has been identified, but need to be spaced between those months.

(See Figure 5): \*\*Extract from Bat Conservation Bat Surveys: Good Practice Guidelines 2016)

Bat Conservation Trust

**Table 7.3 Recommended minimum number of survey visits for presence/absence surveys to give confidence in a negative result for structures (also recommended for trees but unlikely to give confidence in a negative result).**

| Low roost suitability                                                                                                           | Moderate roost suitability                                                                       | High roost suitability                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| One survey visit. One dusk emergence or dawn re-entry survey <sup>a</sup> (structures).<br>No further surveys required (trees). | Two separate survey visits. One dusk emergence and a separate dawn re-entry survey. <sup>b</sup> | Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. <sup>b</sup> |

**Figure 5 – BCT extract**

*\*\* The guidelines do not aim to either override or replace knowledge and experience. It is accepted that departures from the guidelines (e.g. either decreasing or increasing the number of survey carried out or using alternative methods) are often appropriate.*

*The guidelines should be interpreted and adapted on a case-by-case basis according to site-specific factors and the professional judgement of an experienced ecologist. Where examples are used in the guidelines, they are descriptive rather than prescriptive. (Good Practice Guidelines 2016 3<sup>rd</sup> edition). Based on the aforementioned the survey protocol will be determined using the collective and long standing experience of the Tyrer Partnership.*

- 8.3 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 continue, an application for a Natural Resources Wales Development Licence will be required. As part of the licence procedure additional information would be required to establish species and status of the roost by undertaking dusk or/and dawn surveys over the breeding season of bats i.e. May - August. 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.

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- 8.4 As part of Wrexham Councils biodiversity strategy provisions and in line with Technical Advice Note (TAN 5 2009) which provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. Therefore in the event that bats are not located during any additional surveys provision for bats should be incorporated into the new development as enhancement; subject to elevation drawings being made available suggestions for this purpose can be provided by the ecologist.

## **9.0 Dusk Survey Results**

- 9.1 Relative to the nature and condition of the buildings, they have been classified as offering moderate potential; the survey effort was proportionate to that classification and surveyors were located where bat roost potential was considered to be highest and most productive.
- 9.2 The dusk emergence observations undertaken on the 9<sup>th</sup> May 2017 and 30<sup>th</sup> May 2017 and were completed by Mrs K. Wilding – a highly experienced (over 8 years) surveyor and holder of a Class 2 Natural England Bat Licence (CLS-14227) and an accredited agent on the Natural Resources Wales bat licence of Mr S. Irwin (51880:OTH:CSAB:2014). Mrs. K. Wilding was assisted by Mr H. Green a fellow highly experienced surveyor with over 20 years experience and holder of a Class 2 Natural England Bat Licence, Mrs. J. Taylor whom has 9 years survey experience with the Tyrer Partnership and Mr J. Barnes an experienced surveyor with over 2 years experience with The Tyrer Partnership.
- 9.3 Surveyors were located in positions where unrestricted views of the identified roost potential were achievable – based upon the judgement of the lead surveyor Mrs K. Wilding. The surveys were aided with Anabat electronic detectors to locate and record the high frequency calls that are emitted by bats. Echolocation calls were then analysed with computer software to verify field observations.

| <b>Times of Survey</b>     | <b>Date</b>               | <b>Weather Conditions</b>                                                                   |
|----------------------------|---------------------------|---------------------------------------------------------------------------------------------|
| Dusk survey<br>2030 - 2210 | 9 <sup>th</sup> May 2017  | <b>Sunset: 2054:</b> dry, calm, 0% cloud cover<br>Start temp: 11°C<br>End temp: 8°C         |
| Dusk survey<br>2100 - 2240 | 30 <sup>th</sup> May 2017 | <b>Sunset: 2125:</b> dry, light air, 100% cloud cover<br>Start temp: 13°C<br>End temp: 12°C |

| <b>Survey</b> | <b>Date</b>              | <b>Results</b>                                                                                                                                                           |
|---------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dusk survey   | 9 <sup>th</sup> May 2017 | <b>Summary:</b> Emergence of three Common Pipistrelle bats from several emergence points at the B2 and one Common Pipistrelle bat from B1 during the observation period. |

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|             |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |                           | <p>2116 hrs: Noctule bat commuted over the site</p> <p>2119 hrs: Common Pipistrelle bat emerged from the B2 from the side gable/ lintel.</p> <p>2126 hrs: Common Pipistrelle bat emerged from B1 at the roof ridge.</p> <p>2129 hrs: Common Pipistrelle bat emerged from B2 from the side gable/ lintel.</p> <p>2131 hrs: Common Pipistrelle bat emerged from B2 from the side gable/ lintel.</p> <p>2145 hrs: Common Pipistrelle bat commuted on to site and briefly foraged.</p> <p>Activity was sporadic throughout the survey with low level foraging on the site and no further species commuting on to or across the site.</p> |
| Dusk survey | 30 <sup>th</sup> May 2017 | <p><b>Summary:</b> No emerging bats from any of the buildings - frequent bat activity was recorded throughout the survey.</p> <p>2148 hrs: Common Pipistrelle bat commuted from the south over B1.</p> <p>2154 hrs: x2 Common Pipistrelle bats foraging within garden. Pip activity fairly constant for the rest of the survey.</p>                                                                                                                                                                                                                                                                                                  |

**Table 2 – Bat survey results from 9<sup>th</sup> and 30<sup>th</sup> May 2017**

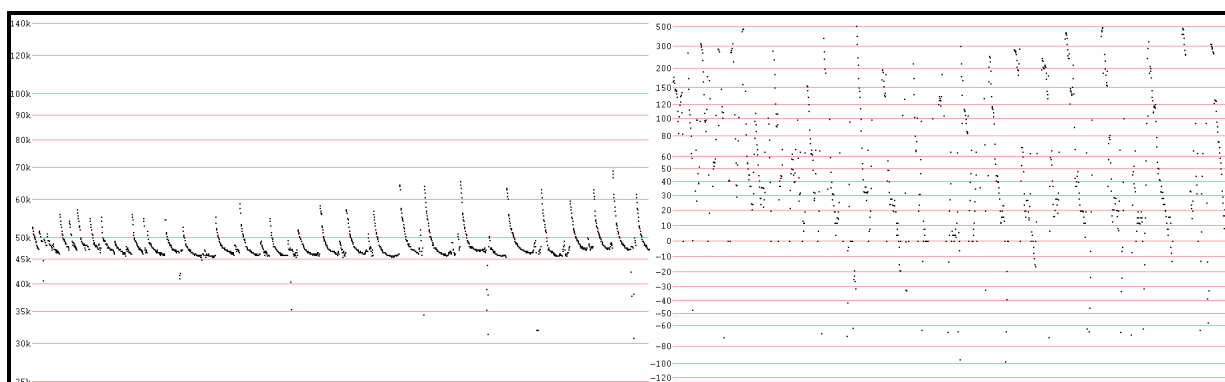


**Figure 6 – Sonogram of Common Pipistrelle bat emerging from barn on 9th May 2017**

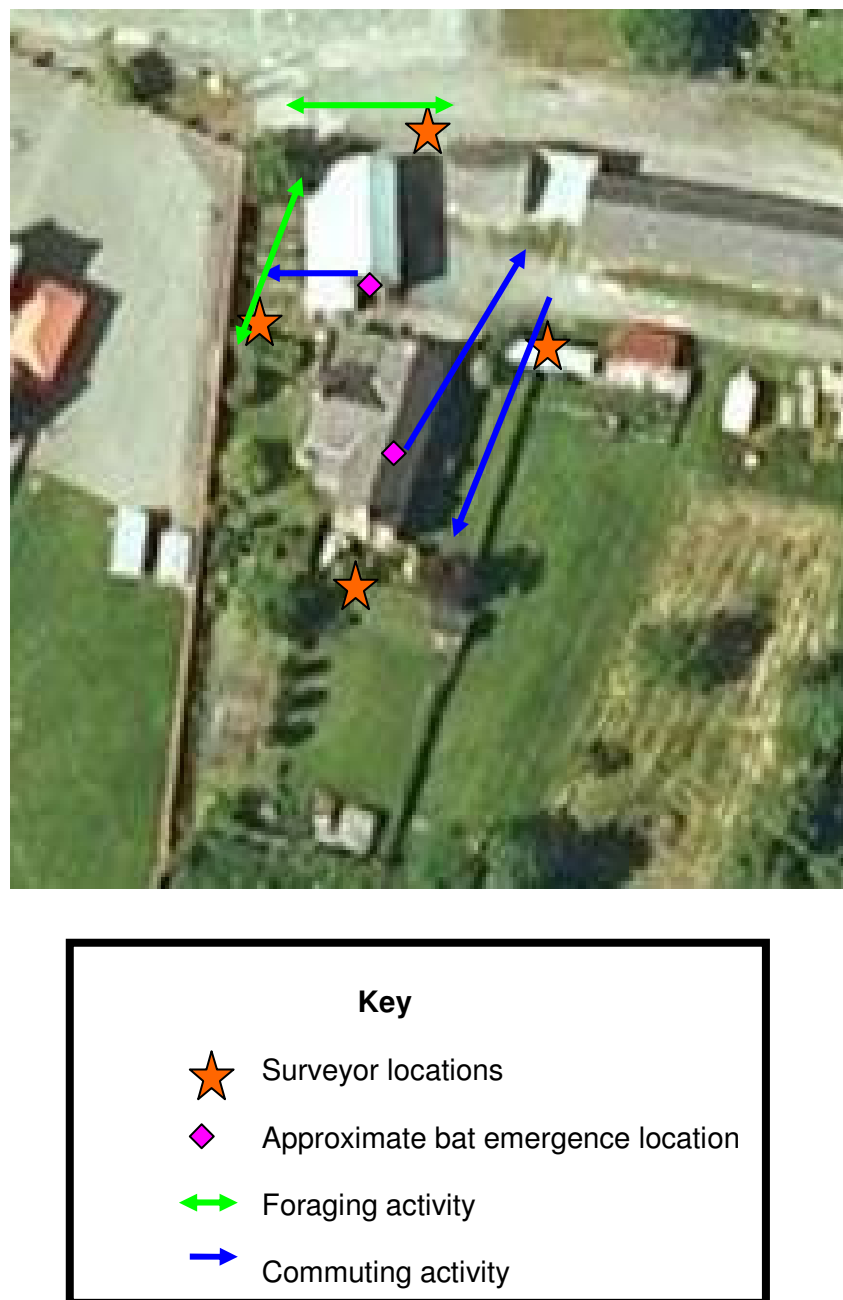


**Figure 7** – Bat survey results including emergence locations and flight paths

## 10.0 Dusk Conclusions & Recommendations

- 10.1 From the 2017 dusk survey results it can be concluded that both the barn and house at Maes-Y-Llan Farm (B1 & B2) are being used as a day roost by small numbers of Common Pipistrelle bats. The presence and destruction of a bat roost will need to be addressed from both a conservation and legal perspective along with the application of appropriate mitigation.

In order that the LPA can implement its obligations under the Habitat & Species Regulations 2010 (as amended) appropriate and proportionate mitigation will need to accompany the planning application which will demonstrate that the “*favourable conservation*” of the species concerned can be maintained.

## **11.0 Indicative mitigation**

- 11.1 From the evidence gained during the dusk observations, the use of the buildings B1 and B2 by bats is considered to be low level and the proposed mitigation is proportionate to that use. However, if at anytime that assessment is revised to a higher level then the mitigation will also be accordingly revised.
- 11.2 The following procedures and mitigation are designed to allow the Local Planning Authority in association with their ecological adviser to determine a Planning Application where a European Protected Species has been identified and will be affected by the work for which the Planning Application seeks consent. In addition Local Planning Authorities in accordance with the obligations placed upon them by way of their duties under the Conservation of Habitats & Species Regulations 2010 (as amended) have to take into consideration the presence of a European Protected species before determination of an application where it/they have been identified.
- 11.3 The LPA need to consider the mitigation in relation to the potential success of a Natural Resources Wales mitigation licence application and/or if in their opinion the mitigation is considered as being appropriate or if it is over and above what is required; if they determine that the mitigation is appropriate then a Planning Condition should be attached requiring the mitigation to be installed. If the LPA consider that the mitigation is over what is necessary but require “enhancement” as part of Local Biodiversity Policies this should be included in the terms Consent. The acting bat ecologist deems the mitigation as appropriate and not over and above what is required.
- 11.4 Notwithstanding that Planning Consent is granted it does not absolve the applicant, site owner, developer or any other party involved with the work from ensuring that an application is made for a Natural England Mitigation licence to legally undertake work that will affect bat(s) or their roost/place of shelter. If work is undertaken without a licence and bat/s or their roost/s is/are affected then a breach of current wildlife legislation will occur, for which penalties are high.
- 11.5 Under Regulation 53(1) and 56(3) (a) of the Conservation of Habitats & Species Regulations 2010,(as amended) a licence is required prior to disturbing bats or destroying any place that is used by bats as a breeding site or resting place. The licence is issued by the EPS Licensing Team of Natural England.

## **Summary of Indicative Mitigation**

- Prior to any work being undertaken the presence/absence bats will be established by undertaking detailed investigation of the buildings at Maes Y Llan Farm, which will include endoscopic examinations wherever opportunities for bats exist.
- To ensure that bats are not left without a roost while the demolition work takes place, it is recommended that two 2F bat boxes are erected on suitable trees within the rear garden which will act as a receptor if bats have to be captured during the demolition process. Should this not be possible a pole mounted bat box will need to be erected within the site.

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- No foraging or commuting habitat will be lost as a result of the proposals nor will the new roosts be at any further distance from foraging places. The demolition of the building is an essential part of the owner's plans for the site, but it is acknowledged that the presence of bats needs to be addressed from both a legal and conservation perspective. The mitigation proposals are seen to be the most productive way forward that will retain opportunities for bats.
- The ecologist will supervise careful dismantling of all places identified as offering roost potential.
- Work will be undertaken during appropriate climatic conditions.
- The ecologist will undertake induction on possible bat presence, License & Method Statement to be kept on site for the duration of the work.
- As a precaution a licensed bat ecologist will supervise the dismantling of the roost with strategies for safely removing bat(s).
- Any external lighting is not to be greater than what exists and where present is to be directed away from bat roost access points, flight paths and foraging areas.
- Mitigation is subject to the approval of Natural Resources Wales (NRW).
- The roost provision at the newly constructed house will be dedicated for bats and permanent.

**Work undertaken by the Ecologist**

**Capture/Exclusion:** Once an EPSML licence is in place the contractor will provide a safe means of access to allow the ecologist to investigate all roost potential for bat presence at Maes Y Llan Farm.

Due to the numerous areas of bat roost potential, exclusion is considered to be unproductive, thus the ecologist will supervise careful and controlled removal of bat roost area(s). In the event of bat(s) being present it/they will be removed, placed in a secure box with soft tissue and immediately transferred into one of the bat boxes that will have previously been erected on a suitable tree or pole mount. Once it has been established by the ecologist that bat(s) are absent the demolition will continue to completion.

In the unlikely event that bats are found outside of supervision time, then work will immediately cease and the ecologist contacted for further advice; contractors must not touch, handle or in anyway cause bats to move.

**New Roost Creation:**

Roost provision will be incorporated within the east and south gable elevations of the newly constructed properties (Figure. 8); the roost provision will be in the form of four integrated brick bat boxes (see below). This roost opportunity will replicate the crevice situations that are utilised by Pipistrelle bats and crevice dwelling bat species more generally. The roosts will be permanent for bats and cannot be used for any other purpose; management requirements at the roost are considered to be absent.

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Lighting will not be directed at or close to the roost area, nor will it affect contiguous foraging places or flight lines (commuting).



**Figure 8** – locations of integral bat bricks within new proposed development

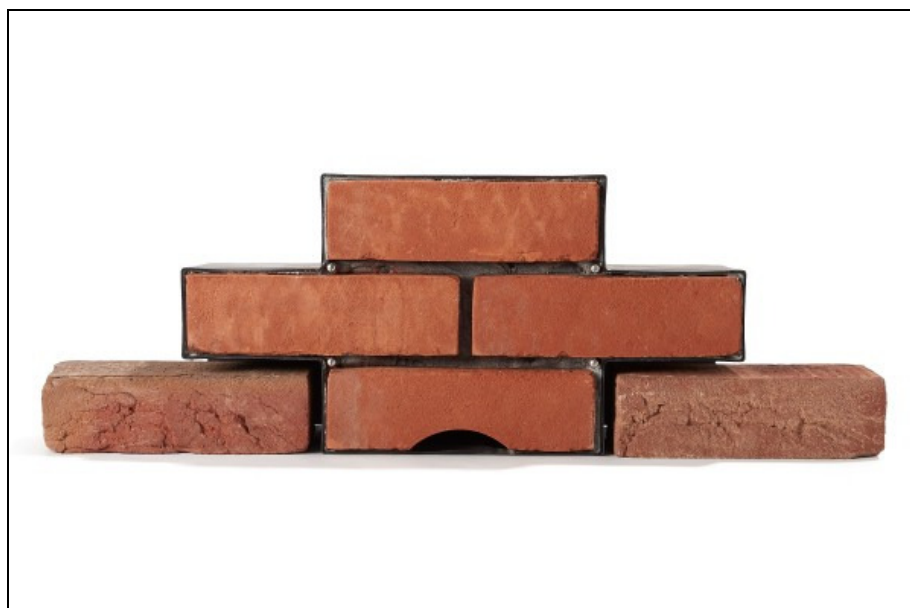




**Figure 9** – Integral bat brick and interior crevice situation

**Appendix I – Site Photographs**



**B1**



**Exterior stone wall of B1**



**Roof of B1**



**Section joining two loft spaces (B1)**



**Loft space (B1)**



**B2**



**Interior of B2**



**Historic Swallows nest within B2**



**Gaps in stone lintels noted to B2**



**Gaps in stonework on B2**



**B3**



**Exterior wall of B3**