



<http://www.tyrer-ecologicalconsultants.co.uk>

<http://www.facebook.com/ecologicalsurvey>

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

Tel: 01704 875781 Mobile: 07719 108429

Email address: stan@tyrer-ecologicalconsultants.co.uk
kylee@tyrer-ecologicalconsultants.co.uk

Land adjacent to Eversley Court, Wrexham LL11 3YZ

(Grid Reference: SJ 27040 51990)

Extended Phase 1 Habitat Survey & Bat Activity Survey Results

Prepared for:

Lawray Architets
The Byre
Croesnewydd Hall
Wrexham
LL13 7YP

Issued: 22nd August 2015



Summary

A planning application regarding Land adjacent to Eversley Court, Wrexham, proposes to construct residential dwellings on the site. The Tyrer Partnership, were therefore commissioned by Lawry Architects to undertake an Extended Phase 1 Habitat survey of the site, which was conducted during March 2015. If additional surveys are required following the initial survey the report will outline the details of those surveys.

Broadly, in its current condition the site is dominated by grazed improved pasture that is colonised by common grass and wild flower species. Other semi-natural elements include broadleaved tree, shrub/scrub and hedgerow. As a consequence of these broad habitat types, the site offers potential for foraging/commuting bats, breeding and foraging passerines bird species, although the presence of true ground nesting species is highly unlikely.

Bats: There are no buildings on the site therefore bat roost potential within a built structure is absent; tree roost potential is present on a single dead but standing tree. Potential for foraging/commuting bats has been identified within the site boundaries and linear features provide connectivity to the wider landscape. Any removal of these features has the potential to adversely impact upon bats that may use then for foraging or/and commuting purposes. As the site is somewhat unaffected by artificial lighting any future development of the site could result in light spillage occurring on those features previously described as being of value to bats, specifically the hedgerow on the boundaries and as such could have an adverse impact upon foraging/commuting bats, if present. Based on the survey results and the fact that commuting habitat may be lost as a result of the development, recommendations were made that activity surveys are undertaken to establish if bats use the site, notably three of the boundaries, and if so identify species and how they are using the identified elements. Subsequently three dusk activity surveys were undertaken which identified a small number of Common Pipistrelle bats commuting into the site and foraging around it; no other bat species was encountered on the application site or the extended survey area.

Birds: The report identifies opportunities for nesting birds and will recommended retention wherever possible if trees and shrub are to be removed, it should be undertaken outside of the breeding season of birds (March - August) unless it can be conclusively established, by an ecologist, that nesting birds are absent. 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).

Terrestrial mammals: Based on the survey results the report will recommended that if any dense vegetation is to be removed, it is done so in a careful manner to check for the presence of hedgehogs; additionally it is recommended that if hedgehogs are discovered during their most vulnerable time, i.e. during hibernation/breeding then they are to be left in situ, and the habitat retained around them. If they are in danger of being harmed then they should be carefully relocated to a suitable sheltered area away from the work. Moreover, if and when future development transpires then provision of low angle sloping boards of approximately 300 mm wide should be placed within any excavations at the end of each working day to facilitate a means of escape for mammals such as hedgehogs.

Land adjacent to Eversley Court, Wrexham LL11 3YZ
Extended Phase 1 Habitat Survey & Bat Activity Survey Results



Evidence of badger activity or actual setts was not recorded either at the site or beyond it to a distance of approximately 60 metres, thus based on the current survey the proposed development will not have an impact upon badgers.



Table of Contents

1.	Introduction and Reasons for Survey.....
2 & 3	UK & Local Biodiversity Plans.....
4.	Site Specific Protected Species
5.	Survey Methodology.....
6.	Constraints
7.	Site Description
8.	Results.....
9.	Conclusions & Implications.....
10.	Recommendations.....
11.	Nocturnal Activity Survey Methodology.....
12.	Constraints.....
13.	Survey Area.....
14.	Survey Results Summary.....
15.	Survey Conclusions.....
16.	Recommendations.....

APPENDIX I - Phase 1 Habitat map

APPENDIX II – Anabat Sonograms

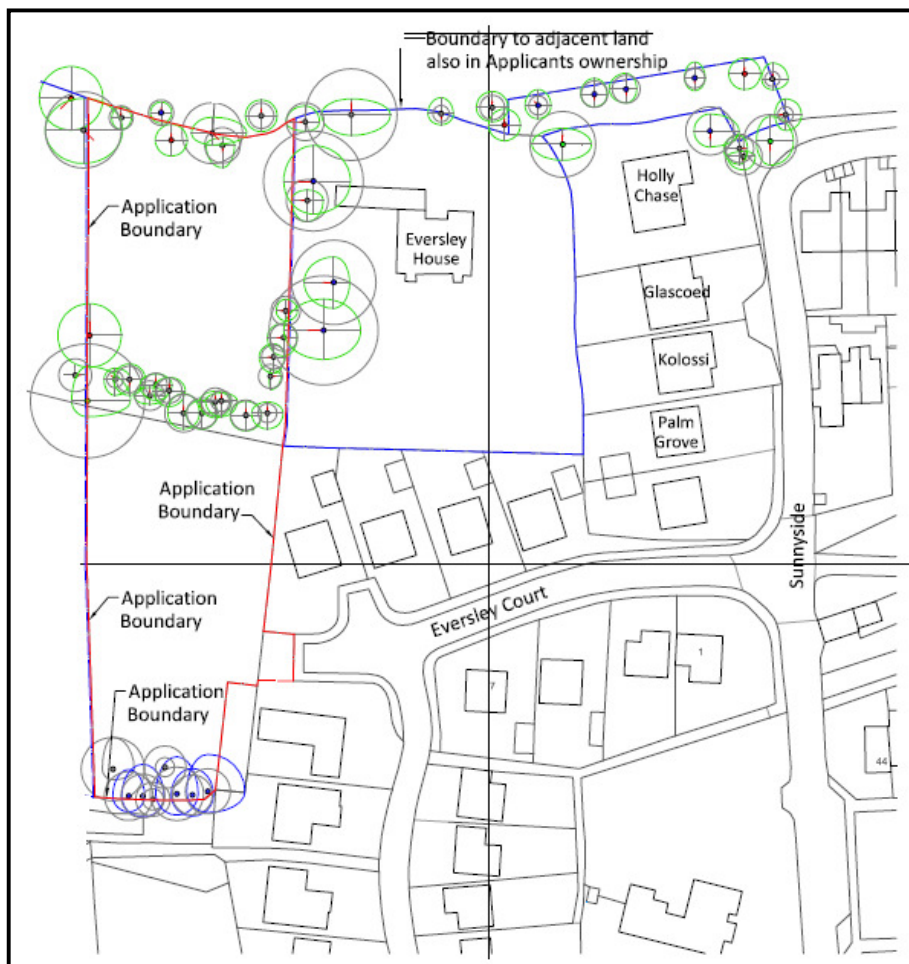
APPENDIX III – Site Photographs

APPENDIX IV – COFNOD data search



1.0 Introduction & Reason for Survey

- 1.1 As part of a proposed Planning Application regarding Land adjacent to Eversley Court, Wrexham, an Extended Phase 1 Habitat survey was undertaken. Proposals for the site involve the construction of residential dwellings; prior to construction it is assumed site clearance of vegetation will be undertaken. Ecological surveys, particularly where a specially protected species is or may be present, are generally required as part of the Local Authority's Planning Policies, therefore Lawray Architects, on behalf of their client, commissioned the survey and report.



Existing site plan



1.2 The basic objective of the survey was to ascertain the nature of the land, and where possible obtain information on any sensitive wildlife habitats or species that may be present and if so if they will be affected by future development of the. To achieve this objective the survey aimed to identify/assess any of the following:

- The presence of species with non-statutory protection
- The presence/potential presence of species protected under the Wildlife and Countryside Act 1981, as amended or the conservation of Habitats and Species Regulations 2010 (as amended)
- Identify any species or habitats that require special consideration during future development.
- Identify the presence of invasive species

If the habitat was found to be suitable for the aforementioned species or signs of use were found then more detailed surveys would be recommended. If a protected species was subsequently found during those detailed surveys and may be affected by the development proposals then a European Protected Species Licence would be required to proceed with the development.



Location of the site, approximate boundaries & contiguous landscape



2.0 UK Biodiversity Plans

- 2.1 The United Kingdom Biodiversity Action Plan lists priority species/habitats. Based upon the site visit there is the potential for ten UK priority species to be present, all of which are listed in Table 1. However, the presence of these species was not ascertained by observational methods but by an assessment of the habitats present and their presence is not conclusive. During the site visit one feature would qualify as UK priority habitats i.e. hedgerow.

Table 1

Bird	Mammal	Herptile (Reptile & Amphibian)
Hedge accentor (<i>Prunella modularis</i>)	West European Hedgehog (<i>Erinaceus europaeus</i>)	Common toad (<i>Bufo bufo</i>)
Song Thrush <i>Turdus philomelos</i>	Brown Long-eared bat (<i>Plecotus auritus</i>)	
Linnet <i>Carduelis cannabina</i>	Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>)	
Bullfinch <i>Pyrrhula pyrrhula</i>	Noctule bat (<i>Nyctalus noctula</i>)	
	Lesser Horseshoe bat <i>Rhinolophus hipposideros</i>	
	NB: Bats mainly in a foraging/commuting capacity	NB: In a non breeding capacity

3.0 Local Biodiversity Action Plan

- 3.1 LBAP's are simply a way of encouraging people to work together and deliver a programme of continuing action for biodiversity at a local level. They set out practical steps that aim to:
- Help protect biodiversity
 - Enhance and improve biodiversity where possible, and
 - Promote biodiversity at a local level

Local Wildlife Sites

- 3.2 Whilst there is no legal protection for Local Wildlife Sites per se the presence of a protected species within them would attract the usual protection afforded to it/them. The Wrexham Biodiversity Action Plan lists key local species/habitats considered to be rare or declining in the area. Some may be of national concern, while others may only be locally rare. Some are statutorily protected, although the great majority are not.
- 3.3 Based on information gathered from the site visit there are two species that are listed within the WBAP for which the nature of the site may be suitable, i.e. Song thrush and Lesser horseshoe bat; the presence of a local priority habitat is absent.



- 3.4 A 1 kilometre data search obtained via COFNOD revealed that the development area is approximately 250 metres from Pen y Nant, which is designated as a Local Wildlife Site and from the land adjacent to Eversley Court there is an element of habitat connectivity.

However there is an unlikelihood that any direct ecological impacts at the LWS will arise as a result of the proposed development. The survey results also indicate that the site does not meet the criteria of any target habitats listed on the WBAP.

4.0 Site Specific Protected Species

- 4.1 Up to ten bat species are likely to be present in the county of Wrexham, 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 Wrexham is reflected throughout the UK.

- 4.2 Guidance for Local Authorities: Extract from Office of the Deputy Prime Minister: Circular 06/2005

"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision."

- 4.3 *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. Detailed advice on the preparation of unitary development plans (UDPs) is contained in *Unitary Development Plans Wales*, 2001. 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.

5.0 Survey Methodology

- 5.1 The survey was conducted on the 30th March 2015 by experienced ecologist Mr S. Irwin who holds a Natural Resources Wales bat licence No 51880: OTH: CSAB: 2014) A COFNOD data search was sourced in relation to species and habitats.

- 5.2 At the time of the inspection tree foliage was absent, which is the optimum time to assess and inspect trees for bat roost potential. Initially a single dead tree within the site was investigated with the aid of close focussing binoculars from ground level for any obvious places that could provide bat roost opportunities; trees just outside the boundary were investigated in the same manner.



- 5.3 A 'walkover' of the site was conducted which included a search for typical signs of badger activity which includes digging, occupied setts, 'runs' leading to and from a sett or the existence of latrines or 'snuffle' holes where badgers have foraged in the ground.
- 5.4 A map and field search was undertaken in relation to the presence of ponds or ditches that may support Great crested newts or Water voles and the land assessed in relation to flora. The information gathered would then be used to establish if more detailed surveys are required.
- 5.6 There is an absence of buildings within the proposed boundaries and therefore the survey did not include an investigation for bat use of such features. However, the site was assessed for all other fundamental landscape elements that have the capability to support foraging and commuting bats.
- 5.7 A number of factors are used for the bat survey methodology, which include:-
- Knowledge of bat species relevant to the site location
 - Nature of the immediate and surrounding habitat in relation to foraging opportunities
 - Presence/absence of roost potential
 - Value of roost potential – if present
- Following the survey the results, conclusions and recommendations are based upon surveyor experience and knowledge of bat ecology.

6.0 Constraints

- 6.1 Having considered all relative flora and fauna in the context of the site, and despite the seasonal timing of the survey, no significant constraints were identified either prior to or during the survey that would prevent the gathering of information on which to base conclusions and recommendations.

7.0 Site Description

- 7.1 The survey site is situated within the small village of Minera and primarily consists of a rectangular grazed pasture bounded by hedgerow and residential properties. The extending landscape possesses a range of ecologically connected semi-natural habitats which include hedgerow/tree lines, woodland, residential gardens, other amenity space, and a water course with riparian woodland. Thus the semi-natural habitat and associated connectivity across the surrounding landscape can be considered as productive for most of the fauna for which the survey was undertaken, particularly highly mobile species such as bats and birds.

8.0 Results

- 8.1 From the COFNOD data search no protected species or habitat were identified at or adjacent to the site but Pen y Nant, which is designated as a Local Wildlife Site, lies at approximately 250 metres away and there is an element of habitat connectivity between the two. Relative to bats the only records were x 2 Pipistrelle within 250 metres, although at just over 1 kilometre away a long standing hibernacula is present and is used by several bat species including Lesser Horseshoe.



There is an absence of roost potential within the study area relative to buildings but one dead standing tree contains woodpecker holes and rot cavities. Notwithstanding a general lack of roost opportunities, the semi-natural nature of the site and its immediate environs would provide foraging and commuting habitat for all bat species that are known to be present in the county of Wrexham.

Terrestrial Mammals

During the survey of the site and localised habitat to a distance of approximately 60 metres, a search was made for evidence of badger activity such as 'runs,' foraging activity, a sett or latrines. Although the site offers some potential for badgers and there is an element of connectivity into the site from the extending landscape no evidence of either foraging activity or sett construction was found.

It is, however, deemed likely that hedgehogs could be present on the site as it comprises a highly suitable area for foraging activity, and due to the presence of scrub, which is of a suitable nature for refuge and breeding purposes.

Breeding birds

During the survey no physical evidence suggesting the presence of breeding birds was located, most notably historic nests or behaviour associated with active nests but it should be noted that the survey was undertaken outside of the peak season for nesting birds. The presence of hedgerow/shrub, however, would make for suitable nesting habitat for common woodland/garden species such as Blackbird and Song thrush.

PHASE 1 HABITAT SURVEY:

Habitats Present:

A2.2	Scattered scrub
A3.1	Scattered trees – broadleaved
B4	Improved grassland
C3.1	Tall ruderal
J2.2.2	Defunct hedgerow – species poor

Each species recorded was given an abundance value according to the standard DAFOR scale, where:

D	=	*Dominant
A	=	*Abundant
F	=	*Frequent
O	=	Occasional
R	=	Rare

*These values can be prefixed by the letter L (locally), to provide more subtle biogeographical data.



Habitat Descriptions:

All species nomenclature follows Stace, C. (1996) – definitive English names

(Refer to Map 1, Appendix 1 for the location of all described habitats)

Scattered trees – broadleaved

A collection of early-mature Sycamore (*Acer pseudoplatanus*) can be found distributed along the south boundary adjacent to a public footpath.

Scattered scrub

Scattered scrub is present on the site within the south boundary areas dominated by bramble

Defunct hedgerow – species-poor

An unmanaged hedge dominated by Oak with single Holly and occasional Pussy willow; there are two notable gaps within it.

Tall ruderal

A small element on the west boundary dominated by nettle

Grass/Rush	Abundance
-------------------	------------------

Rough meadow grass	A
Yorkshire fog	A
Soft rush	O

Wild Flower	Abundance
--------------------	------------------

Cleavers	A
Creeping buttercup	A
Dandelion	A
Bramble	O
Common nettle	F
Cow parsley	O
Rosebay willowherb	F
Lesser celandine	O
Hoary plantain	O
Creeping thistle	O

The survey has revealed that the site does not support any rare or listed biodiversity plant species; furthermore, no invasive species were noted within or close to the site boundaries.



Target Notes

TN1 Boundary hedges suitable for foraging/commuting bats

TN2 Standing dead tree with bat roost potential classed as:-

Category 1 A tree that has definite features of potential for roosting bats but
"Moderate" supporting fewer suitable features than Category 1* trees or with
potential for use by single bats but are less than ideal in some way

9.0 Conclusions & Implications

- 9.1 The overall nature of the site and adjacent habitats is considered suitable for the foraging/feeding and commuting requirements of bats. Therefore, development resulting in loss or reduction of any of the habitats described in the results section may negatively impact upon these species if they are currently using the site for such purposes. Furthermore, as the site is currently undeveloped it is somewhat unaffected by artificial light. Thus, future development which will no doubt include a lighting scheme, may impact foraging/commuting bats should they be using the site for such purposes.
- 9.2 There are no apparent implications in relation to Schedule 1 specially protected bird species. However, the presence of other more common bird species has been deemed possible as the site offers breeding opportunity for a some passerine species, specifically where tree and shrub/scrub is present. Thus, development or significant modification of the site resulting in loss of shrub/scrub and trees is likely to result in the loss or diminution of a resource for breeding, foraging birds.
- 9.3 Bramble scrub is considered to offer some potential for sheltering and breeding hedgehog. Therefore, if there is to be any clearing of the site this may have direct impact upon this species should they be present; however taking into consideration the extent of nearby habitat and residential gardens it is unlikely that the development would result in significant impact upon of hedgehogs. From the survey results any development of the site is unlikely to have an impact relative to badgers
- 9.4 The site does not support plant species of ecological importance; however as outlined in this and previous sections, habitats identified on the site are likely to be of a multi-beneficial nature for some of the species this survey took into consideration, e.g. bats and birds.

10.0 Recommendations

- 10.1 As on site potential for foraging/commuting bats with minor tree roost opportunity has been identified along with connectivity to the wider landscape and several bat species are known to be present in the locality then future development may affect such features. It is therefore recommended that prior to any clearing of the site a series of nocturnal activity surveys (maximum of 3) are undertaken during the months of May – August inclusive. The survey objectives would aim to ascertain if bats are using the site boundaries and if so identify species and how they are using the boundaries, notably as commuting route/s to the wider landscape are evident; the results would then be used to provide information in relation to mitigating the impact.



- 10.2 Currently the site is somewhat unaffected by artificial lighting therefore any future development should ensure that light spillage is restricted; following the nocturnal surveys more detailed recommendations can be provided but the guideline below are generic where lighting will be installed during developments.

If inappropriate and ill designed lighting is implemented then there is likely to be an adverse impact upon bats; see extract below from Bat Conservation Lighting Guidelines.

In addition to causing disturbance to bats at the roost, artificial lighting can also affect the feeding behaviour of bats. There are two aspects to this. One is the attraction that light from certain types of lamps has to a range of insects; the other is the presence of lit conditions.

Lighting can be particularly harmful if used along river corridors, near woodland edges and near hedgerows used by bats. In mainland Europe, in areas where there are foraging or 'commuting' bats, stretches of road are left unlit or lighting is designed in such a way as to avoid isolation of bat colonies.

Type of lamp (light source)

The impact on bats can be minimised by 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.

Luminaire and light spill accessories

Lighting should be directed to where it is needed 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. Planting can also be used as a barrier or manmade features that are required within the build can be positioned so as to form a barrier.

Lighting column

The height of lighting columns in general should be as short as is possible as light at a low level reduces the ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reduce horizontal spill. For pedestrian lighting this can take the form of low level lighting that is as directional as possible and below 3 lux at ground level. The acceptable level of lighting may vary dependent upon the surroundings and on the species of bat affected.

Predicting where the light cone and light spill will occur

There are lighting design computer programs that are widely in use which produce an image of the site in question, showing how the area will be affected by light spill when all the factors of the lighting components listed above are taken into consideration. This should be a useful tool to inform the mitigation process.

Light levels

The light should be as low as guidelines permit. If lighting is not needed, don't light.



Timing of lighting

The times during which the lighting is on should be limited to provide some dark periods. Roads or track ways in areas important for foraging bats should contain stretches left unlit to avoid isolation of bat colonies. These unlit stretches should be 10 m in length either side of commuting route.

- 10.3 It is recommended that if any trees, hedgerow/shrubs or scrub are to be removed, it should be undertaken outside of the breeding season of birds (March - August) unless it can be conclusively established, by an ecologist, that nesting birds are absent. 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).
- 10.4 As the habitat has been identified as offering possible foraging potential and shelter for hedgehogs, it is recommended that if any dense vegetation is to be removed, it is done so in a careful manner to check for the presence of hedgehogs; additionally it is recommended that if hedgehogs are discovered during their most vulnerable time, i.e. during hibernation/breeding then they are to be left in situ, and the habitat retained around them. If they are in danger of being harmed then they should be carefully relocated to a suitable sheltered area away from the work.
- 10.5 If and when future development transpires then provision of low angle sloping boards of approximately 300 mm wide should be placed within any excavations at the end of each working day to facilitate a means of escape for mammals such as hedgehogs.
- 10.6 Retention of habitats identified and described in this document will be of value to most wildlife that can be anticipated as using the site; if landscaping is proposed within the scheme then native species that will be of beneficial to wildlife should be selected and formed to promote wildlife corridors to the extending landscape.

11.0 Nocturnal Activity Survey Methodology

11.1 Habitat use by bats

The use of habitat by bats will depend upon several factors 1) Number of roosts within or in close proximity to the survey area and the number of individuals in the roost 2) The availability of quality foraging habitat and the distance to which it is located from a roost. 3) The quantity and diversity of invertebrates. Where an abundance of quality or similar habitat is present then the distribution of bats tends to be greater which will avoid competition for food and the frequency that bats are encountered may be reduced which can give the impression that bat populations are low. Furthermore although there is often an overlap of species at some feeding sites there can be a slight variation in actual foraging by each species, which is often subtle.

Use of foraging places will vary at different times of the year and will depend upon insect densities which in turn can be affected by climatic conditions both within the general and localised area e.g. around ponds that receive partial or no shelter at all, rivers/streams or around woodland edge.



Small - medium sized bat species, notably *Plecotus* and *Myotis* rely upon linear features, such as hedgerow, for commuting from roosts to favoured foraging areas but *Pipistrellus* (*Pipistrellus*) which is the most frequently occurring species in the UK will regularly fly over open spaces, some of which appear to be quite hostile for a small mammal. However, horseshoe bats (*Rhinolophus*) tend to be more specific when using the landscape for commuting whereby they show a preference for well sheltered and non illuminated flyways that provide a high degree of connectivity to their roost but will forage over open pasture. The larger bat species such as Noctule (*Nyctalus noctula*) tend to commute and forage at a greater height and are not restricted to use of low level linear features for commuting purposes.

11.2 In order to establish if bats are using the habitat features referred to in the Phase 1 Habitat survey (Section 10.1 and 11.1) three activity surveys were undertaken on the 2nd, 14th of July 2015 and the 6th of August 2015.

11.3 The undertaken surveys focussed on the entire proposed development site by way of a combined static/transect approach. The first survey was conducted by Mrs K. Wilding and Mr J. Thomson both of whom are highly experienced bat surveyors. The second and third surveys were conducted by Mr H. Green and Ms A. Mercer both of whom are experienced bat. All of the surveys undertaken at the site were aided with Anabat detectors that continuously record high frequency echolocation calls emitted by bats, which are then subsequently analysed with computer software to verify and add to field observations.

NB: Although not relevant in Wales it should be noted that three of the four surveyors hold Class 2 Natural England bat licences and the same three are accredited agents on the NRW bat licence held by Mr S Irwin.

11.4 Prior to sunset the surveyors adopted static observation posts to identify if bats commuted into the site, and if so, which species and from what direction; following the static observations walked transects were undertaken during the most active period of bat activity post sunset i.e. 1-2 hours thereon after and for added robustness and comparison the surveys extended beyond the site boundaries (See Figs 1 & 2)

11.5 Relative to the nature, size and location of the site three surveys by two surveyors are considered to be adequate.

12.0 Constraints

12.1 There were no site restrictions in relation to the dusk surveys and weather conditions during the surveys were adequate for foraging bats.



13.0 Survey area



Figure 1: Location of the survey site and boundaries (extended)

- Application site & survey area
- Extended survey area



Figure 2: Survey Methodology



Static observations



Transect routes

14.0 Survey Results Summary

- 14.1 The results of the surveys show that Common Pipistrelle commute into the site from a south westerly and easterly direction where residential properties are evident, thus it is apparent that a roost is located in relatively close proximity to the site. (See Figure 2) A Noctule bat (*Nyctalus noctula*) was also observed commuting over the site following a south – north trajectory although foraging at the site did not occur. Bat activity broadly consisted of continuous foraging/commuting activity by a small number (max. 6) of Common Pipistrelle (*Pipistrellus pipistrellus*), which covered most of the application site and the boundaries of the extended survey area.



- 14.2 Apart from the commuting Noctule no other bat species other than Common Pipistrelle was recorded during the three surveys and the only significant variable relative to use of the site by bats that may be present during times other than the survey dates is the numbers present at any one time. Actual use of the site is likely to be relatively consistent and the maximum numbers that may use the site at anyone time is assessed as less than ten.
- 14.3 In relation to the standing dead wood tree classified as Category 1- Moderate Bat Roost potential (as referred in Target note 2). No bat emergence was noted during the dusk surveys.



Figure 2: Bat activity

- Pipistrelle commuting routes
- ↔ Pipistrelle foraging areas

Land adjacent to Eversley Court, Wrexham LL11 3YZ
Extended Phase 1 Habitat Survey & Bat Activity Survey Results



Times of Survey	Date	Weather Conditions
Dusk survey 21:20 – 22:50	02.07. 2015	Sunset: 21:41, Dry, light breeze, clear sky Start temp: 14° C End temp: 12° C
Dusk survey 21:15 – 23:00	14.07.2015	Sunset: 2135, Dry, still, 100% cloud cover Start temp: 16° C End temp: 12° C
Dusk Survey 20:45- 22:15	06.08.2015	Sunset: 2057, Dry, still, clear sky Start temp: 11° C End temp: 9.1° C

Survey	Date	Results
Dusk survey	02.07. 2015	Summary Common Pipistrelle bats in low numbers recorded foraging and commuting throughout the survey period in both the application site and the extended survey area 2203 hrs: A Common Pipistrelle bat commuted into the site and proceeded to forage/commute along the tree/hedge line to the north. 2205 hrs: A Common Pipistrelle bat commuted into the site from the direction of the bungalows to the east and proceeded to forage/commute along the tree line to the south boundary. During the transects several Common Pipistrelle bats were observed foraging in particular to the north, south and west boundaries of the site and the extended survey area throughout the duration of the transects.
Dusk Survey	14.07.2015	Summary Common Pipistrelle bats in low numbers recorded foraging and commuting throughout the survey period. Consistent with activity noted on previous survey. 2135 hrs: A Common Pipistrelle bat commuted into the site from the direction of the bungalows to the east and proceeded to forage/commute down the tree line to the south boundary. 2136 hrs: A Common Pipistrelle bat commuted into the site from the direction of the bungalows to the east and proceeded to forage/commute down the tree line to the south boundary. 2211: A total of four Common Pipistrelle bats commuted through the site along the south hedgerow where they briefly foraged within it and the extended survey area throughout the duration of the transects.

Land adjacent to Eversley Court, Wrexham LL11 3YZ
Extended Phase 1 Habitat Survey & Bat Activity Survey Results



Dusk Survey	06.08.2015	Summary Common Pipistrelle bats in low numbers recorded foraging and commuting throughout the survey period. Lower activity noted in comparison to both previous surveys. 2118 hrs: Two Common Pipistrelle bats commuted into the site and proceeded to forage on the tree/hedge line to the north. 2131 hrs: A Common Pipistrelle bat commuted into the site from the direction of the trees and proceeded to forage/commute down the tree line to the south boundary. Foraging was encountered within the application site and the extended survey area throughout the duration of the transects.
-------------	------------	---

15.0 Conclusions

- 15.1 From the survey results it can be concluded that the application site is utilised by small numbers of Common Pipistrelle bats for both commuting and as a foraging resource. Activity was relatively consistent across the three surveys; however what is surprising is that the full length of the west boundary hedge line, which is to be removed, was not used to any notable degree; the tree/hedge lines to north and south boundaries were used more consistently. The comparative use of the application site and the extended survey area show no discernable differential relative to foraging activity.
- 15.2 In its current state the site provides foraging/commuting resource for a small number C. Pipistrelle bats from a localised roost; due to a notable presence of tree/shrub and small areas rough grass the land that will provide a habitat suitable for invertebrates and in turn prey items for bats. Impact may occur upon a local roost of Pipistrelle bats by reducing the availability of foraging habitat. Loss of habitat in isolation may not be significant but can increase competition at other foraging sites and have an adverse cumulative affect.

16.0 Recommendations

- 16.1 In order to minimise potential impacts, it is recommended that the linear tree and shrub elements that are located on the north, south boundaries are retained and enhanced to maintain connectivity to the wider landscape; the east boundary should be planted with hedgerow to offset what will be lost; all new planting should comprise of native mixed species. The recommendations outlined in 10.2 (Lighting) should be noted and implemented.
- 16.2 In relation to the standing dead wood as referred to as target note 2; as no emergence was noted during the dusk activity surveys it is therefore recommended that prior to its removal the tree is inspected by a licensed bat ecologist with the assistance of a mobile platform. If bat/s or evidence of bat use is found then specific emergence/re-entry surveys may be required unless the status of the tree relative to species and roost classification can be assessed by the bat ecologist. If bat absence/evidence of use is confirmed the tree should then be felled immediately unless the areas identified as having bat roost potential are fully sealed to allow felling at a later date.



- 16.3 The felling of the tree will result in the loss of bat roost potential; it is therefore recommended that 4 bat boxes (2 x Schweglar 2F & 2 x Schweglar 1Fn) are erected on a suitable tree outside of the development area but within land under the ownership of the landowner. The actual tree and location of bat boxes should be informed by the advice of the bat ecologist.



APPENDIX I – Phase 1 Habitat Map

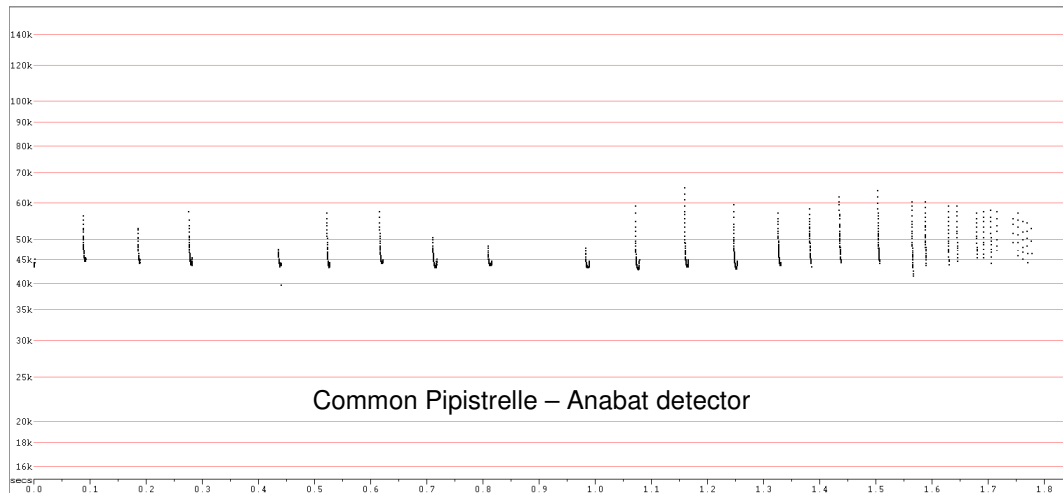


Habitat Key	
	Survey boundary
	Scattered scrub
	Scattered trees – Mixed
	Improved grassland
	Tall ruderal
	Defunct hedgerow – species poor
	Target note
	Recently felled trees



Appendix II-

Bat Sonogram recorded during surveys





**APPENDIX III –
Site Photographs**



Site looking North



Site looking South



Unmanaged hedgerow on west boundary



TN2 Standing dead tree with minor bat roost potential



Middle hedgerow/trees



One of two gaps in west boundary hedgerow



**APPENDIX IV –
COFNOD data search**