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Dusk Survey Results

July 2020

Crown Buildings
Chester Street
Wrexham
LL13 8BG

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Crown Buildings, Chestre Street, Wrexham, LL13 8BG
Dusk Survey Results

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1.0 Background and Introduction

- 1.1 As part of a proposed planning application in relation to the office building at Crown Buildings, Wrexham, Tyrer Ecological Consultants conducted an inspection and assessment in relation to bats and breeding birds in May 2020, which concluded the following (Figure 1):

Bats: The building has been found to possess Potential Roost Features (PRFs) and in association with the moderate-high value bat related foraging habitat the structure has consequently been categorised to possess 'Moderate' roost suitability in accordance with current BCT guidance. Based upon this categorisation and when taking the Bat Conservation Trust 'Bat Surveys: Good Practice Guidelines' 3rd edition (2016) (Figure 5) into consideration then in order to establish if bats are using either building as a roost then this report will recommend two suitably spaced apart dusk emergence or/and dawn re-entry surveys.

Figure 1 - Extract from *Inspection & Assessment in Relation to Bats & Breeding Birds* (Tyrer Ecological Consultants, June 2020)

- 1.2 Development proposals for the site entail the internal and external refurbishment of the existing building.
- 1.3 Tyrer Ecological Consultants Ltd were therefore commissioned by Wrexham Borough Council to undertake the further bat surveys recommended in the Preliminary Survey; only one survey (dusk emergence survey) was carried out in June 2020 in accordance with current Bat Conservation Trust (BCT) Guidelines during the active season of bats due to the reasons outlined within table 3 and the limitations paragraph.
- 1.4 The results, conclusions and recommendations following the surveys, including any indicative mitigation to inform an application to Natural Resources Wales for a European protected species mitigation licence (EPSML), where necessary, will be supplied within this report.
- 1.5 This report should be read, understood and presented to the local authority as an additional document to Appendix I (see Contents page).
- 1.6 In accordance with *Biodiversity Net Gain: Good practice principles for development* (CIEEM *et al*, 2019), measures have been recommended proportionate to anticipated impacts to ensure that the proposed development results in a biodiversity net gain.

2.0 Bats - Legislation & Policy

- 2.1 Planning Policy Wales, 10th Edition (2018) is the Welsh Government's policy document and it describes the land use context for using land sustainably. The document supports every strategy published by the Welsh Government and it is supplemented by a variety of Technical Advice Notes (TAN's) and any circulars.
- 2.2 There are several plans, strategies and national, sub-regional and local policy statements which provide a framework for development in the Plan area. The Planning and Compulsory Purchase Act (2004) makes it a requirement for local planning authorities in Wales to prepare a Local Development Plan (LDP) for their areas.

Wrexham Borough Council prepared a plan, namely the 'Wrexham Unitary Development Plan (1996 – 2011)', which was formally adopted in February 2005 and supersedes any previous development plans for the area. A new plan, the 'Wrexham Local Development Plan 2 (2013 - 2028)', which will replace the current adopted plan, is currently under review. Until this new plan is adopted, the Wrexham Unitary Development Plan remains in effect.

- 2.3 Planning authorities must therefore follow a step-wise approach to maintain and enhance biodiversity and build resilient ecological networks by ensuring that any adverse environmental effects are firstly avoided, or minimized, or mitigated, and as a last resort compensated for; enhancement must be secured wherever possible.
- 2.4 The first priority for planning authorities is therefore to avoid damage to biodiversity and ecosystem functioning. Where there may be harmful environmental effects, planning authorities will need to be satisfied that any reasonable alternative sites that would result in less harm, no harm or pro-gain have been fully considered.
- 2.5 Planning authorities should ensure that features and elements of biodiversity value are retained on site, and enhanced or created where ever possible, by adopting best practice site design and green infrastructure principles. The provision of up to date ecological survey information will assist in this process. Where necessary, planning authorities should seek to modify the development proposal through discussion with the applicant at the earliest possible stage. Biodiversity and green infrastructure modifications should draw on the issues and opportunities identified in a preliminary assessment. In some circumstances, it will be appropriate to attach planning conditions, obligations or advisory notes to a permission, to secure biodiversity outcomes.
- 2.6 When all other options have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes, offsite compensation for unavoidable damage must be sought. This should normally take the form of habitat creation, or the provision of long-term management arrangements to enhance existing habitats and deliver a net benefit for biodiversity.

Where the adverse effect on the environment clearly outweighs other material considerations, the development should be refused.

- 2.7 The Environment (Wales) Act 2016 ("the Act") - requires local planning authorities to have regard to area statements in the development of Local Development Plans.

Part 1 of the Act promotes sustainable management of natural resources, and in Part 1 section 6 states:

"A public authority must seek to maintain and enhance biodiversity in the exercise of functions in relation to Wales, and in so doing promote the resilience of ecosystems, so far as consistent with the proper exercise of those functions."

- 2.8 All British bats and their ****roosts** are afforded protection under Schedule 5 of the Wildlife & Countryside Act (1981) (as amended) and are listed in Schedule 2 of the Conservation of Habitats & Species Regulations 2017. 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 2017 Regulations and therefore has a statutory duty to have due regard to the provisions of the Regulations in the exercise of its functions.

- 2.9 The presence of a species protected under European or UK legislation, or under Section 7 of the Environment (Wales) Act 2016 is a material consideration when a planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat and to ensure that the range and population of the species is sustained.

2.10 Use of Buildings by Bats

- a) Summer breeding roost
- b) Hibernation roost
- 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 2017 (Regulation 43 (d) 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.**

- 2.11 All wild birds no matter how common, their eggs, young and nests whilst being built or occupied are protected under both the Wildlife and Countryside Act (1981) and Natural Environment and Rural Communities Act (NERC Act 2006). Any work that would damage an occupied nest, eggs or young of breeding birds must be avoided and any damage to nests that may occur as a result of the development should be outside of the main breeding bird season (March-August) as long as it can be conclusively established by a suitably experienced ecologist that the nest/s is/are no longer in use. On occasions nests can become unoccupied during the main breeding season but the status of the nest/s should be determined by a suitably experienced ecologist before any damage takes place.

3.0 Bats in Wrexham

- 3.1 Up to eleven bat species have been recorded in Wrexham, many of which use built structures for roosting. A variety of building types and features are utilised by bat species at different times of year ranging from occupied residential dwellings to disused barns and bridges. The most frequently encountered species is the common pipistrelle bat (*Pipistrellus pipistrellus*); its abundant status in Wrexham is mirrored throughout the UK.

4.0 Dusk Survey Results

- 4.1 Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016) edition states:-

“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 surveys carried out or using alternative methods) are often appropriate. The guidance 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.”

Relative to the above the survey protocol has been determined using the collective and long standing experience of Tyrer Ecological Consultants Ltd and knowledge of the specific nature of the site.

Survey Protocol

- 4.2 The timing of the survey took place in June thus within the main active period of bats, at a time when maternity colonies have formed / returned to summer roosts and bats are in a highly active and social stage.

In accordance with Bat Conservation Trust - Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd ed. (2016), it is specified that:

“The bat active period is generally considered to be between April and October inclusive”, though the period of May - August is the optimal most productive period that Natural Resources Wales accept bat surveys and grant European Protected Species Mitigation licences (EPSML).

When considering survey protocol the decisions about whether dusk or dawn surveys are selected are based on the extensive experience of the Tyrer Ecological Consultants Ltd, the nature of the building and species that can be anticipated as being present either at the property or in the locality and how complex a building is relative to observations. In this case the bat roost potential that existed at the Crown Buildings presents no problems for dusk observations; if a building is complex, or observations were restricted, or species that are difficult to detect at dusk are suspected then dawn surveys would be conducted. At this site there are no visual constraints and to date there is no evidence to suggest the presence of such species.

It should also be noted that at dawn temperatures are usually lower than at dusk as a result bat activity can, in some locations, be less frequent. Additionally, where singular/small numbers of bats are present and there are no survey constraints then dawn surveys are of no more value than dusk surveys; singular bats can and do return to a roost before dawn and as a result a dawn survey would not record them anyway. Dawn surveys are more productive when “back tracking” bat to a roost from foraging grounds.

Survey protocol should not be determined by parties who are 1) not familiar with the site 2) do not have a sufficient level or experience in relation to the undertaking of dusk/dawn bat surveys.

Limitations

- 4.3 Due to the reasons described in Table 3 below, only one dusk emergence survey was carried out despite the roost potential categorisation of ‘Moderate’. It is understood that following the diurnal assessment in May, the potential roost features had been ‘bricked up’ and sealed during the same week, thought was given to removing these areas, however, considered futile as PRF’s had been effectively sealed for an extended period of time between the daytime and dusk survey, and should bat/s have been present, unfortunately mortality would have previously occurred.

The number of surveyors was adequate relative to the roost potential that was identified i.e. ‘Moderate’, however, due to the now absent PRF’s surveyors observed any general behaviour or activity around the site.

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4.4 Surveyors were strategically positioned so that the elevations that had offered bat roost potential, as described in the daytime report, could be observed. The surveys were aided with Anabat electronic bat detectors that enable the locating and recording of the high frequency calls that are emitted by bats; echolocation calls were analysed the next day using Analook computer software to verify field observations.

4.5 See the following tables for Raw Data.

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4.6 One dusk emergence surveys was undertaken on the 01st June 2020 by a combination of two surveyors as per Table 1 below:

Table 1 - Surveyor Credentials

Surveyor(s)	Experience	Surveyor Credentials
Mr. P. Harrison	4	A seasonal ecological consultant with experience of undertaking professional bat surveys
Mr. J. Pescod	3	Experienced ecologist in training with Tyrer Ecological Consultants and accredited agent on the Natural England Class 2 license of Mrs. K. Wilding (CLS-14227)

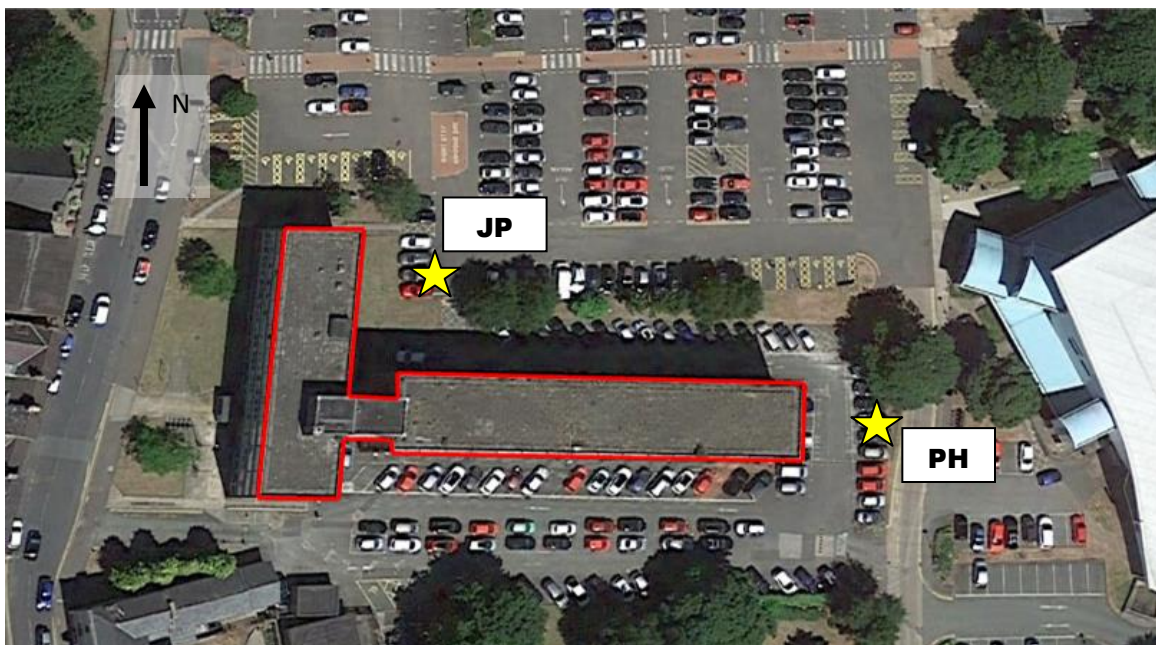
Table 2 – Survey date, times and weather conditions

Times of Survey	Date	Weather Conditions
Dusk survey 2100 - 2240	01 st June 2020	Sunset: 2128: Dry, Light Breeze, 5% cloud cover Start temp: 20 ° C End temp: 18 ° C

Table 3 – Dusk Survey Results

Dusk Survey	Time	Activity
01/06/2020	2100 - 2240	Summary: No bat emergence for the duration of survey. There was no activity from any bats throughout the duration of the survey. Upon arrival at the site, the attending surveyors found the potential roost features (PRF) identified in the preliminary roost assessment (Appendix 1) had been refilled with brick and mortar (See Figure 3). Destruction of this PRF drastically reduces the value of the structure to bats, lowering its categorisation to 'negligible' in line with current Bat Conservation Trust guidance. As such a second emergence / re-entry survey was not carried out.

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Dusk Survey - 01/06/2020

Key			
	Site Boundary		Surveyor initials
	Surveyor Positions		Directional compass

Figure 2 - Visual Aid - Dusk Survey Results with Key



Figure 3: PRF identified during the preliminary roost assessment (Left) and during the dusk emergence survey (Right).

5.0 Dusk Survey Conclusions & Recommendations

- 5.1 From the dusk survey results, it can be concluded that whilst using best practice survey methodology and within the constraints imposed through a change in the structure of the target building, emergence of bats was absent at Crown Buildings; no activity was recorded at the site throughout the entirety of the survey period.
- 5.2 As bats are a highly transient species and can use buildings that offer potential roost features at any time of the year, it should be stated that if bats, or evidence of bats (see Figure 4), is found at any stage during the works then as a legal requirement the work at the site should immediately cease and a bat ecologist contacted for further advice.



Figure 4 - Bat droppings (left) and pipistrelle bat (right)

- 5.3 If bat(s) or their roost will be affected then a 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.
- 5.4 Notwithstanding absence of roost behaviour observed, the proposed development scheme should now incorporate enhancement for bats as part of its biodiversity net-gain goals, in accordance with local and national planning policy and to address the roost features that have now been lost – see proposed compensation overleaf, on option will need to be installed as a priority.

Enhancing a development site for Bats

2FE Schweglar Bat Box

The Schweglar Wall-Mounted Bat Shelter 2FE has two applications: it can either be fixed to outside walls to provide a summer hideaway for bats, or it can be installed inside buildings to provide winter hibernation quarters. The interior has shaped cavities in various sizes where the animals can roost giving optimum body contact, and offering a home to a very wide range of species. The outside surface has an attractive logo in the shape of a bat, making it easy for the amateur to recognise that this is a bat home. Each purchase includes two 2FE bat shelters.



1FR Schweglar Bat Box

This box is ideal for all types of bats which inhabit buildings. The shape and design make it equally attractive to bats as a roost or nursery and it is also very attractive to the human eye. The structure of the box has been designed with bat behaviour in mind. For example, the outside of the front panel has been roughened to enable the animals to land and hang onto it securely. Access is via a step-like recess which enables even young and inexperienced bats, to safely access the box. The inside of the box has rough pieces of wood incorporated which provide good insulation and are also used by the bats as perches. The internal layout provides three different areas from which bats can hang and which offer different levels of light and temperature. There are also non-slip areas, gaps ranging from 1.5 to 3.5cm in width and various places for individuals to hide.

The box should be positioned a minimum of three metres above the ground and where there is a clear flight path for bats entering and leaving.



6.0 References

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