



Demolition of Chapel for two Residential Dwellings

Report Title: Updated Dusk Survey Results

Address: Salem Chapel, Bank Street, Rhos, Wrexham, LL14 1EN

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Document Title	Updated Dusk Survey Results
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Executive Summary

The former Salem Chapel, Rhos is now redundant from its former use and is subsequently due to be demolished, followed by redevelopment of the site to accommodate two residential dwellings. Following a daytime assessment and inspection that was undertaken in September 2016, a total of two historic bat droppings attributed to pipistrelle (*Pipistrellus* sp.) were identified, coupled with various potential roost features. Subsequently, two dusk surveys were undertaken during the period May-June in 2017 which identified a maximum of two common pipistrelle bats emerging from the rear of Salem Chapel. In order to update the findings of the 2017 surveys, Tyrer Ecological Consultants Ltd was commissioned by Blueprint Architectural Service Ltd in 2019 to conduct updated dusk observation surveys which took place in August and September 2019.

From the evidence gathered by Tyrer Ecological Consultants Ltd in 2019 in association with the results from 2017, it can be concluded that Salem Chapel, Rhos, continues to be used by a day roost by singular/ small numbers of Common Pipistrelle bats were using a crevices at the wall plate.

The permanent destruction of a bat roost(s) will need to be addressed from both a conservation and legal perspective along with the application of appropriate mitigation. A European Protected Species Mitigation Licence (EPSML) will be required to legally destroy a place(s) used for breeding, rest and/or shelter (roost) by bats, in this case the roost(s) identified at the former Salem Chapel, Rhos.

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1.0 Background & Introduction

- 1.1 As part of proposals at Salem Chapel, Rhos, plans entail the demolition of the extant building, followed by redevelopment to accommodate two new residential dwellings. Following an initial daytime assessment that was undertaken in September 2016 which found two historical bat droppings attributed to pipistrelle bats (*Pipistrellus* sp.), coupled with a variety of potential roost features, Salem Chapel was concluded to possess 'moderate' roost suitability. As such, two dusk observation surveys were conducted in 2017 over the period May-June by The Tyrer Partnership (now Tyrer Ecological Consultants).

These dusk observations concluded that Salem Chapel was in use as a day roost by small numbers of common pipistrelle (*Pipistrellus pipistrellus*) bats, with a peak count of two bats emerging from the structure.

- 1.2 Due to the lapse in time since these observations, updated dusk surveys were commissioned by Blueprint Architectural Services during 2019 in the period August-September; these surveys were conducted in line with Bat Conservation Trust (BCT) guidelines (see Figure 1).

Table 7.1 Recommended timings 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
May to August (structures) No further surveys required (trees)	May to September ^a with at least one of surveys between May and August ^b	May to September ^a with at least two of surveys between May and August ^b

Figure 1: BCT extract

- 1.3 Mitigation for the destruction of a previously identified Pipistrelle roost has been given within section 11.0 of the Tyrer Partnership report (see Appendix I).



Figure 2: Site plan showing the location of Salem Chapel (Red) (Google Earth, 2018)

2.0 Protected Species & Their Requirements

- 2.1 Up to 11 bat species have been recorded in Wrexham, most of which use built structures, notably occupied residential properties, for roosting. The most frequently encountered species is the Common Pipistrelle bat (*Pipistrellus pipistrellus*) and its abundant status in Wrexham is reflected throughout the UK.
- 2.2 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 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 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.
- 2.3 The Planning Policy Wales (PPW) is one of the documents to which Planning Authorities refer to, particularly where a specially protected species is or may be present and will be affected by a development for which a Planning application seeks consent. The aims of the NPPF in relation to species and habitats (Biodiversity and Ecological networks, point 6.4) are that it places a clear responsibility on Local Planning Authorities to protect and enhance biodiversity, to encourage on the consideration that should be given to Protected Species where they may be affected by development.

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

“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. Planning authorities should advise anyone submitting a planning application that they must conform with any statutory species protection provisions affecting the site, and potentially the surrounding area, concerned.”

2.4 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 2017 (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 Updated Dusk Survey Results

3.1 BCT Good Practice Guidelines 2016 3rd edition state:-

“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 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 the specific nature of the site.

3.2 The timing of the pre-dusk inspection and of the updated dusk surveys is at the end of the main active period and breeding season of bats when maternity colonies have formed / returned to summer roosts and bats are in a highly active and social stage.

3.3 Updated dusk emergence observations were undertaken on the 29th August and 16th September 2019 by a total of three highly competent surveyors as follows:

Table 1: Surveyor credentials

Survey	Name	Surveyor Credentials
29/08/2019 Dusk	Mr. M. Pritchard	Multiple protected species licenced FISC Level 3 Ecologist and accredited agent on the Class 2 Natural England bat licence of Mrs. K. Wilding (CLS-14227). 3 years' experience undertaking professional bat surveys.
	Ms. A. Watson	Trainee Ecologist, in training with Tyrer Ecological Consultants Ltd. 1 years' experience undertaking professional bat surveys.
16/09/2019 Dusk	Mr. J. Styles	FISC Level 6 Ecologist and accredited agent on the Class 2 Natural England bat license of Mrs K Wilding (CLS-14227). 4 years' experience undertaking professional bat surveys.
	Ms. A. Watson	Trainee Ecologist, in training with Tyrer Ecological Consultants Ltd. 1 years' experience undertaking professional bat surveys.

The number of surveys and surveyors were adequate relative to the roost potential that was identified originally i.e. 'moderate'.

Pre-dusk Assessment

3.4 A pre-dusk inspection undertaken on 29th August 2019 which found that the building does not appear to have significantly altered following surveys carried out during 2017 and the status of roost potential remains consistent. Externally, the presence of more scattered scrub is present to the rear (north) and to the east on the site; no evidence of bats was found upon appraisal of the building.

Survey Protocol

- 3.5 When considering the 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 exists at building 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 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.
- 3.6 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.
- 3.7 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.
- 3.8 The dusk survey was conducted at the latter end of the typical breeding season of bats (May-August/September). In accordance with BCT Guidelines however (see Figure 1), it is specified that *“The bat active period is generally considered to be between April and October inclusive”*.

In general:

- August to October surveys may detect mating bats
 - September and October may detect transitional roosts used after bats have dispersed from maternity colonies but before they go into hibernation.
- 3.9 Given the absence of suitability for a maternity/breeding colony, surveys completed during September can be of more benefit and can provide a better understanding of a structures value in respect to bats notably for transitional roosts prior to the hibernation. BCT guidelines also state the following:
- “September and October surveys may detect transitional roosts used after bats have dispersed from maternity colonies but before they go into hibernacula (although October may be less suitable for surveys in more northerly latitudes).”*
- 3.10 Singular/low numbers of common pipistrelle bats can be very opportunistic when selecting roosts but generally have a number of roost opportunities within a given range and will alternate between them. The highest proportion of maternity roosts of this species is found in warm, dry residential properties, including modern dwellings. As previously described, the building does not meet these requirements and there is no evidence to suggest that post breeding dispersal of a maternity roost is taking place at the structure or that it is used for instance as a “satellite” roost in conjunction with any other roost in the locality.

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- 3.11 Surveyors were located in positions that allowed unrestricted views of the identified roost potential. 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 then analysed with computer software to verify field observations.

Table 2: Survey results

Times of Survey	Date	Weather Conditions
Dusk survey 1949-2112	28 th August 2019	Sunset: 2009: Dry, moderate breeze, 75% cloud cover Start temp: 18°C End temp: 16°C
Dusk survey 1900-2025	16 th September 2019	Sunset: 1925: Dry, light air, 95% cloud cover Start temp: 13° C End temp: 12° C

Table 3: Survey results

Survey	Date	Results
Dusk survey 1949-2112	28 th August 2019	Summary: Emergence of a single common pipistrelle bat from the northern elevation from wall plate. 2026 hrs: Common pipistrelle emerged from the wall plate on the northern elevation. 2047-2058 hrs: Common pipistrelle bat sporadically foraging to the east of the building on the eastern elevation. 2048 hrs: Noctule bat commuted overhead. Foraging activity on the site was sporadic with minor common pipistrelle foraging during the dusk survey observations.
Dusk survey 1900-2025	16 th September 2019	Summary: No bat emergence for the duration of the observation period. 1942-2024hrs: Common pipistrelle bat commuted on to site commuting in a southerly direction then occasionally foraged along the eastern elevation. Foraging activity on site was occasional with a singular common pipistrelle foraging during the dusk survey observations.



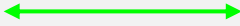
Key			
	Site Boundary		Foraging activity
	Surveyor Positions		Commuting activity
	Point of bat emergence		

Figure 3: Summary of dusk results 2019



Figure 4: Common pipistrelle emergence point at wall plate indicative.

4.0 Updated Dusk Conclusions & Recommendations

- 4.1 From the updated dusk survey, it is concluded that the results confirm the continued presence of a single common pipistrelle bats (peak count of one) out of the wall plate on the northern elevation. Salem Chapel is thus concluded to still be host to a day roost of a common pipistrelle bats (*Pipistrellus pipistrellus*), consistent with dusk results from the 2017 survey effort.
- 4.2 The damage/destruction of a bat roost/s will need to be addressed from both a conservation and legal/planning perspective along with the application of appropriate mitigation. A European Protected Species Mitigation Licence (EPSML) will be required to legally damage/destroy a place that is used for rest or shelter (roost) by bats; in this case the roost identified at building at Salem Chapel.

- 4.3 Relative to bat roost mitigation, proposals that entail a scheme of mitigation are contained within section 11.0 of the Tyrer Partnership (now Tyrer Ecological Consultants Ltd) dusk report remain applicable.

Appendix I: *Inspection & Assessment in Relation to Bats & Breeding Birds including Dusk Survey Results* (The Tyrer Partnership, 2017)