



Bat Survey Report

Former Coach House, Llan-y-Cefn Hall

Ref: 547

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1.0 INTRODUCTION

- 1.1 J W Ecological Ltd were commissioned in Spring 2010 to undertake a bat activity survey of a former coach house/outbuildings at Llan-y-Cefn Hall, Oswestry Road, Overton, Wrexham (SJ 35644 41049). See site location plan D/JWE/547/BS001 (Appendix 1).
- 1.2 An initial bat survey of the coach house was undertaken as part of an extended phase one habitat survey of the site in November 2009. This survey identified evidence of roosting Brown long-eared and Pipistrelle bats in the building.
- 1.3 The aims of the survey in June 2010 were to:
- ☐ Identify any evidence of bats roosting in the coach house.
 - ☐ Identify any bats exiting the coach house at dusk.
 - ☐ Assess the likely impact of the conversion of the barns on local bat populations.
- 1.4 Prior to any survey work a health and safety risk assessment of the site was undertaken. Risk assessments are undertaken on a site by site basis in order to identify potential risks with the aim to reduce these as far as is practicable.

2.0 SITE LOCATION AND DESCRIPTION

- 2.1 The site is located to the north of the Oswestry Road, to the west of Overton, Wrexham.
- 2.2 The survey area comprises a former coach house and outbuildings to the south-east of the main Llan-y-Cefn Hall. The main coach house building is arranged in an L-shape around a central courtyard. The buildings are enclosed by a stone wall. A former ice house is located to the east of the coach house and is entered through a door in the stone wall on the eastern boundary. Photographs of the buildings are provided in Appendix 2.
- 2.3 The Coach house is bordered by areas of amenity grassland and shrub planting to the north, an area of mixed woodland to the east, improved grassland fields to the south and the mature gardens of the main hall to the west.

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3.0 DESKTOP STUDY

- 3.1 Ecological data and records of protected species were requested/gathered from the following sources (Table 1):

Table 1: Desktop Study Sources

Consultee/Source of Information	Information Supplied
NBN Gateway	Protected species records within 500 metres of the proposed development site.
Countryside Council for Wales	CCW online protected sites register.
Cofnod	Protected species and protected sites data.
UK Biodiversity Action Plan	Identification of national priority species and habitats known to occur in the region.
Local Biodiversity Action Plan	Identification of local priority species and habitats known to occur in the area.
WCBC	Wrexham Unitary Development Plan

Protected Sites

- 3.2 The River Dee Site of Special Scientific Interest (SSSI) and Special Area of Conservation is located approximately 200 metres north of the survey area.

The closest Wildlife Site to the survey area is Llan-y-Cefn Wood which is located approximately 45 metres north-east of the site on the opposite side of the site access road. Two further Wildlife Sites are located within 1 kilometre of the survey area. The Morris, Helt Wood and Neile's Wood Wildlife Site is located approximately 962 metres west of the site. The Manley Wood Wildlife Site is located approximately 760 metres north-west of the site on the opposite side of the River Dee.

Bat Records

- 3.3 The following bat records are located within 1 kilometre of the site:

- Pipistrelle Bat – Pipistrelle bats were recorded at Maes-Y-Haul in 1994 (250 metres from site). Pipistrelle bats were also recorded at Knowlton Hall in 1989 (650 metres from site) and Barton Bank Cottages in 2003 (750 metres from site).
- Brown long-eared bat – Brown long-eared bats were recorded at Knowlton Hall in 1989 (650 metres from site).

The site owner has reported that a significant Brown long-eared bat roost is located in the roof of the main hall.

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4.0 LEGISLATIVE AND PLANNING CONTEXT

4.1 This is a brief summary of the ecological planning and legislative context in Wales. This is general advice only and does not relate specifically to the site being assessed.

4.2 Bats

All 16 species of British bat are protected under Schedule 5 of the Wildlife and Countryside Act 1981 and under Regulation 39 of the Conservation (Natural Habitats, &c.) Regulations 1994 (the Habitats Directive). Under this legislation it is an offence to:

- ☐ Intentionally kill, injure or capture a bat
- ☐ Deliberately disturb bats
- ☐ Damage, destroy or obstruct access to roosts (a bat roost is defined as any structure or place which is used for shelter or protection, whether or not bats are present)

The potential fine for each offence is £5,000. If more than one bat is involved, the fine is £5,000 per bat. An offender can also be imprisoned for six months.

The UK BAP lists six bat species considered as priorities: Barbastelle, Bechsteins, Greater Mouse-eared bat, Pipistrelles (common and soprano), Greater Horseshoe and Lesser Horseshoe.

Where bats are found to occur on a development site, and there is considered to be a reasonable possibility that a roost may be damaged or destroyed or that bats using a roost will be disturbed, a licence must be obtained from WAG.

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5.0 BAT SURVEY METHODS

- 5.1 A repeat daytime bat survey of the coach house was undertaken by Joseph Whittick BSc (Hons.) MIEEM on the 10th June 2010 immediately prior to the dusk emergence survey.
- 5.2 Joseph Whittick is an experienced bat surveyor and holds a Countryside Council for Wales (CCW) Scientific bat license (licence Number 18982:OTH:CSAB:2 010).
- 5.3 During the survey the coach house was inspected on the interior and exterior for evidence of past or present use by bats and its suitability as a bat roost including:
 - droppings
 - feeding remains (e.g. moth and butterfly wings)
 - potential roosting sites
 - potential entrance points
 - discolouration around entrance points
 - absence of cobwebs in potential roosting points
- 5.4 A dusk bat emergence survey of the coach house and adjoining outbuildings was also undertaken on the 10th June 2010. Conditions were fair. The survey was undertaken by Joseph Whittick and two experienced assistant. Surveyors were equipped with Duet bat detectors and recorded all bats seen and heard during the survey. Surveyors were in position from 15 minutes before sunset until 90 minutes afterwards at which point it became too dark to survey effectively. Sunset on the 10th of June was at 21.35 and the temperature at dusk was 14°C.

6.0 BAT SURVEY RESULTS

Internal/External Survey

- 6.1 Numerous bat droppings were identified on the first floor of the two-storey section of the coach house. Approximately 100 hundred droppings characteristic of the Common Pipistrelle (*Pipistrellus pipistrellus*) and Brown long-eared bat (*Plecotus auritus*) were found beneath the ridge and other roof beams indicating that bats are roosting between the beams and the roofing sheets. Two Common Pipistrelle bats were also seen between the beams and the roofing sheets. Approximately 200 fresh droppings characteristic of the Brown long-eared bat (*Plecotus auritus*) were also found stuck to an internal wall and on the floor beneath what appears to be a bricked up window (this window is now internal due to extensions to the coach house). The position of the droppings would indicate that Brown-long-eared bats are roosting in the wall above the window and are gaining access via gaps behind the lintel. Access into the coach house for bats is freely available through the western gable of the building which has partially collapsed.
- 6.2 No evidence of roosting bats was identified in the single storey buildings attached to the coach house however suitable roosting sites exist in the form of gaps in brickwork and beneath roofing tiles. The former ice house to the east of the coach house has suitability as a hibernation site for bats although no evidence of bat activity was found at the time of survey. Access for bats into the ice house is available through gaps around the timber access door.

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Dusk Survey

- 6.3 During the dusk emergence survey the first bat, a Common Pipistrelle (*Pipistrellus pipistrellus*), was recorded at 21.40. This bat emerged from the north-eastern corner of the coach house and began to forage along the northern side of the coach house. Further emerging Common Pipistrelles were recorded at 21.47, 21.50 and 22.10. At 22.24 the first brown long-eared bat (*Plecotus auritus*) was recorded flying on the interior of the eastern section of the first floor of the coach house. This bat was light sampling prior to emerging. The bat appeared to have come from a gap in the wall where one of the roof lintels is inserted. At 22.28 a second Brown long-eared bat began light sampling in the central section of the coach house. This bat was quickly joined by three other Brown long-eared bats at 22.29, 22.31 and 22.32. The bats all emerged from behind the lintel of the bricked up window in the internal gable wall. The four Brown long-eared bats continued light sampling in the coach house until 22.46 when the first bat exited the coach house through the western gable. The remaining Brown-long-eared bats exited the coach house between 22.46 and 22.57. No bats were recorded emerging from any of the other barns/outbuildings on site.
- 6.4 Foraging Common Pipistrelles were observed to the north of the coach house from 21.40 onwards and continued until the end of the survey. Periodic foraging by Common Pipistrelles was also recorded to the south of the coach house from 21.51 onwards.
- 6.5 The results of the bat survey are shown on drawing D/JWE/547/BS002 (Appendix 1).

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7.0 CONCLUSIONS AND RECOMMENDATIONS

- 7.1 The results of the bat survey indicate the presence of a small Summer roost of up to 5 Common Pipistrelles in the coach house and a Summer roost of 5-10 Brown long-eared bats. Given the numbers of bats the coach house is not thought to be a maternity site for these species however given the difficulties associated with determining the status of roosts with smaller numbers of bats, particularly Brown long-eared bat roosts, the proposed mitigation is designed so as to accommodate maternity sites for both Pipistrelles and Brown long-eared bats.
- 7.2 A Welsh Assembly Government bat license will be required for works to the main coach house building. No evidence of roosting bats was identified in the adjoining single-storey outbuildings and a license is not thought to be required for works to these buildings. Given the presence of the roost in the main coach house works to the single-storey buildings should however be undertaken with bats in mind. Suitable roosting sites, primarily roof tiles/sheets, should be removed carefully by hand. If any bats, or evidence of bats, is found all works should cease and a licensed bat worker should be contacted for advice. No bats were recorded emerging from the ice house however this building could be used as a hibernation site (no works to the ice house are planned as part of the proposals).
- 7.3 The license application for the coach house will need to include mitigation/compensation measures for bats. Mitigation proposals are outlined below, these will be subject to agreement by CCW/WAG.

Impact Assessment

- 7.4 Given that the species of bat recorded on site are the most common in this area the roost is thought to have moderate importance locally but low importance regionally and nationally.

IMPACT	SCALE								
	Local			Regional			National		
	Low	Med	High	Low	Med	High	Low	Med	High
Disturbance		E		E			E		
Roost modification	E			E			E		
Roost loss		E		E			E		
Fragmentation and isolation	E			E			E		
Post-development interference		E		E			E		

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New Roosting Provision

- 7.5 In order to accommodate Brown long-eared bats a new loft space is to be created at the eastern end of the coach house. This loft will have minimum dimensions of 4 metres by 4 metres by 2 metres in height. Access for bats into the loft will be a combination of ridge tile access, bat access 'slate's and access at the gable.
- 7.6 On the interior of the bat loft two interconnecting 2FR bat tubes will be installed on the internal gable wall in order to create roosting conditions for brown long-eared bats similar to those lost behind the lintel of the bricked up window. A minimum of 2 timber bat boxes will also be installed on the interior of the loft in order to provide suitable roosting crevices for Common Pipistrelle bats.
- 7.7 Exterior lighting will be avoided in close proximity to the new roosting provision/entrance points as this may deter bats from using it.

Timing

- 7.8 Disturbance of the existing roost will commence in September/October or March/April to avoid the significant numbers of bats present during the summer and any hibernating bats.

Capture and Exclusion

- 7.9 Removal of roofing materials will be undertaken carefully, by hand, and under the supervision of the licensed bat worker. Where cavities in the brick and stone work (including the identified roosting crevices) are to be filled these will be checked by the licensed bat worker using a flexible endoscope immediately prior to being filled. Where the absence of bats cannot be assumed, one-way excluders will be used on the cavities over four consecutive nights in suitable weather conditions.
- 7.10 Any bats taken will be released as close as possible to the existing roosting site and only once all roosting potential in the coach house has been removed.

Post-Construction Monitoring

- 7.11 Monitoring of bat usage of the new roosting provision will take place for a minimum of 1 year following completion of works.

8.0 References

Mitchell-Jones, A.J, & McLeish, A.P. Ed. 2004. Bat Workers Manual
English Nature 2004. Bat Mitigation Guidelines.

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APPENDIX 1

Drawings:

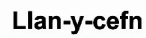
D/JWE/547/BS001 – Site Location Plan

D/JWE/547/BS002 – Bat Survey Results



 = Site Location

 JW ECOLOGICAL LTD
TITLE: Site Location Plan
SITE: Llan-y-Cefn Hall
NGR: SJ35644 41049
DRAWING NUMBER: D/JWE/547/BS001



Site: Coach House, Llan-y-Cefn Hall

Title: Bat Survey Results

KEY:

-  Roosting Common Pipistrelle bat
 Roosting Brown long-eared
 Emerging bat
 Light sampling
 Foraging bat
 Common Pipistrelle (Pipistrellus pipistrellus)
 Brown long-eared (Plecotus auritus)

Times - Common Pipistrelles:

- 1 - 21.40
- 2 - 21.47
- 3 - 21.50
- 4 - 22.10
- 5 - 21.40 onwards
- 6 - 21.51 onwards

Times - Brown long-eared

(emerging into barn, light sampling for a period then emerging from western gable):

- 1 - 22.24 to 10.52
- 2 - 22.28 to between 22.46 & 22.57
- 3 - 22.29 to between 22.46 & 22.57
- 4 - 22.31 to between 22.46 & 22.57
- 5 - 22.32 to between 22.46 & 22.57

GRID REFERENCE:

SJ 35644 41049

SCALE:

1:500

DRAWN BY:

JW

CHECKED BY:

JM

	DATE:
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27/06/10

DRAWING NUMBER:

D/JWE/547/BS002

ISSUE:	
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APPENDIX 2

Photographs

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	Photograph 1 – Coach house
	Photograph 2 – Interior of coach house
	Photograph 3 – Western gable of coach house
	Photograph 4 – Attached single storey outbuildings

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Photograph 5 – Detached single storey outbuilding



Photograph 6 – Ice house to east of coach house