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Barry Pump House

Bat Survey Report

September 2014

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DOCUMENT CONTROL

Barry Pump House Bat Survey				
Revision	Date	Prepared by	Checked by	Approved by
1.0	26 September 2014	Paul Hudson	Cari Ormerod	Paul Hudson

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Executive Summary

Site Location	Acer Ecology Ltd was instructed by WYG on behalf of DS Properties to conduct a survey of two buildings known as the Pump House in Hood Road, Barry (Ordnance Survey Grid Reference: ST112 675), for bats and nesting birds. The site is located within the boundary Vale of Glamorgan County Borough Council.
Existing Information	A preliminary roost inspection of the buildings has previously been undertaken by WYG which assessed both buildings as having low potential for supporting roosting bats.
Survey Methodology	The survey comprised one dawn re-entry survey of the buildings.
Results of Dawn Re-entry Survey	No bats were seen returning to roost within the buildings during the dawn re-entry survey. No bats were noted close to the building (i.e. within 20m) and activity around the site was very low.
Requirements for Additional Survey	None required.
Predicted Impacts of Development on Bats	<p>Based on the conclusion that bats are unlikely to be using the buildings as a roost site, no negative direct impacts on bats are anticipated.</p> <p>A potential minor indirect impact on bats could occur as a result of increased external lighting, however, given the low number of bats recorded during the survey such impacts are considered to be minimal.</p>
Licensing Requirements	None required.
Recommendations	<p>Detailed recommendations are given below:</p> <ul style="list-style-type: none">• Building works to the roof, fascias, soffits and bargeboards etc (if required) should take place from mid September to March, outside of the bird nesting season. Alternatively, any works which must necessarily be carried out during April to September will be preceded by a survey to ensure that no nesting birds are present. Any nesting birds present will be allowed to complete their nesting cycle undisturbed.• Building contractors will be warned of the possible presence of roosting bats and nesting birds, and of their protected status. It will be clearly understood that in the event of any bats (or occupied birds' nests) being found the contractor must halt works and advice sought from a bat consultant or Natural Resources Wales.• The services of an appropriately qualified and licensed bat consultant will be available on an 'on-call' basis at all stages of the works to deal with any unexpected encounters with bats or nesting birds. Contact details of such will be held on site. Acer Ecology Ltd. Will be happy to provide this support.

1. Introduction

1.1. Brief

Acer Ecology Ltd was instructed by WYG on behalf of DS Properties to conduct a survey of two buildings known as the Pump House in Hood Road, Barry (Ordnance Survey Grid Reference: ST112 675), for bats and nesting birds. The site is located within the boundary Vale of Glamorgan County Borough Council.

1.2. Site description

A description of the site is given in the daytime bat roost assessment letter produced by WYG which is included within Appendix 2.

1.3. Development proposals

The development proposals are for the change of use and conversion of the former pump house to A3, C3 and D2 class uses.

1.4. Legislation

1.4.1. Bats

All species of bat and their breeding sites or resting places¹ (roosts) are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats & Species Regulations 2010 (as amended). Works affecting bats are subject to licensing procedures by Natural Resources Wales. The legal protection and licensing procedures are summarised in Appendix 1.

1.4.2. Nesting birds

All wild British birds (while nesting, building nests and sitting on eggs), their nests and eggs (with certain limited exceptions) are protected by law under Section 1 of the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. Included in this protection are all nests (at whatever stage of construction or use) and all dependent young until such time as the nest is abandoned and the young have fledged and become independent.

As the proposed work has potential to adversely affect protected species such as bats and nesting birds, this study was commissioned to inform and support the proposals.

¹ Resting places are defined 'as the areas essential to sustain an animal or group of animals when they are not active' (Anon 2007).

1.5. Survey scope

The survey comprised the following:

- One dawn re-entry survey of the buildings.

1.6. Reporting

The aims of the report are to:

- Present a summary of the survey methods and results;
- Provide an assessment of the ecological significance of the findings;
- To identify the need, or otherwise, for further work if necessary so that the species of any bats found to use the building can be identified, and any roosts present characterized to enable suitable mitigation to be designed;
- To identify the legal and policy constraints relevant to bats and nesting birds which may affect the development;
- To provide an indication of potential licensing requirements and mitigation measures that may be required.

2. Survey methods

2.1. Desk study

No desk study has been undertaken.

2.2. Field study

2.2.1. Dawn re-entry surveys

The dawn re-entry survey commenced 2 hours before sunrise and continued for 15 minutes after sunrise. In accordance with best practice guidance surveys were only undertaken during nights with a minimum night time temperature above 8°C.

Surveyors were positioned to ensure full visual coverage of two buildings. Surveyors recorded all bats observed, as well as the time and direction of flight. Particular attention was given to detecting the presence of bats re-entering the buildings. In addition, bat activity in close proximity to the buildings was also recorded to help ascertain flight lines.

There were four surveyors involved in the survey: Paul Hudson MCIEEM², Angela Hudson³, Rod Hudson⁴ and Cari Ormerod⁵. All of the surveyors were equipped with Elekon Batlogger M detectors.

The start, end and sunrise times and weather conditions experienced during the surveys are presented in the table below:

Date	Sunrise/ Sunset Time ⁶	Start / End Time	Air Temperature (start – end)	Cloud cover (%)	Rain	Wind Speed (Beaufort Scale)
13/9/2014	6:45 hrs	4:48 – 7:00 hrs	14°C - 13°C	20%	Nil	1

2.3. Constraints

² Paul is an experienced bat worker and has been involved in bat work since 2001.

³ Angela has over five years experience of undertaking bat surveys primarily involving dusk emergence and dawn re-entry surveys.

⁴ Rod is a trainee bat surveyor over 100 hours of fieldwork. He has been undertaking regular surveys with Acer Ecology over the last two years.

⁵ Cari graduated with a degree in Biology from Cardiff University in 1995. She is an experienced bat worker with six years of bat survey experience.

⁶ Sunrise and Sunset times sourced from www.sunrisesunsetmap.com

2.3.1. Desk Study

A data search request to the South East Wales Biological Records Centre (SEWBRc) has not been undertaken as part of the desk-based assessment. It is considered best practice to undertake such a search and is recommended within BS 42020:2013⁷, the Bat Survey Guidelines (Hundt 2012), CIEEM's reporting standards, the Welsh Governments Technical Advice Note 5: Nature Conservation and Planning and in some local authority supplementary planning guidance on biodiversity including that of the Vale of Glamorgan County Council⁸. As such, the results of such a search may be required to fully inform the report before the planning application can be determined by the Planning Authority.

2.3.2. Field study – dusk emergence and dawn re-entry surveys

Timing

With reference to best practice guidance, the optimal time for undertaking dusk emergence and dawn re-entry surveys is between May and August, with ideally at least 1 survey visit undertaken in June or July. The surveys were undertaken in September 2014 which is slightly outside of the optimal survey period. However, Figure 2: Survey Seasons of the Vale of Glamorgan Supplementary Planning Guidance⁹ states that the optimal survey time is from May to mid September, and that surveys can extend from April until the end of September.

General temporal constraints

Any ecological survey can only identify what was present on site at the time it was conducted. Habitat usage by species can change over time, and if development works do not begin within two years of the date of this report, further survey work will be required to identify any change of use of the site by protected species.

⁷ Biodiversity. Code of practice for planning and development

⁸ http://www.valeofglamorgan.gov.uk/Documents/Living/Planning/Policy/Biodiversity_Development_SPG.pdf

⁹ Figure 2: Survey Seasons of the Vale of Glamorgan Supplementary Planning Guidance states that the optimal survey time is from May to mid September, and that surveys can extend from April until the end of September.

3. Results

3.1. Desk Study

No desk study has been undertaken.

3.2. Field study

3.2.1. Site description

A description of the site has been prepared by WYG as part of the bat roost assessment letter which is included within Appendix 2.

3.2.2. Activity surveys

A summary of the results of the dawn re-entry survey is presented below. The raw survey data is presented in Appendix 3.

Dawn re-entry survey

The dawn re-entry survey recorded no bats returning to roost in either of the buildings.

General Activity

A low level of bat activity was recorded during the survey, with a total of 2 species recorded: common pipistrelle and soprano pipistrelle. A single contact of a soprano pipistrelle bat was recorded flying to the north-west of the site. A single common pipistrelle bat was foraging to the north-east of the site over a period of 15 minutes.

4. Discussion

4.1. Bats –dawn re-entry survey

No bats were seen returning to roost within the buildings during the dawn re-entry survey. No bats were noted close to the building (i.e. within 20m) and activity around the site was very low. Therefore it is unlikely that the buildings support a bat roost.

4.2. Robustness of survey

The number of flight surveys undertaken (i.e 1) is considered adequate and in accordance with the Bat Conservation Trust's *Bat Surveys – Good Practice Guidelines* (BCT 2012) (see Appendix 4B).

4.3. Licensing requirements

No evidence of bat roosting was found during the survey and the buildings. There is considered to be no requirement to apply for a Habitats Regulations licence from Natural Resources Wales prior to works to the buildings.

5. Potential Impacts of Development

The potential impacts are based on the development proposals at the time of writing. This impact assessment may need to be reviewed and amended as necessary in light of any alterations to the development proposals.

5.1. Development proposals

The development proposals are for the change of use and conversion of the former pump house to A3, C3 and D2 class uses.

5.2. Potential impacts of development on bats

Direct impacts

Based on the conclusion that bats are unlikely to be using the buildings as a roost site, no negative direct impacts on bats are anticipated.

Indirect impacts

A potential minor indirect impact on bats could occur as a result of increased external lighting, however, given the low number of bats recorded during the survey such impacts are considered to be minimal.

6. Recommendations

Given the lack of any evidence of any use by bats, it is highly unlikely that there will be any impact on bats or their roosts as a result of the proposed works. However, it is not possible to rule out bat use entirely, and there is also a risk of an offence being triggered if active birds nests are present. The following recommendations are made:

- Building works to the roof, fascias, soffits and bargeboards etc (if required) should take place from mid September to March, outside of the bird nesting season. Alternatively, any works which must necessarily be carried out during April to September will be preceded by a survey to ensure that no nesting birds are present. Any nesting birds present will be allowed to complete their nesting cycle undisturbed.
- Building contractors will be warned of the possible presence of roosting bats and nesting birds, and of their protected status. It will be clearly understood that in the event of any bats (or occupied birds' nests) being found the contractor must halt works and advice sought from a bat consultant or Natural Resources Wales.
- The services of an appropriately qualified and licensed bat consultant will be available on an 'on-call' basis at all stages of the works to deal with any unexpected encounters with bats or nesting birds. Contact details of such will be held on site. Acer Ecology Ltd. Will be happy to provide this support.
- Consideration should be given to requesting a data trawl from the local record centre (SEWBReC) to source previous bat recordings in the area.

7. References

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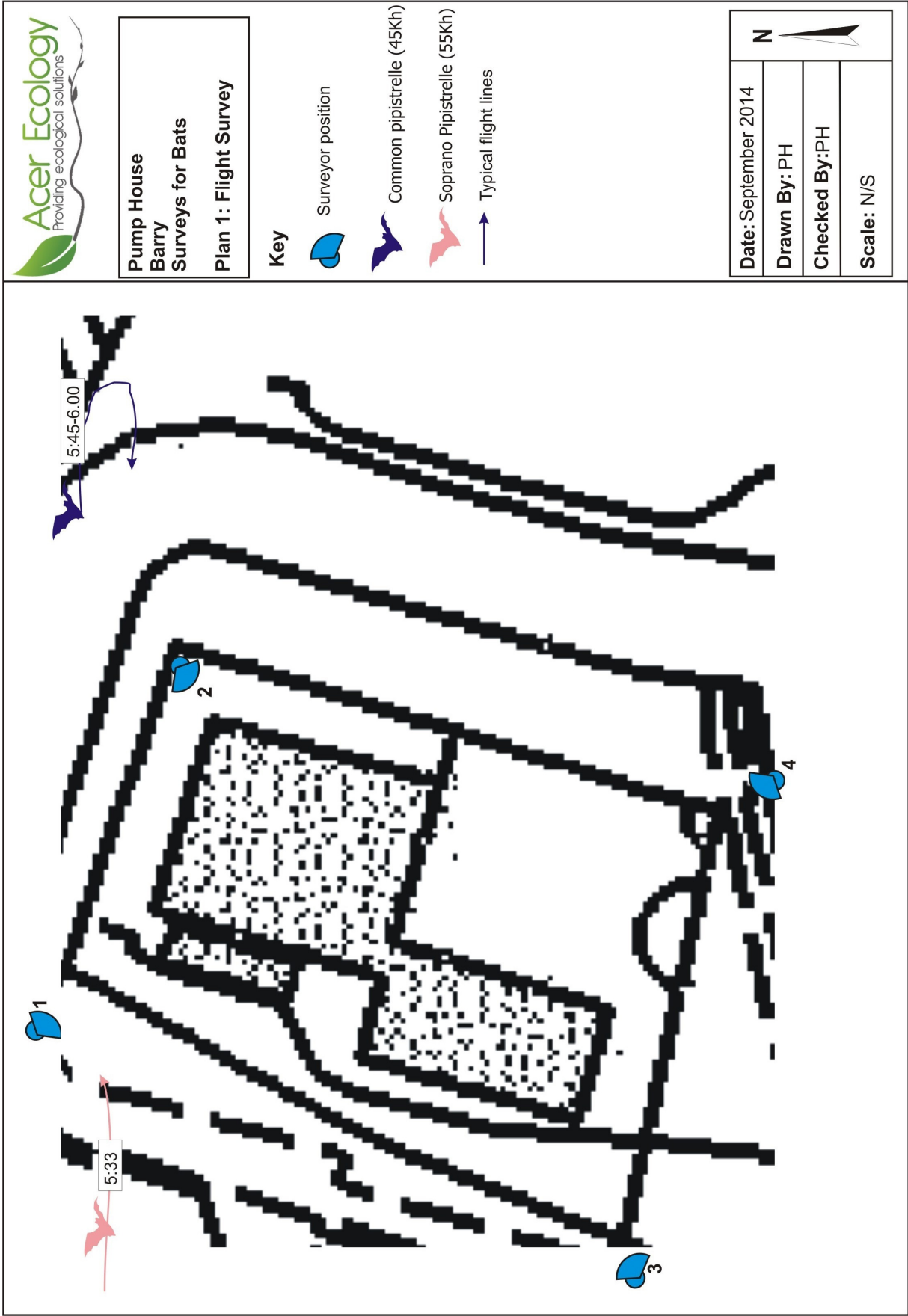
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UK Biodiversity Group (UKBG 1998-99) *Tranche 2 Action Plans (6 vols)*. English Nature.

Welsh Assembly Government (WAG 2001) *New Guidance for Local Planning Authorities on European Protected Species and Changes in Licensing Procedures*. Circular 23/2001.

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Plan 1: Flight Survey Results



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Appendix 1: Bat Ecology and Legislation Protecting Bats and Their Roosts

There are 18 resident species of bat found in the UK with additional species recorded as migrants or vagrants. All are small, nocturnal, flying, insectivorous mammals that are under considerable conservation threat and many having undergone massive population declines over the last century. Some species, such as pipistrelle bats still remain relatively common and widespread in the UK, while others, such as greater horseshoe bats, have an extremely restricted distribution.

Most bats will use a variety of roosts of different types throughout the year. The winter hibernation sites typically have cool, humid conditions with a stable microclimate and low levels of disturbance. Most British bats hibernate in caves, or artificial structures that fulfil such requirements such as mines, tunnels and cellars. Bats emerge from hibernation around late March or early April and move into transition or intermediary roosts. Around early May, female bats gather in colonies to form summer or maternity roosts, and it is here where they will give birth between late May and early July. A colony may consist of many individuals (sometimes hundreds of bats) of mixed age and sex. Roosts may be in a variety of situations, including tree holes, caves, buildings and other secure crevices or internal spaces with appropriate stable temperatures and humidity. Bats may change roost locations many times during the course of a year and colonies may split up and reform during this period. Males occupy solitary roosts in autumn, to which they attract females for mating.

All British bat species and any place used for shelter or protection, or a breeding site or resting place (their roosts) are fully protected under the amended Wildlife and Countryside Act 1981 through inclusion in Schedule 5. All bats are also protected under Regulation 41 (and listed on Schedule 2) of the Conservation of Habitats & Species Regulations 2010 (the 'Habitats Regulations') (as amended) which defines 'European Protected species of animal'. These pieces of legislation make it illegal to deliberately or recklessly:

- kill, injure or capture bats;
- disturb bats (whether it is a roost or not);
- damage, destroy, or obstruct access to bat roosts;
- possess or transport a bat or any part of a bat unless acquired legally;
- sell, barter or exchange bats or parts of bats.

Both the animals themselves and any structures or places used for shelter and protection, or as breeding sites and resting places, are fully protected against both intentional or unintended but 'reckless' disturbance or harm. The roosts are protected irrespective of whether bats are present at the time.

Natural Resources Wales can issue licences under the Habitats Regulations to permit otherwise prohibited acts where there is considered to be for imperative reasons of overriding public interest (primarily developments). Licences for certain activities can be granted providing:

1. the action is in the interests of public health or public, safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment.

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2. that there is no satisfactory alternative.
3. that the action proposed will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Conservation status is assessed as favourable when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long term basis as a viable component of its natural habitats,
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future,
- there is, and will probably continue to be, a sufficiently large habitat to maintain the population on a long term basis.

Failure to obtain a derogation would render any actions which cause harm or disturbance to bats illegal, including any activities which might be undertaken under a valid planning consent. The possession of planning consent does not alleviate or over-ride the requirements of the Habitats Regulations and is no guarantee that a derogation will be obtained. Natural Resources Wales take approximately 8 to 10 weeks to process licence applications.

Sites supporting internationally important populations of greater horseshoe, lesser horseshoe, barbastelle, Bechstein's and greater mouse-eared bat can be designated as Special Areas of Conservation (SACs) as set out under Annexes II and IV of the EC Habitats and Species Directive. This protection means that there is a statutory obligation to protect areas used by these species for foraging as well as for roosting in order to maintain them in favourable conservation status.

Seven of the UK species of bat (soprano pipistrelle, barbastelle, Bechstein's, noctule, brown long-eared, lesser horseshoe and greater horseshoe bats) have been listed on the UK Biodiversity Action Plans (2007) as conservation priorities. These species in addition to common pipistrelle are also listed as species of principal importance for the conservation of biodiversity in Wales under the Natural Environment and Rural Communities (NERC) Act 2006. The Government Circular (ODPM, 2005) which supports National Planning Policy Framework states that 'local authorities should take steps to further the conservation of habitats and species of principal importance through their planning function.' The habitats and species subject to this duty are those listed as priorities under section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

The unmitigated redevelopment of existing roost and foraging sites is an important factor in the decline in bat populations and national planning policy has been devised to halt or reverse this decline. Paragraph 98 of the Government circular 06/05 (ODPM, 2005) states that 'the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat'. Paragraph 99 also states that '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'.

Appendix 2: Daytime Bat Roost Assessment

WYG Environment

part of the WYG group



Ref: A088140

22nd September 2014

Dear Jon

RE: Pump House, Barry - Daytime bat roost assessment

Please find below a summary of the bat roost assessment undertaken at the Pump House site in Barry.

Background

WYG Environment was commissioned by WYG planning on behalf of DS Properties Ltd in August 2014 to undertake a daytime bat roost assessment at the Pump House, Hood Road, Barry, Vale of Glamorgan ('the site').

The site is located off Hood Road close to Barry Docks (OS grid reference: ST 112 675). The site itself comprises two buildings which formerly functioned as the pump house for Barry Docks. Habitats on site are typical of brownfield development and include bare ground, ephemeral, tall ruderal and some scrub vegetation.

The site is bounded by Hood Road to the south with feeder roads delineating the eastern and north boundaries. A relatively modern office complex with car park and landscaping is located off site to the west. Barry Docks lies approximately 100m south-east of the site and a railway line approximately 100m to the north. Residential and commercial properties lie beyond the boundaries to the east, north and west and brownfield areas lie off site to the south.

The principal objectives of this study were to undertake an internal and external bat roost assessment of the buildings to assess the suitability of the structures for roosting bats and to identify if any signs of bats were present. Based on the results of this bat roost assessment, potential ecological constraints and opportunities relating to the proposed development have been identified and recommendations for further work have been made as appropriate.

Proposed Development

The site is subject to a planning and listed building application for the change in use and conversion of the former pump house to A3, C3 and D2 class uses.

creative minds safe hands

DS Properties Ltd
A088140

WYG Environment Planning Transport Ltd Registered in England Number: 3050297
Registered office: Arndale Court, Otley Road, Headingley, LS6 2LJ

www.wyg.com



Daytime Bat Roost Assessment Methodology

An external and internal building inspection was undertaken on 15th August 2014. The buildings were visually inspected for their potential to support roosting bats using the criteria outlined in Appendix A. An external inspection of the buildings was undertaken to establish if there were any potential access points (e.g. gaps beneath soffits, lifted flashing, etc), which bats may use to enter/exit a roost. A full internal inspection of the building was then undertaken, where possible, whereby all accessible areas were searched for signs of bat activity (e.g. droppings, staining, feeding remains and individual bats). The buildings were then evaluated based on the guidelines outlined in the Bat Conservation Trust's (BCT) Bat Surveys: Good Practice Guidelines 2012.

Results

Two buildings of similar age and construction are present on site, one of which supports a chimney stack. The buildings are described below:

Building 1 (B1) is located to the south of the site. It is a brick structure and at least two storeys in height with a double pitched roof. It has recently been re-roofed with modern roof tiles and large skylights. The building appeared generally well sealed although gaps around the window hoarding and some crevices between the brickwork were noted. Internally B1 is light as a consequence of the skylight illumination. The ground level is subterranean with brick chambers and walls but lacking a ceiling. The roosting opportunities to bats are limited to some cavities within the brickwork and gaps within the window frames. No signs of bats (droppings, staining, feeding remains or bats themselves) were noted during the internal or external inspection of B1, but there were a number of internal inaccessible areas such as within wall cavities, in which bats could be located. The building is considered to be of low bat roost potential.

B2 lies to the north in a slightly elevated position and supports a large chimney stack. As with B1, the building is constructed with brick and at least two storeys in height with a double pitched roof, which has also been re-roofed with modern roof tiles and large skylights. The building appeared generally well sealed although gaps around the window hoarding were noted. The chimney structure was not accessed. Internally B2 is well illuminated and open plan. The internal structure appeared well sealed, with the exception of gaps around the window hoarding. No signs of bats were noted during the internal or external inspection of B2, it should be noted that access was not possible into the chimney structure and it is possible that bats could be present in this area. The building is considered to be of low bat roost potential.

Survey limitations



The details of this report will remain valid for a period of one year. Beyond this period, if works have not yet been undertaken, it is recommended that a new review of the ecological conditions is undertaken.

Conclusion

No signs of bats were found during the internal or external inspection. There were a number of internal inaccessible areas such as within wall cavities and chimney structure, in which bats could be located. Access points into the structures were limited to gaps around the window fixtures and beneath the hoarding and through missing gaps in some of the brickwork. Roosting areas within the buildings are minimal given the open interior and amount of light, but there are opportunities for crevice dwelling species such as pipistrelle within the wall cavities. Whilst the building is an urban location in Barry, there is some limited suitable bat commuting/foraging along the railway line to the north of the site and the dock area to the south.

Recommendations

In line with BCT guidance (2012) for buildings of low potential, one survey comprising an evening emergence and dawn return should be carried out to determine if bats are using the buildings as a summer roost and if so which species and how many are breeding/resting within the building. Electronic bat detectors and visual observation should be used to identify the roosting status of the buildings.

The survey should be carried out when bats are active during suitable weather conditions (dry, warm with little wind) between May to September, preferably within the optimal period of June to August.

In the event that a bat roost is discovered within the buildings on site, further surveys may be required to fully assess the roost status. Any future development which impacts the areas supporting the bat roost will need to be carried out under a European Protected Species licence, with working methods and suitable mitigation agreed by the licensing body Natural Resources Wales in advance of any works.

I trust this summary is useful, but should you require any further information, please do not hesitate to contact either myself or one of my colleagues.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Nancy Davies'.

Nancy Davies MCIEEM
Senior Ecologist
for and behalf of WYG

A handwritten signature in blue ink, appearing to read 'Chris Meddins'.

Chris Meddins MCIEEM
Associate Ecologist

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Appendix 3: Raw Data from Dusk Emergence/Dawn Re-entry Surveys

Surveyor No 1: Paul Hudson in north-westernmost position.		
Time	Species	Activity Notes
5:33	Soprano pipistrelle	Brief contact flying in easterly direction to the north of the site.
Note: No bats were recorded returning to roost within the building		

Surveyor No 2: Rod Hudson in north-easternmost position.		
Time	Species	Activity Notes
5:45-6:00	Common pipistrelle	Foraging to the north-east of site.
Note: No bats were recorded returning to roost within the building		

Surveyor No 3: Cari Ormerod in south-westernmost position.		
No bats recorded during survey		

Surveyor No 4: Angela Hudson in south-easternmost position.		
No bats recorded during survey		

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Appendix 4A: Features for assessing the value of buildings for roosting bats¹⁰

Likelihood of bats being present	Feature of the building or built structure and its location
Increased likelihood	• Pre 20th century or early 20 th century construction.
	• Agricultural buildings of traditional brick, stone or timber construction.
	• Large and complicated roof void with unobstructed flying spaces.
	• Large (>20 cm) roof timbers with mortise joints, cracks and holes.
	• Entrances for bats to fly through.
	• Poorly maintained fabric providing ready access points for bats into roofs and walls but at the same time not being too draughty and cool.
	• Roof warmed by the sun, in particular south facing roofs.
	• Weatherboarding and/or hanging tiles with gaps.
	• Low level of disturbance by humans
	• Bridge structures, follies, aqueducts and viaducts over water and/or wet ground.
	• For rarer species, building or built structure is located in the core area of the distribution.
	• Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year.
	• Buildings or built structures close to good foraging habitat, in particular mature trees, parkland, woodland or wetland, especially in a rural setting.
	• Building located close to known roosts.
Decreased likelihood	• Modern, well maintained buildings or built structures that provide few opportunities for access by bats.
	• Small cluttered roof space.
	• Buildings and built structures comprised primarily of prefabricated steel and sheet materials.
	• Cool, shaded, light or draughty roof voids.
	• Roof voids with a dense cover of cobwebs and no sections of clean ridge board.
	• High level of regular disturbance.
	• Highly urbanised location with few or no mature trees, parkland, woodland or wetland.
	• High levels of external lighting

APPENDIX 4B: MINIMUM NUMBER OF FLIGHT SURVEYS REQUIRED (HUNDT 2012 ADAPTED)

High roost potential	Low to moderate roost potential	Low roost potential	Negligible roost ¹¹ potential
3 dusk emergence and/or pre-dawn re-entry surveys during May to September (Optimum period May – August).	2 dusk emergence and/or pre-dawn re-entry surveys during May to September (Optimum period May – August).	1 dusk emergence and/or pre-dawn re-entry survey during May to September (Optimum period May – August).	No flight surveys or mitigation required.
<p>If bat droppings are discovered during the building inspection or bats are recorded emerging from or returning to the building during flight surveys, the survey schedule should be appropriately adjusted to increase the survey effort so that sufficient information can be collected.</p> <p>Note: Two surveys carried out within the same 24 hour period constitute 1 survey</p>			

¹⁰ Table 8.2 in Hundt (2012)

¹¹ Negligible is defined as so small or unimportant or of so little consequence as to warrant little or no attention