

5.3 Dusk Emergence & Dawn Re-Entry Surveys

Date	From	To	Temp	Weather	Species Recorded	Comment
19/08/2015	04:25	05:55	13.5°C	80-90% cloud, slight to no breeze, no rain	(1)	Activity was limited only to a brief forage by a single Common Pipistrelles 05:16. At 05:38 a common Pipistrelle bat entered a roost on No.3 Craven road, the south facing elevation in peak of gable end.
22/09/15	18:45	20:30	16 °C	Cloudy with a light westerly wind, showers earlier in evening.	(1),(2)	A single pass by a Common Pipistrelle bat was heard at 19:30 across the car park of the site. No bats were seen leaving the buildings on the site. A brief pass by a Noctule bat was recorded at 19:45.
28/09/15	18:15	20:20	15 °C	Clearing night, becoming still.	(1)	At 19:27 a single pass by a Common Pipistrelle bat. No bats were seen leaving the buildings on the site.

Table 2: Bat Survey Summary of Data * (1) Common Pipistrelle bat (*Pipistrellus pipistrellus*)
(2) Noctule bat (*Nyctalus noctula*)

5.4 Data Analysis

Ultrasonic survey data was collected throughout the survey period using three individually placed Anabat SD2 recording equipment.

All recording devices were placed externally surrounding the building; all recordings were analysed through Analook software and screenshots are available in Appendix 3.

Species positively identified from a combination of visual sighting, flight patterns and data analysis are recorded within Table 2 above.

6.0 Analysis of Results

During the external survey undertaken on 1st July 2015, several potential entry/exit points were identified within the two buildings along the frontage of the site, No. 3 and No. 5. Access was later gained internally, including a loft inspection of the buildings, which found no direct evidence of bats.

A single dawn and two dusk surveys were undertaken to ascertain whether bats were using the buildings for roosting and the level of foraging/commuting activity across the site. On the first survey on 19th August 2015 a small day/night roost of Common Pipistrelle bat was identified, which was observed entering No. 3 at the top of the gable along the frontage of the site. No bats were seen entering/exiting the other buildings or the trees on the site. Only the occasional single passes by Common Pipistrelle bats and on one occasion a Noctule bat was recorded during the previous and remaining surveys.

In addition to this, Three Anabat SD2 recording equipment units were placed to the north, east, south and west of the buildings on site. All recordings and subsequent screenshots (Appendix 3) were taken from the Anabat units placed around the site.

Impact Assessment

The development is expected to have a negative impact on roosting bats within No. 3. Entry/exit points were identified during the site surveys at various points around the roof of the building. A European Protected Species licence will therefore be required from Natural England after full planning permission has been gained due to the loss of a bat roost by the proposed works. The licence should be prepared at a time when a detailed schedule of works is available to ensure that all works that will have a potential impact on bats are covered under the licence and appropriate mitigation measures are specified. A method statement will be prepared as part of the licence application and all works to the roof and loft spaces (and in the vicinity of these areas) will need to be supervised by a suitably qualified ecologist. Included in the EPS licence there should also be provision to reduce the impact of the development by providing alternative roost sites within the new development.

There will be no loss of potential roost sites in trees as no suitable trees are to be felled. Additional bat boxes should be incorporated onto the boundary trees to offset the lack of suitable tree roosting sites and on the building to provide further alternative roosting opportunities where the buildings have been removed. Additionally a suitable lighting scheme should be designed for the exterior lighting to allow areas around the tree boundaries to remain unlit during the hours of darkness; also all exterior lighting should be on a suitable PIR timer only activated by large moving objects (NOT BATS).

7.0 Recommendations

A thorough survey, internally/externally and using ultrasonic detection equipment with data analysis, was made of the buildings scheduled for demolition at 3-5 Craven Road by experienced ecologists.

The temporary single storey buildings on site are classified as having negligible bat roost potential (NBRP) and the two three storey buildings along the frontage (No. 3 and No. 5) are classified as having Moderate Bat Roost potential (MBRP). These buildings had wooden soffits, weather boarding and red tiles and no evidence was found during the internal inspection of the buildings.

Four experienced surveyors were used for the dusk and dawn surveys undertaken on 19th August 2015, 22nd September 2015 and 28th September 2015 using BatBox Duet Detectors, Wildlife Acoustic EM3+ and Anabat SD2 recording devices. During the survey very limited foraging and commuting activity was recorded by Common Pipistrelles (*Pipistrellus pipistrellus*) and a single Noctule (*Nyctalus noctula*) bat. A single Common Pipistrelle was seen entering the building during the dawn survey on 19th August 2015. At no time were bats seen emerging from the trees or any of the other buildings.

Based on the findings of the surveys the following recommendations have been made:

1. A European Protected Species licence will be required from Natural England once full planning permission has been granted, due to the loss of a bat roost within the front gable of No. 3 by the proposed works. The licence should be prepared at a time when a detailed schedule of works is available to ensure that all works that will have a potential impact on bats are covered under the licence and appropriate mitigation measures are specified. A method statement will be prepared as part of the licence application and all works to the roof and loft spaces (and in the vicinity of these areas) will need to be supervised by a suitably qualified ecologist.
2. Included in the EPS licence there will also be provision to reduce the impact of the development by providing alternative roost sites within the new development.
3. Bat and bird boxes are required within the new development design wherever possible, located on or integrated into the buildings. In this instance, 6 x Bat boxes will be included within the new development design on buildings and wherever possible, on retained trees. Boxes must be situated between 4m and 6m above ground level, with entrances facing North, South-east and South-west to allow for use all year round. Assistance will be engaged from an ecologist in the design and location of bird/bat boxes. A suitable planting scheme is also required, including native and species beneficial to wildlife with native trees and shrubs used to landscape areas surrounding all buildings.
4. A suitable lighting scheme will be incorporated to prevent light pollution into the garden areas after dark with suitable PIR timers only activated by large moving objects (NOT BATS).

8.0 References

British Standards Institute (BSI) (2013). BS42020 - Biodiversity Code of Practice for Planning and Development. BSI, London.

Hundt (2012). *Bat Surveys – Good Practice Guidelines (2nd Edition)*. Bat Conservation Trust: London.

Institute of Ecology and Environmental Management (IEEM) (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom*. Available at: http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/TGSEcIA-EcIA_Guidelines-Terrestrial_Freshwater_Coastal.pdf.

Joint Nature Conservation Committee (JNCC) (2004). *Bat Workers Manual* (3rd Edition). JNCC: Peterborough.

Natural England (2014). *Habitats and Species of Principal Importance in England*. Available at: <http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

Mitchell-Jones, A.J. (2004). *Bat Mitigation Guidelines*. English Nature: Peterborough.

Wray, S., Wells, D., Long, E. & Mitchell-Jones, T. (2007). *EcIA: Specific Issues Associated with Bats*. Presentation at the Mammal Society/Zoological Society of London/IEEM Symposium on Advances in EcIA for Mammals.

Websites for access to Full Legislation and Policy Text:

Conservation of Habitats and Species Regulations 2010 (as amended):
<http://www.legislation.gov.uk/ukxi/2012/1927/contents/made>

Countryside and Rights of Way Act 2000:
<http://www.legislation.gov.uk/ukpga/2000/37/contents>

Habitats Directive:
http://ec.europa.eu/environment/nature/legislation/habitatsdirective/index_en.htm

National Planning Policy Framework:
<http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf>

Natural Environment and Rural Communities Act 2006:
<http://www.legislation.gov.uk/ukpga/2006/16/contents>

UK Post-2010 Biodiversity Framework:
<http://jncc.defra.gov.uk/page-6189>.

Wildlife and Countryside Act 1981 (as amended):
<http://www.legislation.gov.uk/ukpga/1981/69>

APPENDIX 1

Surveyor Location and Flight Lines

Location of Surveyors and Flight Lines 19/08/15



1	Surveyor 1	P May
2	Surveyor 2	P Hiscocks
3	Surveyor 3	J Jones
4	Surveyor 4	V Telford
5	Anabat Locations	
★	Roost Location	
	Bat flight lines	Common Pipistrelle

Location of Surveyors and Flight Lines 22/09/15



1	Surveyor 1	P Hiscocks
2	Surveyor 2	V Telford
3	Surveyor 3	P May
4	Surveyor 4	J Jones
5	Anabat Locations	
	Bat flight lines	Common Pipistrelle

Location of Surveyors and Flight Lines 28/09/15



1	Surveyor 1	P May
2	Surveyor 2	P Hiscocks
3	Surveyor 3	V Telford
4	Anabat Locations	
	Bat flight lines	Common Pipistrelle

APPENDIX 2

Bat Roost Potential Assessment Results of Buildings

Surveyor	Philip May	Case Ref	E2108131515
Site Address	3-5 Craven Road, Reading, RG1 5LF	Survey Date	28/09/15
Building Type	NHS Offices	Roof Shape	Multi-Pitched and flat roof sections
Approximate Construction Date	1900's	Roof Cover	Clay tiles and waterproof membrane
Number of Stories	3	Roof Condition	Clay tiles are rounded and do not interconnect fully leaving suitable entrance gaps underneath. Despite this the roof is generally in good condition.
Number of Chimneys	5 and a dove cot feature	Soffits & Condition	Some gaps where soffits and exposed eaves have rotted, where they are present and the cladding in the gables have small holes.
Walls & Condition	All in excellent condition	Windows & Condition	Wooden frames and occasional PVC replacements– all in relatively good condition.
Signs of Bats	None	BRP	Moderate
Additional comments: Due to the ages of the building, the clay tiles have become warped over time leaving gaps between them, which are ideal entrances directly into the loft space. There are also some hanging tiles and timber cladding on the lower rear extensions.			
Building Plan			

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Roost
entry point
identified
during
surveys

Eastern elevation of No. 5



Rear and eastern elevation of No. 3



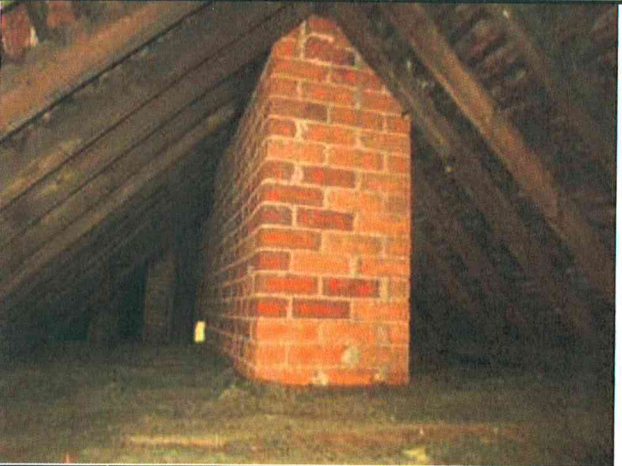
Rear elevation of No. 5



Frontage of No. 3 and location of bat entry point



Main Loft of No. 5



Main Loft of No. 3



Central roof area linking the two buildings



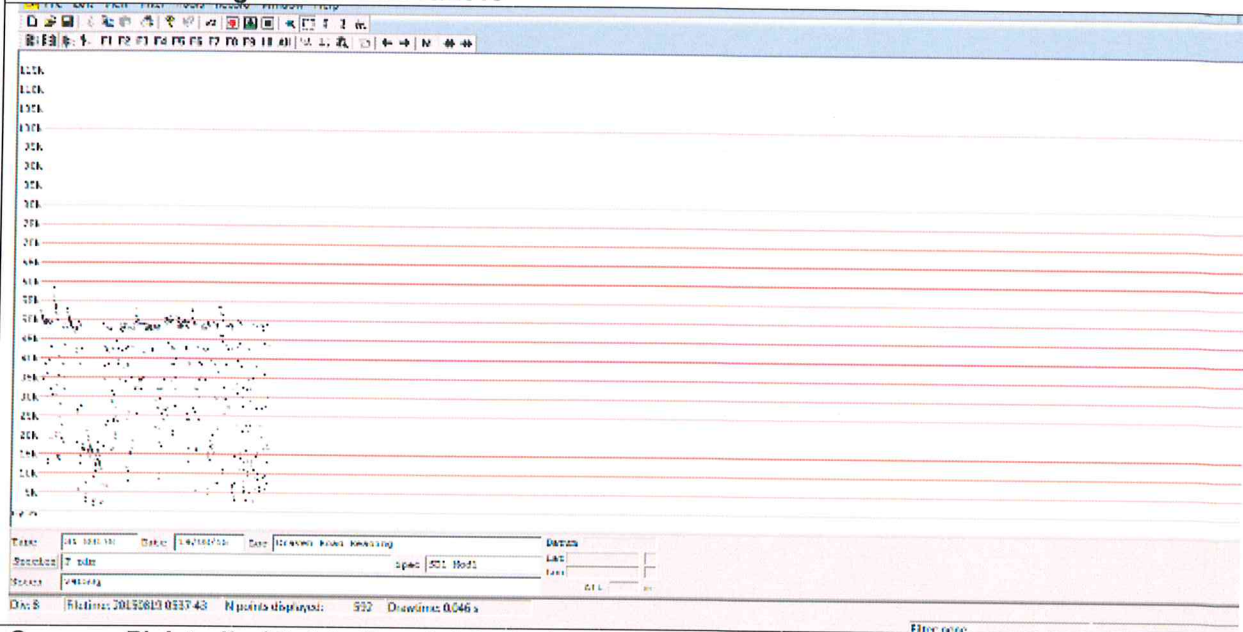
Detail of roof and front gable at No. 5



APPENDIX 3

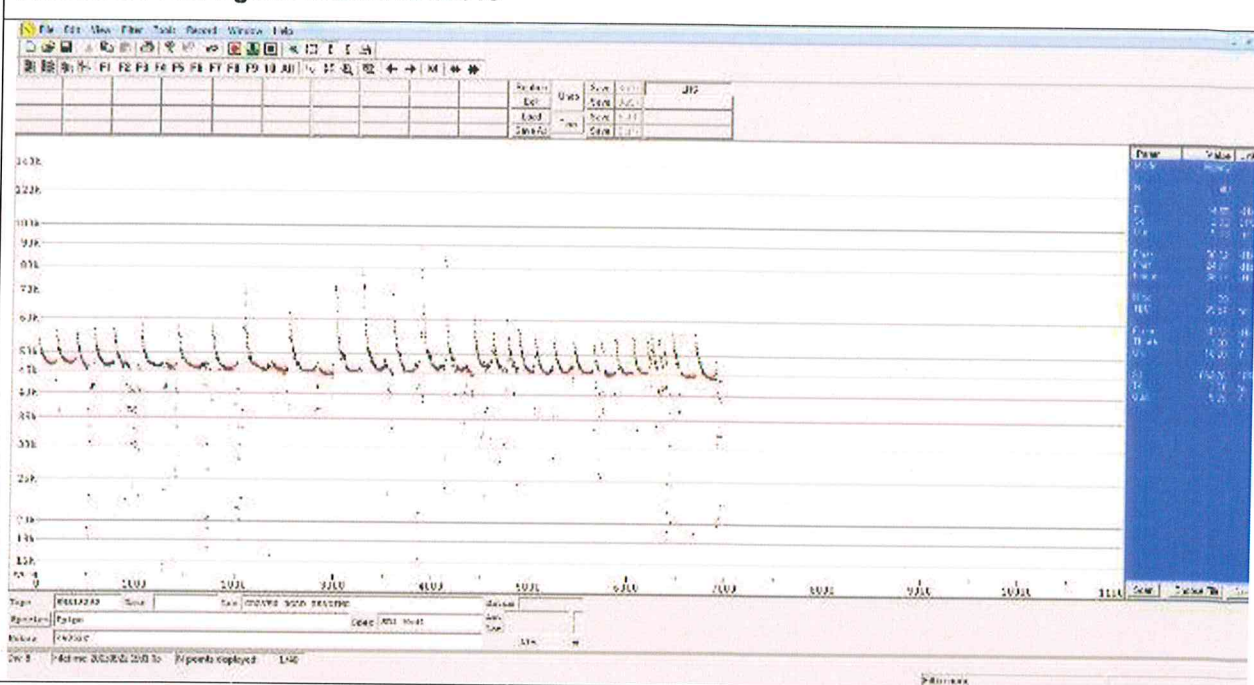
Ultrasonic Data Analysis

Anabat SD2 Sonogram Dawn 19/08/2015

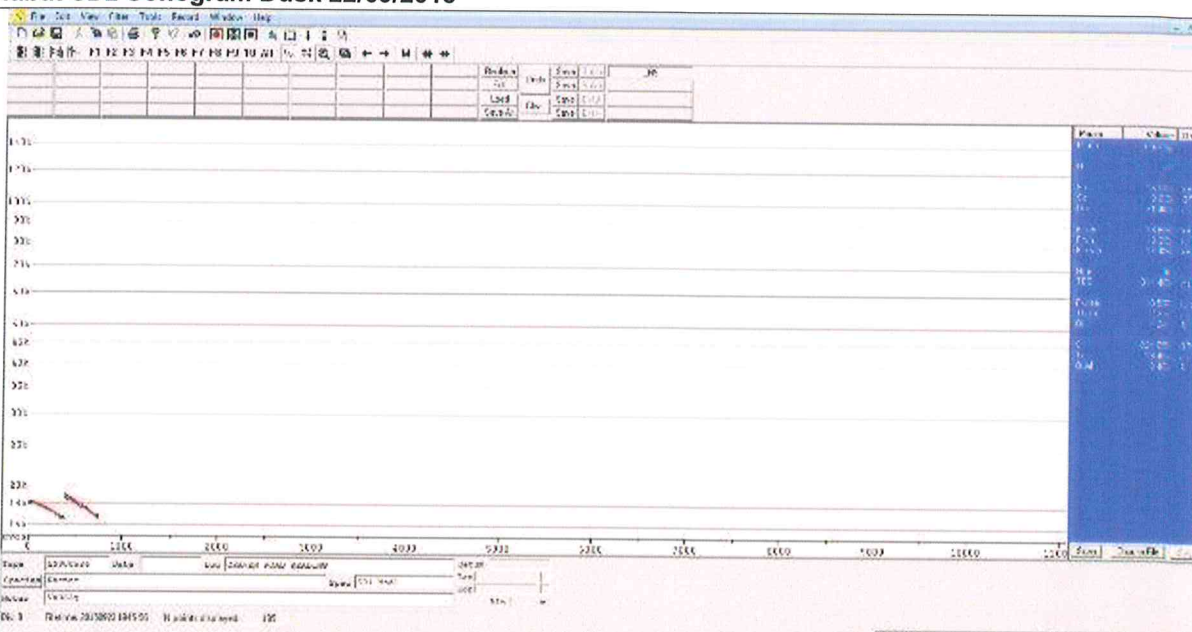


Common Pipistrelle (*Pipistrellus pipistrellus*)

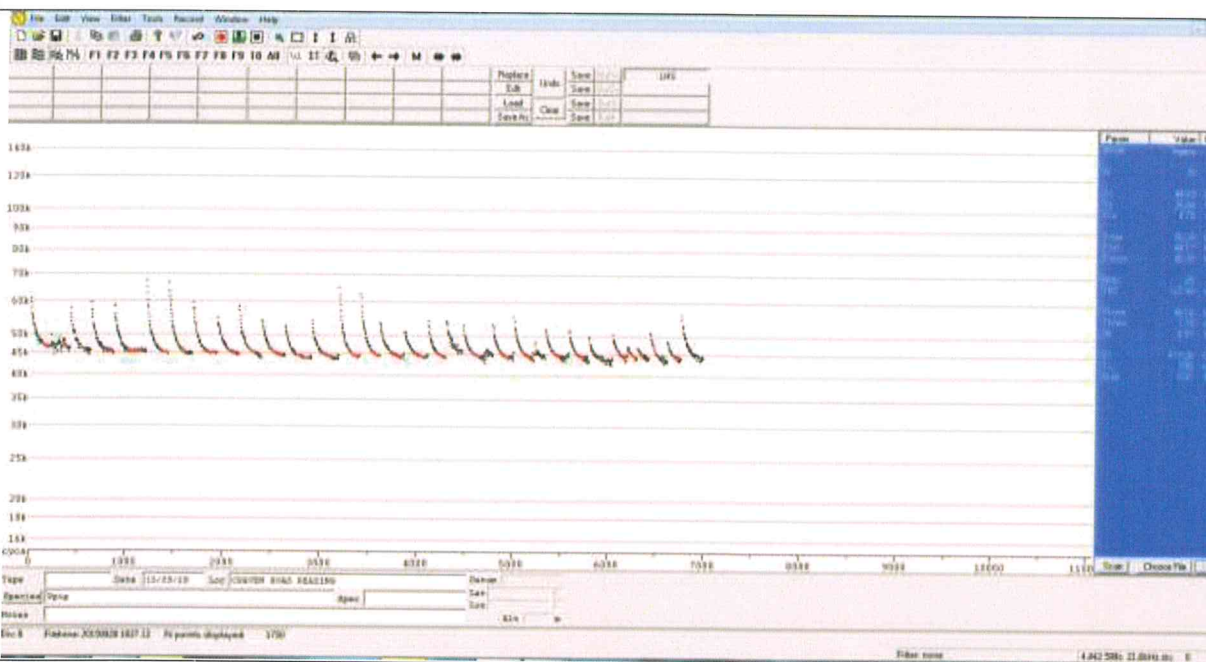
Anabat SD2 Sonogram Dusk 22/09/2015



Common Pipistrelle (*Pipistrellus pipistrellus*)



Noctule Bat (*Nyctalus noctula*)



Common Pipistrelle (*Pipistrellus pipistrellus*)