



Urban Tree Experts

BS5837 – Tree Surveys – Ecological Consulting

BAT SURVEY AT THE WIRE MILL SOUTHCOTE MILL



**Prepared for:
Mr G Puddephatt
Southcote Mill
Southcote Farm Lane
Reading
RG30 3DZ**

16th September 2015

Ref: SPH/PBS-01/04.10



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Unit H Bridge Farm
Reading Road
Arborfield
Reading
Berkshire RG2 9HT
Tel: 0118 976 2902
Mobile: 07557 982091
Email: info@batsurveys-uk.com

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Executive Summary

Urban Tree Experts was commissioned by Mr G Puddephatt to carry out a preliminary bat survey and emergence survey at the former wire mill, Southcote Mill, Southcote Farm Lane, Reading, RG30 3DZ. This is to support a planning application to re-instate the existing derelict building creating a single story habitable dwelling with a mansard roof and dormer windows. This report confirms the findings of the surveys, completed by an experienced, licensed bat ecologist in accordance with current best practice guidance (Hundt et al, 2012) where possible, and outlined any ecological constraints or issues with the proposed works.

No statutory or non-statutory protected features of ecological significance were present within the site boundary and there are no statutory protected features within a 1km radius of the site.

The former wire mill is derelict, has no roof and the site is overgrown with ivy and self-seeded trees and shrubs. The ivy and dilapidated stonework may provide roosting opportunities for crevice dwelling bats. The surrounding habitat provides good foraging opportunities and the old wire mill is considered to be of low potential for bat roosting, therefore a single emergence survey was undertaken in accordance with current best practice to determine if bats were using the features described above.

No evidence of bats present, or signs of historic use were found during the surveys. In the absence of direct signs of bat presence, the potential of the building to support bats was assessed.

The former wire mill is considered to have a low potential to support roosting bats, and there is a low risk of bats using the features present. The building therefore receives no ecological protection under wildlife legislation, and there are no ecological constraints to the proposed works.

Bats are highly mobile wild animals and may be encountered within a building following a negative survey result. If bats are found during demolition works then all works should stop, Simon Holmes (01189 762902) or Natural England (0845 601 4523) should be contacted for advice, and that advice acted upon.

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The validity of this report ceases at the prescribed time limit or after one year from the site inspection, or if the site conditions change due to unspecified works that affect the site whichever is the sooner.



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1. Introduction

1.1 Instruction

Urban Tree Experts were instructed by Mr G Puddephatt to carry out a preliminary bat survey and one emergence survey at the former wire mill, Southcote Mill, Southcote Farm Lane, Reading, RG30 3DZ, to support a forthcoming planning application to Reading Borough Council (RBC).

1.2 Survey scope

- The survey aimed to establish baseline data on the presence/absence of bat species at the site, and to assess the potential of the building to support bats.
- The outcome of the survey has been used to inform and specify whether further surveys are required, or to establish the need for and extent of any mitigation or compensation measures required as part of the proposed works.
- For the purposes of this survey, the site boundary is defined as the old wire mill building footprint.

1.3 Proposed Works

The survey was commissioned in connection with a planning application to RBC that proposes to re-instate the current derelict building creating a single story habitable dwelling with mansard roof and dormer windows.

1.4 Surveyor Background and Experience

The preliminary bat survey and report were completed by Simon Holmes CEnv. He holds a Class 2 Bat Licence (No.CLSO03440). He has 26 years' experience of carrying out bat surveys and bat conservation work and has attended numerous training courses on bat surveys and mitigation, run by the Bat Conservation Trust, Wildwood Ecology and local bat groups.

Elaine Charlson: Elaine has been surveying bats for two years and has received training in surveying techniques, bat detector use, bat biology, identification acoustic monitoring and echolocation analysis.

2. Legislation and Planning Policy

2.1 Legislative Background

All species of British bat are protected under the Wildlife and Countryside Act 1981, as amended, and also receive additional protection via The Conservation of Species and Habitats Regulations (2010). Under this legislation it is an offence to kill or injure a bat or interfere with any roosting or resting site. A bat roost is interpreted as "any structure or place used for shelter or protection" whether or not bats are present at the time. A summary of the main legislation and planning considerations are included at Appendix 1.



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3. Site Location and Description

3.1 Site Location

The property is located at Grid Reference SU 69272 - 71233, see Ordnance Survey (OS) extract at Figure 1. An overview of the immediate area surrounding the property is set out in Figure 2, courtesy of Google Maps.

Figure 1. The wire mill, Southcote Mill, OS extract.

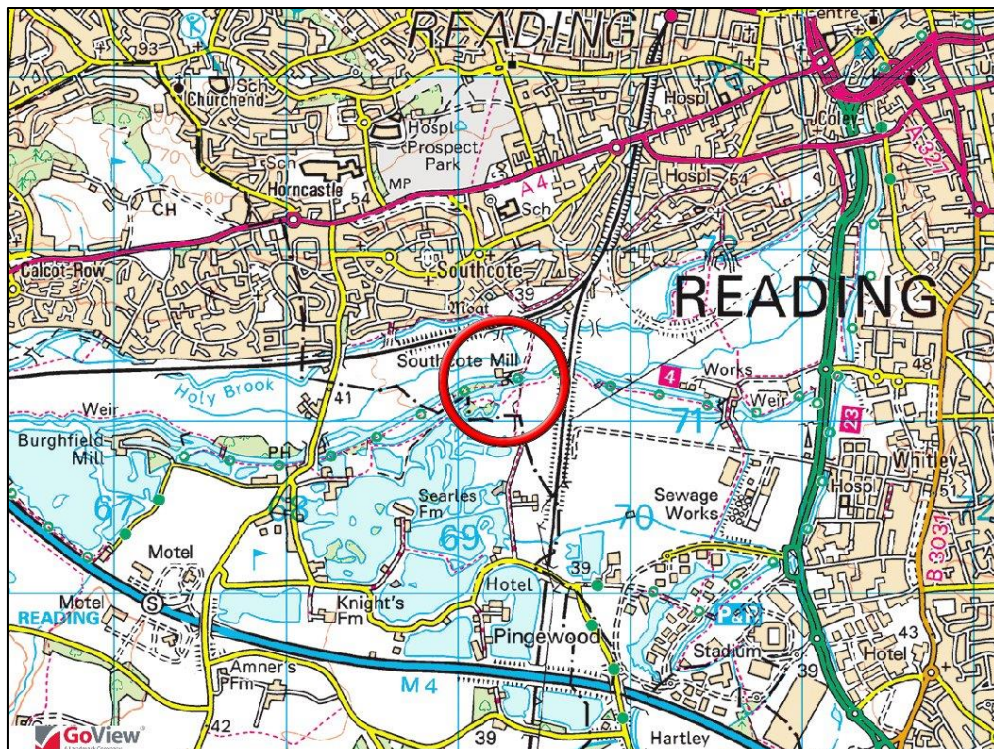


Figure 2. Area surrounding the wire mill, Southcote Mill, highlighted.





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3.2 Site Description

The application site is the former wire mill and is situated on an island opposite Southcote Mill, see Figured 3 and 4.

Figure 3. Exterior of the former wire mill, Southcote Mill. 16.09.15.



Figure 4. Interior of the former wire mill, Southcote Mill. 16.09.15.





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4. Survey Methodology

4.1 Pre-Survey Data Search

Due to the urbanised area, the small size of the proposed development and the very local impact that may occur, no data was sought from local biodiversity record centres.

The property is located on an island in the River Kennet. To the north are flood meadows which give way to Southcote, a dense urban housing conurbation of south Reading. To the south and east are former flooded gravel quarries. The site habitat has continuous links to adjacent watercourses and numerous flooded gravel pits along the M4 motorway between junctions 11 and 12.

4.2 Daylight Survey

A preliminary bat survey of the wire mill, Southcote Mill, Southcote Farm Lane, RG30 3DZ was carried out by Simon Holmes on Wednesday 16th September 2015 at 14.00 hrs. Equipment used included a high powered torch, a digital camera, binoculars, recording endoscope and thermal scope.

During this survey an internal and external inspection of the building was carried out to identify any signs of occupation by bats and features that could offer potential roosting sites following standard survey guidelines.

Features investigated included:

- Construction of the building – stone work and brick work etc
- Building condition – structure of the walls
- Internal conditions – microclimate stability, draughts etc
- Access points – potential entry and exit points for bats, crevices in stone and dense ivy
- Roosting points – gaps under the timber wall plate and the ivy clad walls

Field signs that would indicate the presence of bats were searched for. These included:

- Bat droppings on the floor and walls of the building
- Feeding remains (particularly butterfly and moth wings)
- Evidence of urine and/or oily staining around possible roost entrances
- Odour can sometimes suggest the present of bats
- Squeaking and chattering can reveal bats roosting in the walls or ivy



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4.3 Emergence Survey

One emergence survey was conducted on Sunday 4th October 2015. The survey was at a time of year when bats are most likely to be present. Weather conditions were suitable for the bat survey, being conducted during warm weather and when bats were likely to be active. Elaine Charlson assisted Simon Holmes during the emergence survey.

The surveyors were stationed as indicated in Figure 5, to ensure that possible emergence areas (areas of concern) could be observed.

During the surveys bat activity was also monitored using BatLogger M bat detectors. Both detectors were fitted with SD cards for recording bat activity, allowing for later analysis with Kaleidoscope Pro 3 software.

The weather conditions and surveyor details for the survey can be found in Table 1 included on the next page.

Figure 5 – The wire mill, Southcote Mill. Surveyor locations during the emergence survey.





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Table 1

Surveyor details and weather conditions for bat activity survey conducted at the wire mill, Southcote Mill.

Date:	4 th October 2015		
Survey Type	Dusk survey		
Surveyors and locations	Simon Holmes (A) Elaine Charlson (B)		
Weather Conditions (Start)	18.6°C, 100% cloud cover, Dry, Beaufort 0 Humidity 68%		
Sunset/Sunrise	18:32		
Start time	18:15		
Finish Time	20:20		
Weather Conditions (Finish)	14.3°C, 100% cloud cover, Dry, Beaufort 0 Humidity 86.6%		

4.4 Constraints

Full access to the site during the visit was made possible by the client. The daylight inspection was constrained due to the dense ivy growth and the self-seeded trees and shrubs. The emergence survey was undertaken at a time when bats are known to be active and there were no constraints to the emergence survey.

5. Survey Findings

5.1 External Inspection

The external features of the building were examined for signs described in section 4.2. What remained of the windowsills, exposed features around the windows, walls and doors were inspected for any evidence of bat droppings or staining.

The property inspected is of a red brick construction with external a stone facade. There was no roof. Aside from the ivy other features which may provide roosting features for crevice dwelling species included missing mortar and gaps where the timber wall plate rests on the walls, see Figure 6.

Figure 6. The wire mill, Southcote Mill, timber frame on top of walls. 16.09.15.





During the external survey no sign of historic bat use was found.

5.2 Internal Inspection

An internal inspection of the building was carried out, see Figure 7.

Figure 7. Interior of the wire mill, Southcote Mill. 16.09.15.



The interior was inspected with close focusing binoculars and a thermal scope, all visible areas of the brick work were inspected and no signs of bats were observed.

5.3 Emergence survey

During the dusk survey no bats were seen emerging from or returning to the building to roost. In total three different species were recorded foraging within the vicinity of the building and commuting across the site. Bat passes were good around the site, however most activity was centred approximately 100 metres west along the canal, a simple summary of the bats recorded can be seen in Table 2 on the next page and the most frequently used flight paths are shown in Figure 8 on the next page.



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Table 2. Bat recording/observations in the vicinity of the wire mill. 04.10.2015

Date	Surveyor Position	Time	Seen	Heard	Species	Comments
04/10/2015	A	18.52 to 18:56	Y	Y	55 pip	First bat seen flying along canal path from west to east, in transit
		18.58	Y	Y	45 and 55 pip	Ditto
		19.01	Y	Y	45 and 55 pip	Ditto
		19.03	Y		45 pip	Foraging along canal and towpath
		19.04 to 19.38	Y	Y	45 and 55 pip	Continuous foraging activity at least 5 bats foraging over the canal 75 to 100m to the west. Seen through thermal imaging scope.
		19.39 to 19.42	Y	Y	45 pip	4 to 5 bats constantly calling/foraging from the west. Bats often foraging over ivy on building and around mature tree to the east. Light disturbance from Southcote mill restricts foraging on canal adjacent.
		19.43 to 19.47	N	Y	45 pip	Ditto.
		19.48				Pedestrians with torches disturb foraging to the west
		19.51	N	Y	55 pip	Foraging
		20.20				Finish
04/10/2015	B	18:56 to 19:32	Y	Y	45 and 55 pip	Constant foraging over building and round trees, later over canal and down towpath to east
		19.36	N	Y	Daubenton	Foraging near lock
		19.43	N	Y	Daubenton	Ditto
		19.46 to 20.17	N	Y	45 and 55 pip	Continuous foraging activity at least 2 to 3 bats foraging over the canal between lock gate and pedestrian bridge to the east. Seen through thermal imaging scope.
		20.15	N	Y	Daubenton	Forages near lock
		20.19	N	Y	55 pip	Foraging
		20.20				Finish

Figure 8. Commonly used bat flight paths at the wire mill, Southcote Mill. 04.10.15.





6. Evaluation

The bat roost potential of the features within the site have been assessed with reference to the criteria laid out in the Bat Mitigation Guidelines (Mitchell-Jones, 2004), with any relevant features **highlighted in bold**.

The likelihood of bat roosts being present will be higher where structures:

- **are of a pre-20th Century construction;**
- **are in a lowland rural setting;**
- **have woodland, mature trees, species-rich grassland and/or water nearby;**
- have large dimension roof timbers with cracks, joints and holes;
- **have numerous crevices in stonework and structures;**
- have an uneven roof covering with gaps, though not too draughty;
- have hanging tiles or roof cladding, especially on south-facing walls;
- have a roof warmed by the sun;
- **are disused or little used; largely undisturbed; or**
- provide appropriate hibernation conditions, such as abandoned mines, tunnels, kilns, or fortifications;
- Recent or historical records of bats on the site, or bat roosts in the general area.

The likelihood of bat roosts being present will be lower where structures:

- are in an urban setting with little green space;
- **are subject to heavy disturbance (constant movement due to draughts and noise, also unstable microclimate);**
- have a small, cluttered roof void (particularly for brown long-eared);
- are of a modern construction with few gaps or crevices that bats can fly or crawl through (though pipistrelle bats may still be present);
- are comprised of prefabricated of steel or sheet materials; (some sections)
- are active industrial premises.

Please note that the above list provides generic screening criteria only and there are exceptions to consider.

7. Conclusions

7.1 Interpretation

No evidence of bat presence or historic bat activity was found at the wire mill. It is considered that the building presents negligible roosting potential for bats and there is a low risk that bats may roost within the building during the main bat activity period, May to September.

The emergence did not identify any bats leaving or entering the property. The first pipistrelles emerged 20 minutes after sunset and were seen foraging along the canal. As the surveyors had a clear view of the property and observed the bats flying to their location it may be concluded that the bats did not emerge from the building but are roosting nearby. This is also supported by the timing of the various calls indicating that the bats have commuted to the site.



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The light pollution from Southcote Mill casts light over the canal and clearly impacts upon the foraging of bats on the water.

The proposed area of work should not cause disturbance to any bats, therefore a European Protected Species licence will not be required prior to the works being undertaken. Further surveys are not considered necessary or appropriate.

Bats are highly mobile wild animals and may be encountered within a building following a negative survey result. If bats are found during demolition works then all works should stop, Simon Holmes (01189 762902) or Natural England (0845 601 4523) should be contacted for advice, and that advice acted upon.

Due to the proximity of habitat to the site and the potential for bats to use the building after this survey has been completed, the following recommendations are made.

8. Recommendations

If, for whatever reason, there is a time delay of greater than 12 months between this survey and the commencement of work then the survey should be re-done.

9. References

Hundt, L. (2012) Bat Surveys: Good Practice Guidelines, 2nd edition. Bat Conservation Trust.

10. Queries

Any queries regarding this report should be addressed, in the first instance, to Urban Tree Experts:

Telephone: 01189 762902
Fax: 01189 761168
Email: info@batsurveys-uk.com

Urban Tree Experts
Unit H, Bridge Farm
Reading Road
Arborfield
Berkshire RG2 9HT

Simon Holmes CEnv
Consultant Urban Tree Experts
Natural England Licence CLSO03440



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APPENDIX 1

In summary, the legislation combined makes it an offence to:

- Intentionally or recklessly damage, destroy or obstruct access to a structure or place used for shelter by a bat.
- Intentionally or recklessly disturb bats; in particular any disturbance which is likely to impair the ability of bats to survive, breed or reproduce or nurture their young; or in the case of hibernating or migrating bats, to hibernate or migrate.
- Intentionally or deliberately kill, injure or take any bat.

Planning Considerations:

Developments that compromise the protection afforded to bats or roosts under the provisions of The Conservation of Species and Habitats Regulations (2010) will require a European Protected Species (EPS) licence from Natural England (NE).

NE, the government's statutory conservation advisory organisation, is responsible for issuing EPS licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations.

Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:

- Reg 44(2)(e) – the derogation is “in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment”.
- Reg 44(3)(a) – there is “no satisfactory alternative” to the derogation.
- Reg 44(3)(b) – the derogation is “not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range”.

Tests (a) and (e) can be met with the issue of planning permission for the proposed works. Test (b) is determined by NE's ecology department that requires the development of a suitable mitigation strategy that would ensure that any bats present on site, are retained at the same population level or better.