

**12 Eldon Terrace
Reading
Berkshire
RG1 4DX**

Daylight Bat Survey

Ref: R1621/a

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1 INTRODUCTION

1.1 Background

1.1.1 John Wenman Ecological Consultancy LLP was commissioned by Mr Jagtar Dhadwal to undertake a survey for the presence of bats within the building at 12 Eldon Terrace – a terraced property with a garage at ground floor level and a residential flat at first floor level in Reading, Berkshire.

1.1.2 The survey was commissioned in connection with a planning application to be submitted to Reading Borough Council seeking consent for the demolition of the property and construction of a replacement property with change of use.

1.2 Legislative Background – Bats

1.2.1 All British bat species are fully protected by the Wildlife & Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010 ('Habitat Regulations'). In summary, the legislation combined makes it an offence to:

- Damage or destroy a breeding site or resting place or intentionally or recklessly obstruct access to a structure or place used for shelter by a bat;
- Deliberately, 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; or to affect significantly the local distribution or abundance of the species;
- Deliberately kill, injure or take any bat.

1.2.2 The government's statutory conservation advisory organisation, Natural England, is responsible for issuing European Protected Species licences that would permit activities that would otherwise lead to an infringement of the Habitat Regulations. A licence can be issued if the following three tests have been met:

- **Regulation 53(9)(a)** - there is "no satisfactory alternative" to the derogation, and;

- **Regulation 53(9)(b)** - the derogation “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range” and;
- **Regulation 53(2)(e)** - the derogation is for the purposes of “preserving 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”.

1.2.3 Local authorities have a statutory duty under Regulation 9(5) of the Habitat Regulations to have regard to requirements of the Habitats Directive in the exercise of their functions. The Council must therefore consider and determine whether these three tests are likely to be satisfied by applications where survey findings show that European Protected Species licensing is necessary before granting planning permission.

1.2.4 European Protected Species licence applications can be submitted once all necessary planning consents have been granted and Natural England aim to issue a licence decision within 30 working days.

1.2.5 Licensable projects affecting small numbers of seven commonly occurring bat species may fall under the remit of the Low Impact Class Licence (WML-CL21). The Class Licence permits ‘Registered Consultants’ to carry out licensable operations on site on behalf of clients following the registration of sites with Natural England at least 15 working days before the work is due to start.

1.2.6 Survey data supporting EPS licence applications or the registration of the site under the Low Impact Class Licence (WML-CL21) must be up to date i.e. have been conducted within the current or most recent optimal survey season i.e. May to August. Therefore, if surveys show bats are present and licensable work is delayed until during or after the next survey season, updated surveys will be required to support an application or site registration.

1.3 Site Location and Context

1.3.1 The building is situated on the southern side of Eldon Terrace in the centre of Reading, Berkshire (OS grid reference: SU 72514 73164).

1.3.2 The building is situated on a predominantly residential road bordered on all sides by buildings and Eldon Terrace at the front. The River Thames is 260 metres to the north of the site offering a popular commuting and foraging feature used by bats. The surrounding urban area only offers habitat for those bat species adapted to urban locations with disconnected garden habitats offering limited dark corridors for light-sensitive bats.

2 SURVEY METHOD

2.1 Bat Survey

2.1.1 A survey of the interior and exterior of the building was undertaken by two ecologists registered under Natural England bat survey Class Licences CL018 on the 15th May 2017.

2.1.2 The survey was undertaken with the aid of binoculars, and a high power (1 million candle power) torch and looked for any signs of occupation by bats, and for features that could offer potential roosting sites following standard survey guidelines (Collins 2016; Mitchell-Jones 2004; Mitchell-Jones & McLeish 2004).

2.1.3 The following may indicate the presence of a bat roost within a building:

- Droppings (these can be found externally, especially in sheltered areas such as window sills, underneath roost entrances or internally within a roof space);
- Piles of insect remains e.g. moth wings (these may be indicative of regular feeding sites used by species such as brown long eared bat);
- Staining at roost entrances or within the roost (urine and oil from fur can leave stains on timbers when bats are gathered for long periods);
- Bats (live or dead).

2.1.4 Pitched roofed properties may offer potential roosting sites in a number of locations, favoured locations include:

- Under roof, ridge and hanging tiles, especially when loose or missing tiles are present or sections of mortar are missing;
- At the eaves – gaining access via gaps between the soffits and wall;
- At the gable ends – access is typically gained at the roof apex via gaps in the soffits or under roof tiles;
- Within an enclosed roof space - long eared bats (*Plecotus* sp.) for example, will often cluster at the ridge beam.

2.2 Survey Constraints

2.2.1 Full access was available to the interior and exterior of the building, and therefore there were no significant constraints to the survey.

3 SURVEY FINDINGS

3.1 Introduction

- 3.1.1** Photographs of the site are presented in **Appendix 1** and a plan of the external and internal survey findings with associated target notes is shown in **Appendix 2**. There follows a description of the external and internal survey findings:

3.2 External Survey

- 3.2.1** The building was of stone and brick construction and had a tiled roof at the front and a flat roof at the rear; raised wooden decking provided access to the top floor flat (**Photographs 1 & 2**).
- 3.2.2** The tiled roof was covered with concrete roof tiles that were visible and tightly fitted on the front elevation offering limited roosting opportunities for bats (**Photograph 3; Target note 1**). The rear roof elevation was not all visible but the verge tiles on the eastern gable end were lifted providing roosting opportunities for crevice-dwelling bats (**Photograph 4; Target note 2**). The mortar underneath the ridge tiles and verge tiles was all intact (**Target note 3**). The rear bitumen flat roof was fitted tightly (**Photograph 5; Target note 4**).
- 3.2.3** There were gaps behind the barge boards above all three of the front windows but these did not extend far enough to be a suitable roosting location for bats (**Photograph 6; Target note 5**). The soffit boxes between the windows on the front elevation were tightly sealed to the external wall (**Photograph 7; Target note 6**). The hanging tiles on the external wall of the rear elevation had numerous gaps between the tiles (**Photograph 8; Target note 7**), gaps into the flat roof at the eaves (**Photograph 9; Target note 8**), gaps behind the corner hanging tiles (**Photograph 10; Target note 9**) and a missing tile providing access to the space behind the tiles (**Photograph 9; Target note 10**).
- 3.2.4** No evidence of bat activity was found on the exterior of the property.

3.3 Internal Survey

- 3.3.1** The roof space was accessed through a central loft hatch and had an estimated floor-to-ridge height of one metre (**Photograph 11**). The floor

was insulated with fibreglass, which was tight to the eaves on the front elevation (**Photograph 12; Target note 11**) and the eaves opened into the space beneath the bitumen flat roof (**Photograph 13; Target note 12**). The roof was lined with bitumen-based roofing felt, which was intact (**Target note 13**). The western gable end was constructed of brick and had a gap between the end rafter and the brickwork but there was no daylight visible or draught between the roof and the wall plate (**Photograph 14; Target note 14**). The eastern gable end was constructed of stone/flint and had a gap between the end rafter and the stonework but there was no daylight visible or draught between the roof and the wall plate; there was a strip of daylight visible into the room beneath (**Photograph 15; Target note 15**). The apex of both gable ends was thickly cobwebbed and the ridge beam was lightly cobwebbed throughout (**Photograph 16; Target note 16**).

- 3.3.2** The garages on the ground floor were sealed and offered no roosting opportunities for bats.
- 3.3.3** No evidence of bat activity was found inside the roof space or in the garages during the survey.

4 DISCUSSION AND RECOMMENDATIONS

4.1 Status of Bat Roosts/Potential

4.1.1 No evidence of roosting bats was found during the survey; however the building had external features, e.g. gaps behind the hanging tiles and under lifted verge tiles that offer potential access and roosting opportunities for crevice-dwelling species such as the pipistrelle and smaller *Myotis* species. Two species of pipistrelle bat: the common pipistrelle (*Pipistrellus pipistrellus*) and soprano pipistrelle (*Pipistrellus pygmaeus*) are widespread and abundant throughout the UK (Richardson 2000). Small *Myotis* species: Whiskered bat (*Myotis mystacinus*) and Brandt's bat (*Myotis brandtii*) are widespread and common but less abundant than the pipistrelle species. Roosts supporting pipistrelle and/or small *Myotis* bat species are considered to be of low to moderate conservation importance (subject to the type of roost present i.e. non-breeding roosts supporting individual or small numbers of bats through to maternity roosts supporting large numbers of female bats).

4.1.2 Considering the combination of external features, absence of roosting evidence and urban setting, the building has moderate potential for roosting bats.

4.2 Further Survey

4.2.1 Further survey of the building should comprise of at least one evening emergence survey and one dawn re-entry survey. The surveys should be undertaken in the period between May and September inclusive with at least one of the survey visits in the period between May and August; the visits should be separated by a minimum of two weeks (Collins 2016).

4.3 Assessment of Impacts and Recommendations

4.3.1 If further survey reveals the presence of roosting bats, the proposed demolition would result in the loss of a bat roost. In addition the work could harm and/or disturb any bats present at the time of the works and therefore a European Protected Species (EPS) licence or registration of the site under the Low Impact Class Licence (if appropriate) would be required to allow the planned works to go ahead lawfully.

- 4.3.2** An EPS licence or registration of the site under the Low Impact Class Licence (if appropriate) would be required before the commencement of the work to allow the work to go ahead lawfully. A licence can be issued by Natural England if the three licensing tests (detailed in 1.2.2) have been met by the proposed work and can be sought once all necessary planning consents for the proposals have been granted and any wildlife related conditions discharged.
- 4.3.3** For an EPS licence or confirmation of the site's registration under the Class Licence to be issued permitting the works, it would be necessary to demonstrate that the 'favourable conservation status' of any bats using the building would be maintained throughout the work by employing mitigation measures during the course of the works to minimise the risk of bats being harmed, and by providing adequate alternative roosting sites during the course of the building work and in longer term; indicative and provisional mitigation proposals are set out in Section 4.4 below.

4.4 Indicative Mitigation Proposals

- 4.4.1** A European Protected Species licence or registration of the site under the Low Impact Class Licence (if applicable) should be sought before work affecting roosting sites commences.
- 4.4.2** The mitigation strategy submitted with an application is likely to include the requirement for the start of the works affecting bats to be timed to avoid the periods when bats are most susceptible to disturbance. If surveys show a maternity roost is present, the peak breeding season (May to mid-September inclusive) will need to be avoided so not to disturb pregnant and non-flying, dependent juvenile bats. For all roost types, due to the potential for hibernating bats to be present, the peak winter hibernation season (mid-November to February) will also need to be avoided, to minimise the risk of disturbing torpid bats.
- 4.4.3** Replacement roosting opportunities should be provided so that they are available to bats in the short-term i.e. prior to and during the works by erecting woodcrete bat boxes suitable for the species present on nearby mature trees or buildings before the work starts. A 'soft strip' approach to the work should be adopted i.e. the careful removal of roof tiles and hanging tiles by gloved hands, under the supervision of a licensed ecologist. In the

event that bat(s) are discovered during the course of the work, under the terms of a licence, the licensed ecologist should capture the bat(s) and transfer it/them directly to one of the bat boxes erected in advance of the works.

- 4.4.4** In the longer term, the new building should provide replacement roosting opportunities for the bat species found. For example, new crevice roosting sites could be created through the use of bat access tiles or installation of purpose built boxes for example. **N.B. it is important that if bats have access to the space between the tile and liner, breathable roofing membranes must not be used because these cause bats to get trapped in the fibres of the membrane. Traditional bitumen (Type 1F) roofing felt or timber sarking should be used to avoid injuring and harming bats in the roost.**

5 REFERENCES

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines 3rd Edition*. Bat Conservation Trust, London.

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

Mitchell-Jones, A. J. & McLeish, A. P. (2004). *Bat Workers' Manual (3rd Edition)*. JNCC, Peterborough.

APPENDIX 1 - SITE PHOTOGRAPHS



1. The front of the building viewed from the north west



2. The rear of the building viewed from the south.



3. The tight flat roof tiles on the front elevation



4. The lifted verge tiles visible on the rear elevation



5. The tightly fitted bitumen flat roof.



6. The gap behind the barge board on the front elevation.



7. The tightly sealed soffit box on the front elevation.



8. The gaps between the hanging tiles.



9. The gaps into the eaves above the hanging tiles and the missing hanging tile.



10. The gaps behind the corner hanging tiles.



11. The roof space.



12. The fibreglass insulation tight to the eaves.



13. The eaves opening into the space in the flat roof.



14. The western gable end.



15. The eastern gable end and daylight in the corner into the room below.



16. The cobwebbed gable end.

APPENDIX 2 – DAYLIGHT BAT SURVEY FINDINGS

