

**37 Coley Avenue  
Reading  
Berkshire  
RG1 6LL**

## **Daylight Bat Survey**

**Ref: R1864/b**

**April 2018**



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# **1 INTRODUCTION**

## **1.1 Background**

- 1.1.1** John Wenman Ecological Consultancy LLP was commissioned by Mrs Hotston to undertake a survey for the presence of bats within the detached house at 37 Coley Avenue in Reading, Berkshire.
- 1.1.2** The survey was commissioned in connection with planning proposals lodged with Reading Borough Council seeking consent to construct a two-storey side and rear extension as well as a single storey front extension (planning reference 180265; refer to existing and proposed elevations in Appendix 3).

## **1.2 Legislative Background**

- 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 2017 ('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 55(9)(a)** - there is "no satisfactory alternative" to the derogation, and;

- **Regulation 55(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 55(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 7(3e) of the Habitat Regulations to have regard to requirements of the Habitats Directive in the exercise of their functions. They must therefore consider and determine whether these three tests are likely to be satisfied by planning proposals affecting European Protected Species before granting planning permission.
- 1.2.4** If a European Protected Species licence is necessary, a licence can be sought once all the necessary planning consents have been granted. Natural England aims to issue a decision on licence applications within 30 working days of submission.
- 1.2.5** Licensable projects affecting small numbers of seven commonly occurring species occupying roosts of low conservation importance may fall under the remit of the Low Impact Class Licence, which would enable consultants registered by Natural England to carry licensable work under the Class Licence once sites have been registered in advance with Natural England. Registration forms must be submitted at least three weeks before work is due to start, and if acceptable, Natural England aims to register sites within two weeks.
- 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 house is situated toward the center of Coley Avenue in Reading, Berkshire on the eastern side (OS grid reference: SU 70718 72721), just south of the junction between Castle Crescent.
- 1.3.2** The detached house is bordered by further residential properties and their associated gardens on all sides. There is deciduous and broadleaved woodland to the west, bordering the railway line. Prospect Park is located further west about 1.39km away. This is primarily parkland and wood pasture but also contains habitats of deciduous and broadleaved woodland. The Coley Recreation Ground - containing amenity grassland - is located 312 metres to the south-east. The Holy Brook - a channel of the River Kennet - runs approximately 725 metres away to the east. There is an area of grassland and grazing marsh that serves as a floodplain to the Holy Brook about 590 metres away. This area also has a stretch of deciduous woodland that could provide quality foraging habitat for bats.

## **2 SURVEY METHOD**

### **2.1 Building Inspection**

**2.1.1** A survey of the interior and exterior of the house was undertaken by an ecologist registered under Natural England bat survey class licence CL18 supported by an assistant ecologist on the 5<sup>th</sup> April 2018.

**2.1.2** The survey was undertaken with the aid of binoculars and a high power (1 million candle power) torch and looked 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:

- Bat 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 residential buildings may offer potential roosting sites in a number of locations, favoured locations include:

- Under roof, ridge and hip tiles, especially when loose or lifted tiles are present, or sections of mortar are missing;
- Under sections of raised lead flashing;
- Beneath lifted barge boards;
- At the gable ends – access is typically gained at the roof apex via gaps in the soffits or under roof tiles;
- At the eaves – gaining access via gaps between the soffits and wall;
- 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** The loft in the house's main roof could not be inspected fully due to the low height and narrowness; however, it was inspected from the loft hatch.

### **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**. The survey findings from the exterior and interior of the house are described as follows.

#### **3.2 External Survey**

- 3.2.1** The house is of brick solid wall construction. It is a three storey building with multi-pitched roof covered with clay tiles, and has a flat roofed garage to the northern side. A single storey pitched roof extension is situated to the rear (eastern side) (**Photographs 1 & 2**).
- 3.2.2** The flat clay tiles covering the roof were uneven in several places, with tiles missing occasionally. The gaps were more prevalent at the rear (**Target note 15**) than at the front, offering potential roosting opportunities for bats although no evidence of use was seen at the time of the survey. A missing tile was present at the top of the west facing gable on the south-facing side (**Photograph 5; Target Note 3**). At the rear of the building, occasional gaps beneath the roof tiles were visible (**Photograph 6**). A tile was lifted at the gable junction at the single storey pitched roofed section (**Photograph 7; Target Note 4**).
- 3.2.3** There was a large gap under the soffits of the front (west-facing) gable (**Photograph 3; Target Note 1**) and at the corners between the timber soffits and the brickwork (**Photograph 4; Target Note 2**). A gap was also present between the timber soffits at the corner of this section (**Photograph 8; Target Note 5**) although the verges were well mortared (**Photograph 9; Target Note 6**). On the south facing side of the rear extension, an open vent was present that would offer access to bats to the space behind (**Photograph 10; Target Note 7**). On the side (north-facing) section there was a gap beneath the soffits at the corner of the eaves towards the front (**Photograph 11; Target Note 8**). The lead flashing at the base of the chimney was fitted tightly to the tiles (**Photograph 12; Target Note 9**) but gaps were present at the side of the chimney base where the soffits of the chimney met the main roof (**Photograph 13; Target Note 10**). The tiles in this section were mostly flat and even. No gaps were seen on top of the garage at the flat roof section.

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No evidence of bats was visible on the exterior of the house.

### **3.3 Internal Survey**

- 3.3.1** The house had two main enclosed roof spaces. The first was located in the main roof between the west-facing (front) and south-facing (side) gables; an eaves space was situated towards the rear of the roof void. The rear extension contained a second loft space above the kitchen that had been converted into a room (**Photograph 14**). The walls of this section had been plastered over.
- 3.3.2** The main roof space was accessed via a loft-hatch. It was 0.5 metres high at the ridge and was of 'cut and pitch' construction with exposed rafters and ridge board. It had brickwork gable end walls and fibreglass insulation covering the floor. The east-facing half was lined with bitumen; the west-facing half was unlined (**Photograph 18; Target Note 12**). The area behind (north of) the loft hatch extended towards the western (front-facing) brickwork gable (**Photograph 19; Target Note 13**) and towards the rear where it ended in a boarded gable behind the water tank (**Photograph 20; Target Note 14**). Both brickwork and wooden boards appeared to in good condition with no visible gaps but full access was restricted. There was cobwebbing at the brickwork end.
- 3.3.3** An eaves space was located towards the rear, below the main roof space and was accessed via a door. The roof and side wall contained fibreglass and was covered in bitumen felt (**Photograph 21; Target Note 15**). Wooden panelling lined the floor and the brickwork at the end had a gap beyond, where wooden boards were visible (**Photograph 22; Target Note 15**).
- 3.3.4** The garage had a chipboard ceiling (**Photograph 15**) that sloped to join the pantry section containing a skylight (**Photograph 16**). The garage had tightly fitted polystyrene at the eaves (**Photograph 17; Target Note 11**).
- 3.3.5** No bats or evidence of bats was visible within the roof spaces of the house during the survey. Mouse droppings were found at the northern end of the converted loft space in the rear extension.

## **4 DISCUSSION AND RECOMMENDATIONS**

### **4.1 Assessment of Bat Roost Potential**

- 4.1.1** There was no evidence of the roof spaces of the house being used by roosting bats and it is unlikely therefore that the property supports species that primarily occupy roof voids such as long-eared bats (*Plecotus* sp.). The house had several features however that could potentially be used by crevice-roosting species such as the pipistrelles (*Pipistrellus* spp.) and small *Myotis* spp. Such features noted included: gaps beneath raised and misplaced tiles; gaps behind soffits at the front gable; a missing tile on the front gable; a gap behind the soffit at the side (northern) chimney; an open vent on the rear extension; and a lifted tile at the junction of the rear extension.
- 4.1.2** 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). Evidence of crevice-dwelling bats utilising external features such as the space between the gaps in the roof tiles and internal walls is typically hidden from view and therefore the presence of a bat roost cannot be ruled out at this stage.
- 4.1.3** The house is considered to be of moderate potential for use by roosting bats. This takes into account the availability of roosting opportunities, and the building's proximity to good quality foraging habitat in the surrounding area. To determine if bats are present or likely to be absent and to determine the status of any roosts, further surveys should be conducted as detailed below in Section 4.2.

### **4.2 Impact of Proposals and Recommendations**

- 4.2.1** The planned extensions will affect sections of the existing roof that provide crevice roosting opportunities for bats and as such, if bats are present, the work could lead to bats being harmed/disturbed and to the loss of roosts.

- 4.2.2** Further survey is required to establish if the house is likely to be used by roosting bats. Surveys should comprise of at least one evening emergence and one dawn re-entry survey. The surveys should be carried out in the period between May and September, with at least one visit in the period between May and August; at least two weeks should separate the visits (Collins 2016).
- 4.2.3** If further survey shows roosting bats are present, the proposed extensions to the main building may lead to the loss of roosting sites and could potentially harm any bats present at the time of work. Should further survey show bats are present in sections to be affected by the extensions, an EPS licence or registration of the site under the Low Impact Class Licence (if applicable) would be required for the work to go ahead lawfully.
- 4.2.4** If required, a licence must be obtained before the commencement of the licensable work and following the grant of planning consent and can be issued by Natural England if the three licensing tests (detailed in 1.2.2) have been met. To meet one of the licensing tests, it would be necessary to demonstrate that the 'favourable conservation status' of bats using the dwelling would be maintained throughout and after the completion of the work by employing mitigation measures during the work, by providing compensatory roosts in the short-term and ensuring that roosting sites are retained on site in the long-term. Indicative provisional mitigation proposals are set out in summary in section 4.3 below. **N.B. the preparation of a detailed mitigation strategy necessary for the submission of a licence application should be based on the findings of further survey detailed in section 4.2.2 above.**

### **4.3 Indicative Mitigation Proposals**

- 4.3.1** If further surveys show that impacts to bats will be unavoidable, a European Protected Species Licence or Low Impact Class Licence (if applicable) should be obtained before the licensable work begins. The start of the work affecting any bat roosts should be timed to avoid the periods when bats are most susceptible to disturbance i.e. winter hibernation season for all roosts (mid-November to February) to avoid disturbing torpid bats, and outside of the peak summer breeding season (May to mid-September) where evidence of a maternity roost is recorded.

- 4.3.2** Replacement roosting opportunities should be provided so that they are available to bats in the short-term i.e. prior to and during the work by erecting woodcrete bat boxes suitable for the species present on nearby mature trees or buildings before the work starts.
- 4.3.3** A 'soft strip' approach to the work should be adopted i.e. the careful removal of features used by roosting bats, such as the roof tiles, by gloved hands and under the supervision of a licensed ecologist. In the event that bat(s) are discovered during the course of the work, 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.
- 4.3.4** If roosts are to be lost, the newly extended property could incorporate replacement roosting opportunities. For example, bat access tiles that provide access for bats beneath tiles in new sections of roof. Alternatively purpose built bat roosting boxes could be installed such as Schwegler 1FR bat tubes or Habibat 001 boxes within the walls of the extended house. **N.B. if bats are allowed access to the space between tiles and lining, breathable roofing membranes, which are harmful to bats must not be used; bitumen and hessian (Type 1F) felt or timber sarking should be used instead.**

## 5 REFERENCES

Collins, J. (ed.) (2016). *Bat Surveys for Professional Ecologists – Good Practice Guidelines 3<sup>rd</sup> 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 (3<sup>RD</sup> Edition)*. JNCC, Peterborough.

## APPENDIX 1 - SITE PHOTOGRAPHS



1. Front of the house viewed from the west.



2. Rear of the house viewed from the east.



3. Gap under soffit of front gable.



4. Gap at corner of front.



5. Missing tile at front gable



6. Occasional gaps beneath tiles in rear section.



**7. Gap at junction of rear pitched section**



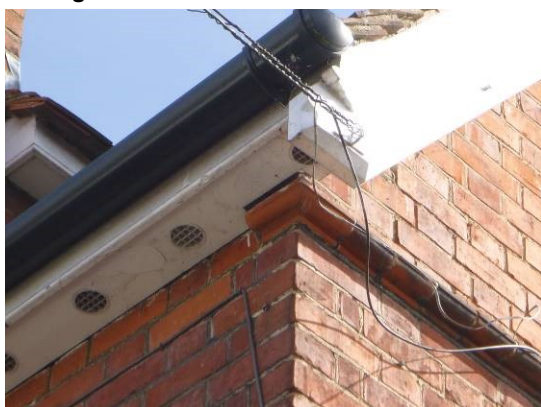
**8. Gap beneath timber soffits.**



**9. Verges well mortared.**



**10. Vent on rear extension.**



**11. Gap under soffit at north-western corner.**



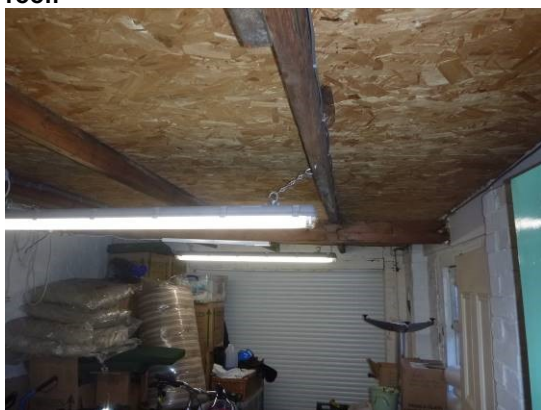
**12. Lead flashing tight around chimney.**



**13. Gap under soffit at junction of chimney and roof.**



**14. Internal view converted loft space.**



**15. Chipboard ceiling in garage.**



**16. Skylight above pantry space.**



**17. Polystyrene fittings at eaves.**



**18. Main roof space half lined with bitumen felt.**



**19. Brickwork intact at front facing gable.**



**20. Boarded gable toward rear behind water tank.**

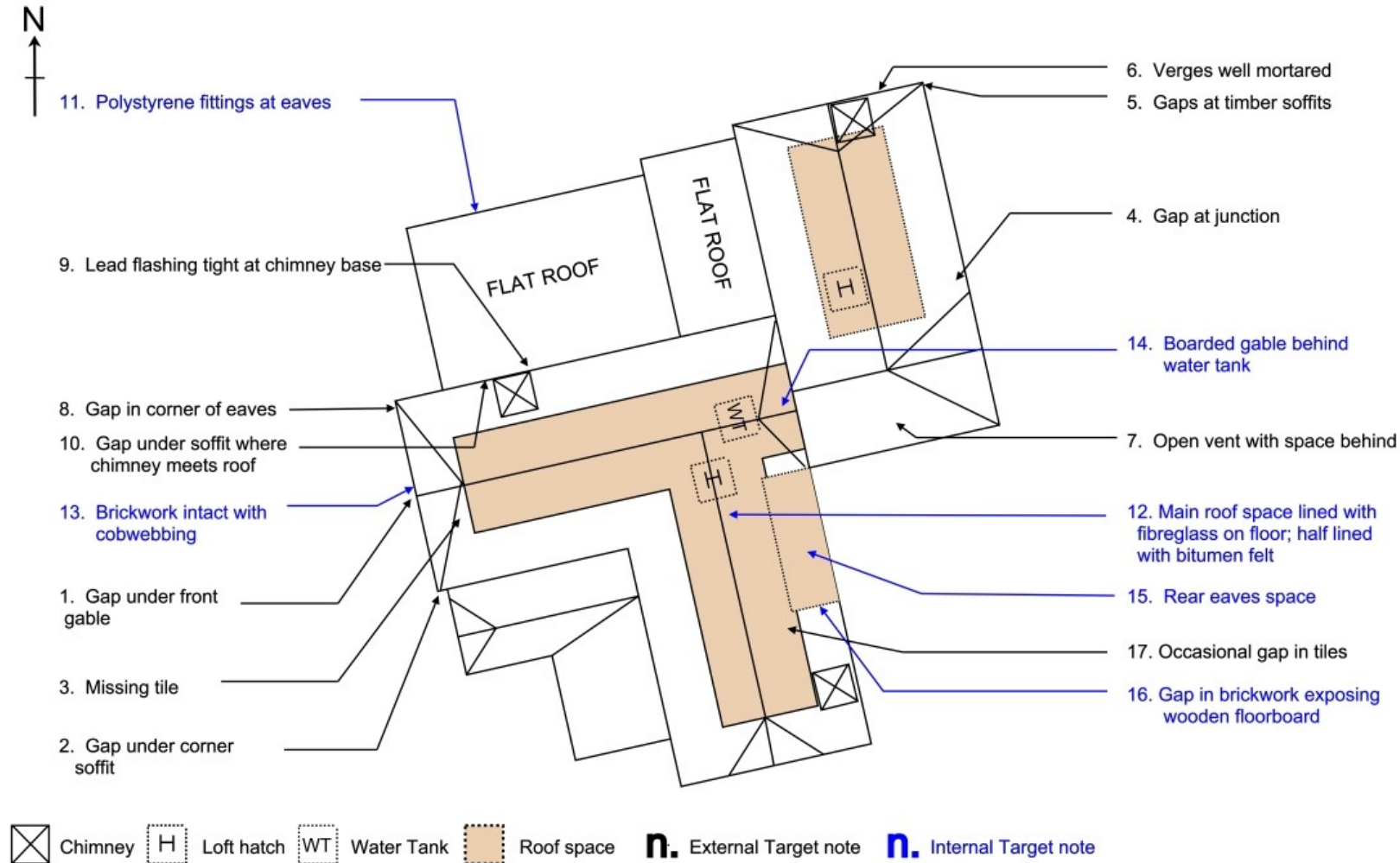


**21. Brickwork at end of rear eaves space.**



**22. Gap at rear eaves space with wooden board exposed.**

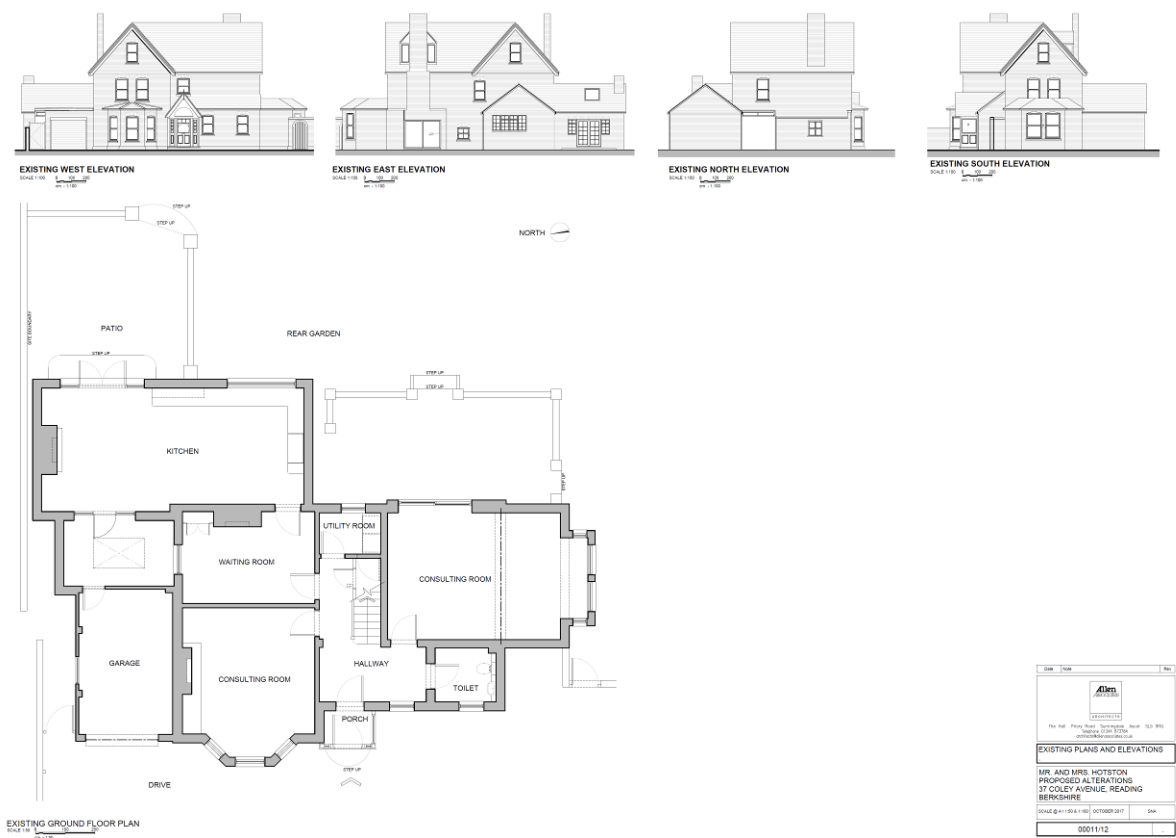
## APPENDIX 2 – DAYLIGHT BAT SURVEY



|           |            |              |                              |  |
|-----------|------------|--------------|------------------------------|--|
| Drawn by: | Date       | Scale:       | 37 Coley Avenue<br>Reading   |  |
| MJ        | April 2018 | Not to scale | Daylight Bat Survey Findings |  |

APPENDIX 3 – EXISTING AND PROPOSED ELEVATIONS

Existing elevations



Proposed elevations

