



Bat Building Assessment

19 Grosvenor Road

Caversham

Berkshire

RG4 5EJ

7th February 2017

Mr and Mrs J Goodwin

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Caversham

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Document ref:	ARB782 19 Grosvenor Road Bat Building Assessment
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Report date:	07/02/2017

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Notice to Interested Parties

To achieve the study objectives stated in this report, we were required to base our conclusions on the best information available during the period of the investigation and within the limits prescribed by our client in the agreement.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of e.g. species abundances or habitat management efficacy described in the report.

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EXECUTIVE SUMMARY

- 0.1 This report outlines the findings of a bat building assessment of a residential dwelling and detached garage at 19 Grosvenor Road, Caversham, Berkshire RG4 5EJ.
- 0.2 The bat building assessment was carried out by a licensed bat ecologist on the 28th January 2017.
- 0.3 The bat building assessment assessed the buildings for their potential to support bat roosts and breeding birds. This report will be used to inform the proposed extension of the residential dwelling and the demolition of a detached garage.
- 0.4 No bats or any evidence of bats was recorded during the assessment of the residential dwelling. No internal or external structural features with the potential to support roosting bats were recorded during the assessment of this building. However, an area of hanging tiles on the eastern elevation with a broken tile was recorded. The building was therefore considered to have **low suitability to support roosting bats**.
- 0.5 In line with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), no further surveys are considered necessary to inform the proposed extension of the residential dwelling but due to the proposed extension impacting the area of hanging tiles on the eastern elevation with a broken tile, it is recommended that works to this area proceed under a precautionary approach. Section 6 of this report sets out what precautionary measures should be implemented.
- 0.6 No bats or any evidence of bats was recorded during the assessment of the detached garage. No internal or external structural features with the potential to support roosting bats were recorded during the assessment of this building. The building was considered to have **negligible suitability to support roosting bats**.
- 0.7 Therefore, in line with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), no further surveys are considered necessary to inform the proposed demolition of the detached garage.
- 0.8 No birds or any evidence of breeding birds were recorded during the survey. The proposed extension of the residential dwelling and demolition of the detached garage is therefore not considered to be constrained by the presence of breeding birds.
- 0.9 Biodiversity enhancements should be incorporated into the development and Section 6 of this report provides details for potential on-site enhancements including the installation of bat and bird boxes.

1 INTRODUCTION

- 1.1 Arbeco Ltd were commissioned by Day Tanner Partnership Ltd on behalf of Mr and Mrs J Goodwin to undertake an ecological assessment of bat species of a residential dwelling and detached garage at 19 Grosvenor Road, Caversham, Berkshire RG4 5EJ to inform the proposed extension of the residential dwelling and the demolition of the detached garage.
- 1.2 The survey involved carrying out a detailed bat building assessment to assess the likelihood and potential of the buildings on site supporting bat species. The assessment comprised of a thorough internal and external inspection the buildings on site for any evidence of bats. The survey also involved assessing the potential of the buildings on site to support breeding birds.
- 1.3 This report details the results of the initial bat building assessment.

Legislation

- 1.4 All seventeen bat species resident in the UK are fully protected under UK and European legislation. In England bats and their places of shelter or protection are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and within Europe all bat species and their places of shelter or protection are protected Schedule 2 of the Conservation of Habitats and Species Regulations 2010.
- 1.5 These pieces of legislation make it an offence to:
 - Deliberately, intentionally, or recklessly disturb, capture, injure or kill a bat;
 - Obstruct, damage or destroy a place used for shelter or protection; and
 - Damage or destroy a bat roost (breeding site or resting place).
- 1.6 Wild bird species are afforded protection under the Wildlife & Countryside Act 1981 (as amended).
- 1.7 This piece of legislation makes it an offence to:
 - Kill, injure or take any wild bird;
 - Take, damage or destroy the nest of any wild bird while that nest is in use or being built; and
 - Take or destroy an egg of any wild bird
- 1.8 Further details of the legislation are outlined in Appendix 1 and 2.

Site Description

- 1.9 The site is situated in a sub-urban area in the centre of Caversham in the Borough of Reading (Ordnance Survey Grid Reference for the centre of the site: SU 72052 75513) and comprises a three-storey residential dwelling, detached garage and associated hardstanding and gardens. The site is surrounded by residential dwellings and gardens.
- 1.10 The location of the site is shown in Figure 1.1 and the extent of the site boundary is shown in Figure 1.2. The buildings on site which were surveyed are shown in Figure 1.2.

Development Proposals

- 1.11 The development proposals comprise the construction of a two-storey extension with a pitched roof on the eastern elevation of the residential dwelling. This will include the demolition of the detached garage.

2 METHODS

Bat Building Inspection

- 2.1 The methods used in the bat building inspection were based on those recommended in English Nature's Bat Mitigation Guidelines (Mitchell-Jones 2004), the Joint Nature Conservation Committee's Bat Worker's Manual (Mitchell-Jones and McLeish 2004) and the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).
- 2.2 The buildings suitability for bat roosting was assessed by examining structural features. Structural features that may influence the suitability of a building to support roosting bats include the presence of a roof void, the presence of access points into the building (including gaps beneath barge boards, soffits and fascias, gaps under lead flashing, gaps within masonry and under loose tiles, gaps between mortise and tenon joints), the complexity and size of any roof void and daytime light levels in the roof void.
- 2.3 The buildings suitability for roosting bats was also assessed by examining the surrounding habitat. Important habitat features surrounding the structure which may influence roost potential include whether the structure is in a semi-rural or parkland location, its proximity to significant linear habitat features such as a watercourse, mature hedgerow, wooded lane or an area of woodland.
- 2.4 Taking account of these architectural and habitat features, the building was then assigned a level of roost suitability based the criteria given in the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) and professional judgement. The primary objective of this exercise was to identify the need for further detailed bat survey later in the year, or alternatively to obtain sufficient information that would dismiss the need for further assessment.
- 2.5 A detailed bat building inspection was undertaken on the 28th January 2017 by licensed bat ecologist Dr Stacey Waring BSc (Hons) MSc PhD MCIEEM. An external search around the perimeter of the building was conducted and any possible access points i.e. gaps and crevices were noted and surveyed with the high-powered torch, ladder and endoscope as required.
- 2.6 A systematic internal inspection of the building was conducted using a high-powered torch to illuminate all areas thought to be suitable for roosting bats. All surfaces were also surveyed for signs of bat presence.
- 2.7 Features of potential value to bats were surveyed not only for the presence of bats but also for signs that could indicate use by bats, such as:
 - Bat droppings;
 - Staining of access points used by bats to enter the structure; and
 - Feeding remains such as moth and butterfly (Lepidoptera) wings.

Survey Constraints

- 2.8 Bats are difficult to locate in large structures, with so many potential roosting areas, particularly in inaccessible areas such as large buildings, finding the exact roosting site can be difficult, especially male/single bat roosting sites.
- 2.9 Bats can have seasonal use of buildings and being so mobile may arrive and start using a site after it has been surveyed, or roost somewhere else during the period it was surveyed. For this reason, bats may potentially be present but remain undetected, particularly during day time assessment surveys.

3 RESULTS

Building Description

- 3.1 19 Grosvenor Road is a three-storey Victorian residential dwelling of traditional brick construction. The building had a pitched, hipped and cross-gabled roof clad with clay tiles. Small areas of clay hanging tiles were present on the sides of roof dormer windows and a half-gable on the eastern elevation. A veranda was present on the southern and eastern elevation with a flat roof.
- 3.2 The second floor of the building comprised a previously converted loft. The loft was converted approximately four years (personal communication with owner). The conversion of the loft comprised the replacement of the roof cladding and lining. The remaining loft comprised a 1 m high roof void, lined with timber sarking boards.
- 3.3 The detached garage is a 1970's building of brick construction with a flat roof clad with asbestos cement boarding.
- 3.4 Photographs of the buildings are provided in Appendix 3.

External Results

Residential dwelling

- 3.5 No evidence of bats was recorded externally. The roof and hanging tiles were tightly fitted with no discernible gaps with exception of one lifted roof tile on the southern roof pitch and one broken hanging tile on the lowest course of the half-gable on the eastern elevation (see Photographs 3 and 6 respectively). However, upon internal inspection within the roof void, it was evident that the roof tiles were fixed directly on to the sarking boards providing no gaps between the roof cladding and lining.
- 3.6 All eaves areas were tightly sealed with timber soffits and fascia boards. All lead flashings around chimneys were tightly sealed with no discernible gaps. No gaps were recorded around the roof dormer windows.

Detached garage

- 3.7 No evidence of bats was recorded externally. No structural features with the suitability to support roosting bats were recorded.

Internal Results

Residential dwelling

- 3.8 The roof void above the second floor was small and cluttered (due to stored items). No discernible potential access points were recorded that could allow bats to enter / exit the roof void. The timber sarking board lining within the roof void was tightly fitted to both the roof ridge and eaves areas.

Detached garage

- 3.9 No evidence of bats was recorded internally. No structural features with the suitability to support roosting bats were recorded internally.

Surrounding Habitat Suitability for Bats

- 3.10 The area immediately surrounding the site comprises extensive residential dwellings and gardens in all directions. The wider landscape comprises sports fields and cemeteries to the east, lakes and the River Thames to the south with golf courses and agricultural fields to the north and west.

Breeding Birds

- 3.11 No birds or any evidence of breeding birds was recorded during the assessment of either building.

4 EVALUATION

- 4.1 All species of bat present in the UK receive full protection under The Conservation of Habitats and Species Regulations 2010, and the Wildlife and Countryside Act 1981 (as amended).
- 4.2 The habitat immediately surrounding the site was considered to have low suitability to support foraging and commuting bats as it comprises mainly residential dwellings and gardens without good quality habitat connectivity to higher suitability habitats in the wider landscape.
- 4.3 No bats or any evidence of bats was recorded during the assessment of the residential dwelling. However, all external structural features such as roof and hanging tiles were tightly fitted with no discernible gaps which could be accessed by roosting bats with exception of one lifted roof tile on the southern roof pitch and one broken hanging tile on the lowest course of the half-gable on the eastern elevation. Due to no gaps between the roof cladding and lining being present, it is considered highly unlikely that bats could roost under the lifted roof tile. The roof void of the residential dwelling was small, cluttered and had no access points which could be used by roosting bats. The residential dwelling was therefore considered to have **low suitability to support roosting bats**.
- 4.4 The proposed development will comprise a two-storey pitched roof extension on the eastern elevation. The ridge line of the extension will be approximately level with the highest part of the roof dormers which will result in the necessary removal of hanging tiles from the half-gable on the eastern elevation. It is therefore advised that these hanging tiles are removed by hand under the supervision of a licensed bat ecologist to ensure that any bats that may be unexpectedly present are not harmed.
- 4.5 No bats or any evidence of bats was recorded during the assessment of the detached garage. No internal or external structural features with the potential to support roosting bats were recorded. The detached garage was therefore considered to have **negligible suitability to support roosting bats**. The proposed demolition of the detached garage is therefore not considered to have a detrimental impact on bats.
- 4.6 No evidence of breeding birds was recorded during the assessment of both buildings. The proposed extension of the residential dwelling and the demolition of the detached garage are therefore not considered to have a detrimental impact on breeding birds.

5 CONCLUSIONS

- 5.1 The residential dwelling was considered to have low suitability to support bats due to the lack of presence of suitable bat roosting features, i.e. no suitable gaps for crevices dwelling bats and no access to roof void for roof void dwelling bats. Due to the low suitability of the building it is considered that the development will have a low impact on the local bat population. Furthermore, due to the development being limited to the building only, the limited foraging and commuting habitat in the local vicinity will not be impacted.
- 5.2 Therefore, in line with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), no further surveys are considered necessary to inform the proposed extension of the residential dwelling but due to the extension affecting an area of hanging tiles on the half-gable on the eastern elevation, a precautionary approach to the works is recommended. Section 6 of this report sets out what precautionary measures should be implemented.
- 5.3 The detached garage was considered to have negligible suitability to support bats. Therefore, in line with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), no further surveys are considered necessary to inform the demolition of the detached garage.
- 5.4 Recommendations are set out in Section 6 of this report which outline what should be done should bats or breeding birds be unexpectedly discovered prior to or during works, and which biodiversity enhancements should be incorporated into the development.

6 RECOMMENDATIONS

- 6.1 It is recommended that works to the area of hanging tiles on the half-gable on the eastern elevation are undertaken under a precautionary approach. This should include close inspection of the features prior to works by a licensed bat ecologist followed by hand removal of the hanging tiles under the supervision of the licensed bat ecologist. If bats are unexpectedly discovered, a Natural England European Protected Species Mitigation licence may be required for works to proceed.
- 6.2 Should bats and / or breeding birds be unexpectedly discovered prior to or during works to other parts of the building, works to that area should immediately cease and the advice of Arbeco Ltd., Natural England or the Bat Conservation Trust should be sought.
- 6.3 Under the National Planning Policy Guidance document, it is a requirement for the planning system to minimise impacts on and provide net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity. In order to conserve and enhance the natural environment the following provisions could be included:
- Bird and bat boxes could be installed on the proposed new extension and on mature native trees on site;
 - External lighting on site kept to a reasonable minimum and to include downward facing lights so as not to disrupt existing bat flight lines.
- 6.4 Wall-integrated bat boxes should be considered due to their permanence within the new extension. Suitable wall-integrated bat boxes are the Schwegler 1FR bat tube and the Habibat 001 bat box (see Figure 6.1 below). Such bat boxes are seamless with the building structure and are self-cleaning as droppings fall out of the angled entrance and do not accumulate within the box itself. It is recommended bat boxes are fitted to the southern elevation of the new extension and external lighting is not directed at the boxes.

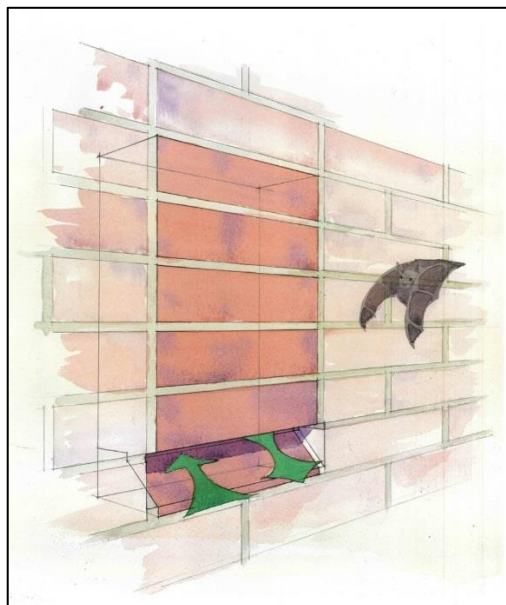


Figure 6.1: Habibat 001 bat box (Copyright Habibat 2017)

- 6.5 Alternatively, wall-mounted bat boxes should be considered such as the Schwegler 1WQ or 1FQ.

- 6.6 Suitable bird boxes should include boxes designed to support birds of conservation concern likely to be present in sub-urban areas such as swifts *Apus apus* and house martins *Delichon urbica*. Suitable wall-integrated swift boxes are the Schwegler Swift Box Type 16 or 17 and suitable wall / eaves mounted house martin boxes are Schwegler House Martin Nest type 9A / 9B.

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.

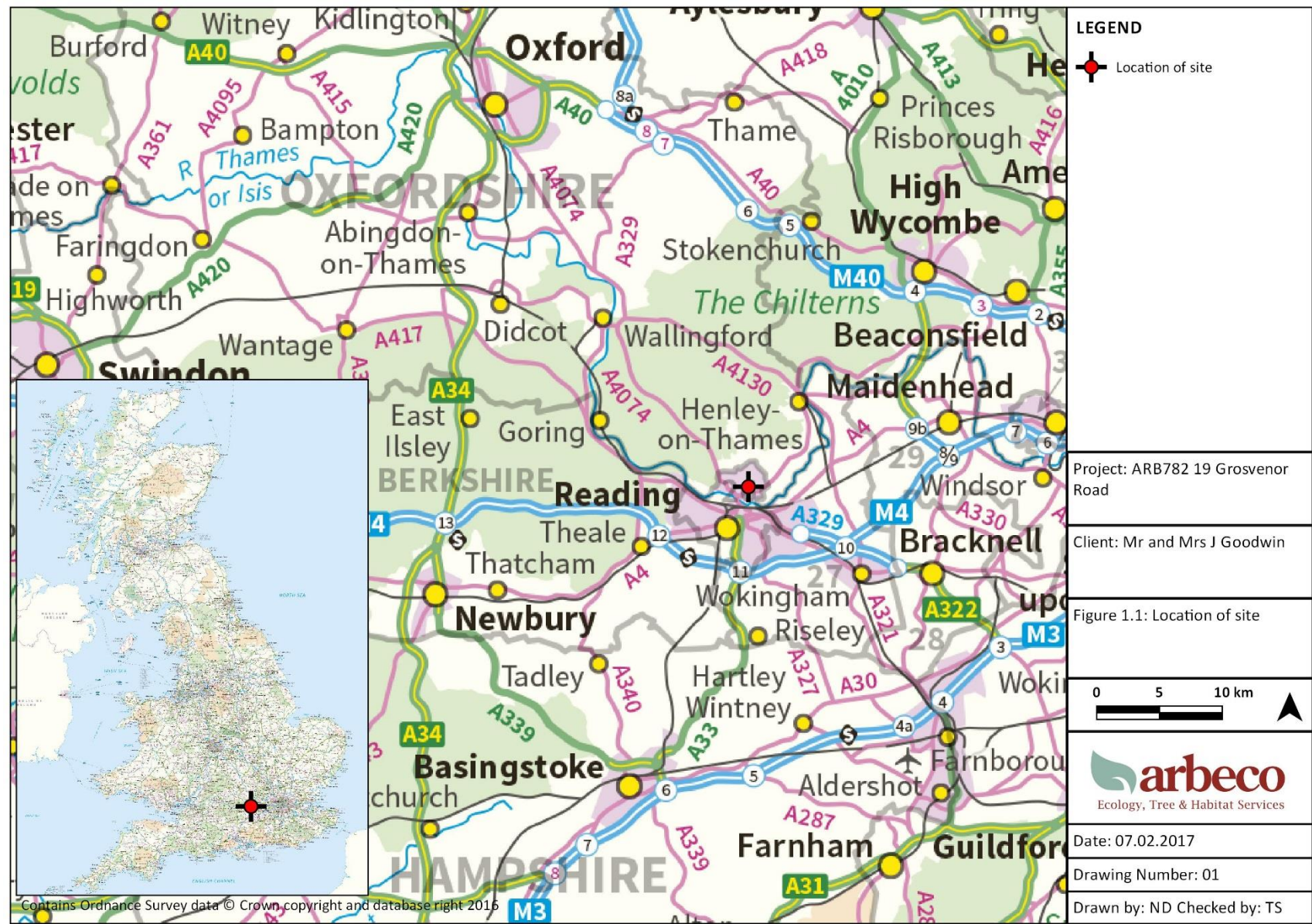
Mitchell-Jones A.J. and McLeish A.P. (2004) *The Bat Workers Manual* 3rd Edition. Joint Nature Conservation Committee.

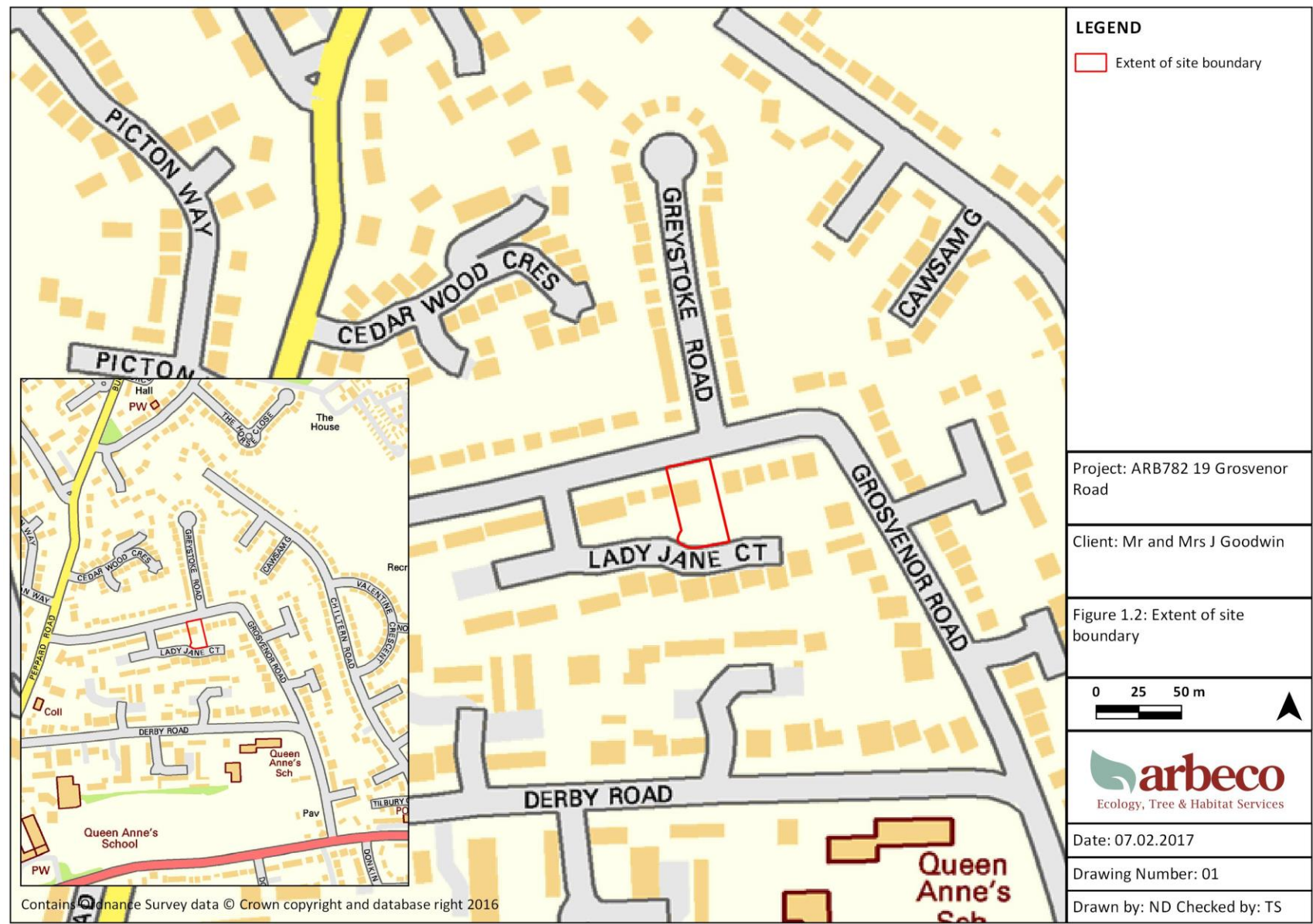
FIGURES

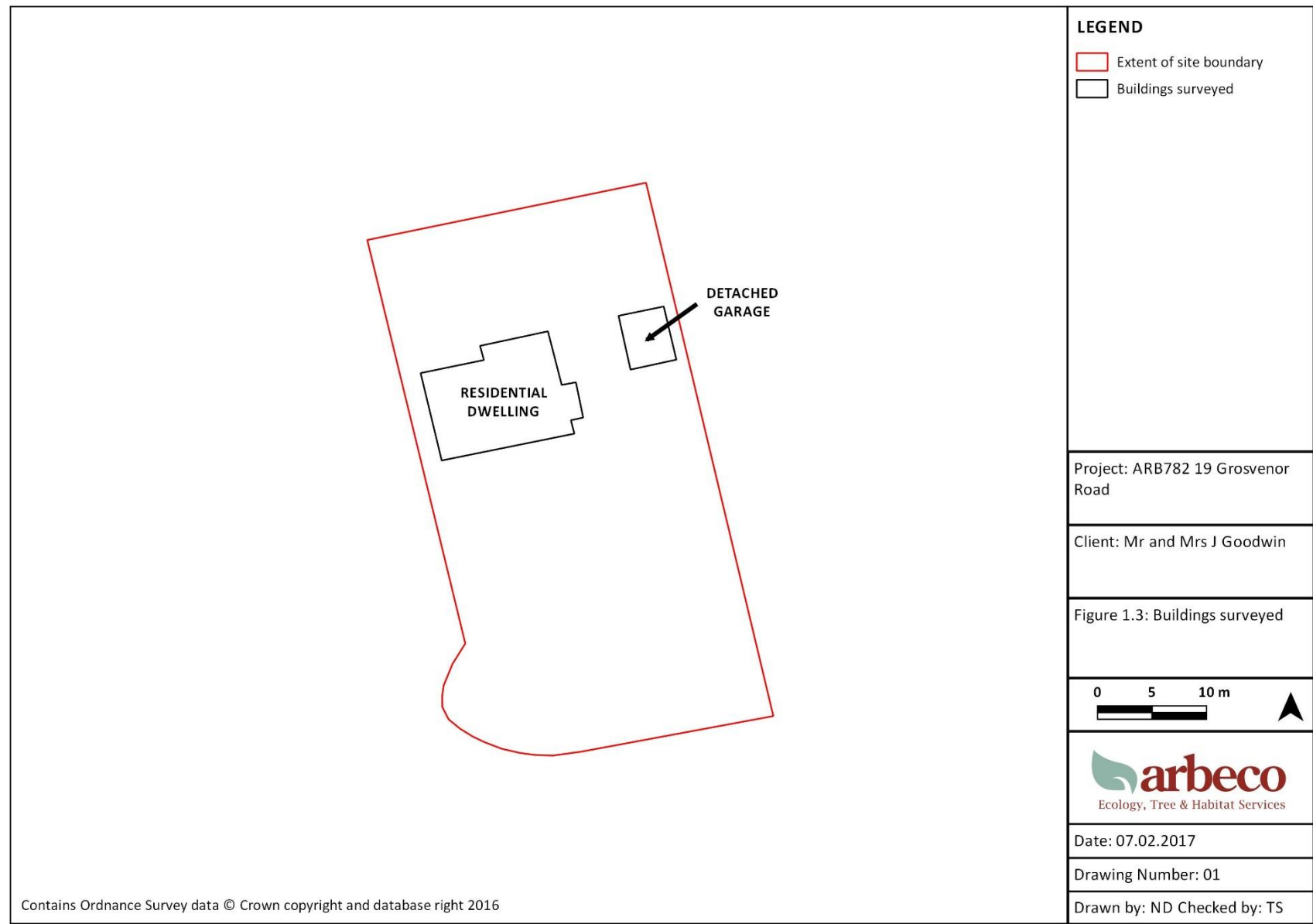
Figure 1.1 Location of site

Figure 1.2 Extent of site boundary

Figure 1.3 Building subject to survey







APPENDIX 1: Legislation relating to bats

Bats and the places they use for shelter or protection i.e. roosts, receive European protection under The Conservation of Habitats and Species Regulations 2010, as amended (Habitats Regulations 2010, as amended). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2010 (as amended), states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2010 (as amended) for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* (rather than deliberately) kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

Several bat species are considered to be Species of Principal Importance for Nature Conservation in England.

The reader should refer to the original legislation for the definitive interpretation.

APPENDIX 2: Legislation relating to birds

The Wildlife and Countryside Act 1981 (as amended)

All wild birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981, as amended.

Schedule 1

Applies to all wild birds where it is an offence:

- to take, damage or destroy a nest whilst it is being built or in use
- to kill, injure or take any wild bird (subject to certain exceptions)
- to take or destroy the egg of any wild bird.

It is also an offence to disturb any wild bird listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)

- while it is nest building
- at a nest containing eggs or young

to disturb the dependant young of any such bird

APPENDIX 3: Site Photographs



Photograph 1: North elevation



Photograph 2: East elevation



Photograph 3: South elevation



Photograph 4: Tightly fitted roof tiles



Photograph 5: Tightly fitted eaves



Photograph 6: Tightly fitted hanging tiles with one broken hanging tile on lowest course



Photograph 7: Roof void