Adeyfield Free Church

Adeyfield Free Church
Leverstock Green Road
Hemel Hempstead, Hertfordshire
HP1 2BT

Bat Survey

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Michael Jennings
Consultant Ecologist MIEEM

Limitations

Ecological surveys can only assess a site at a particular time. This evidence can be used to draw conclusions as to the likely presence or absence of species (animals and plants), population size, use of the site by animals; it is neither definitive nor complete. This study is a snapshot in time and should not be regarded as a complete study. Seasonality and weather conditions may also affect survey results.

Disclaimer

Every effort has been taken to provide an accurate assessment of the situation pertaining to this site and subject at the time of the study, but no liability is accepted by the author for any use of the report, other than for the purposes for which it was originally prepared and provided. No liability is accepted by the author for omissions or changes after the survey has taken place.

This report has been prepared for exclusive use of the commissioning party and unless agreed in writing by the author, no other party may use, make use of or rely on the contents of the report. If others choose to rely on upon this report they do so entirely at their own risk. No responsibility will be accepted for any use of or reliance on the contents of this report by any third party.

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1 Introduction and Site Description

A bat survey was undertaken of Adeyfield Free Church, Leverstock Green Road, Hemel Hempstead, Hertfordshire HP2 4HJ. The survey was requested by the owners to support a planning application. A pre-planning consultation resulted in a request from the local authority, Dacorum Borough Council (DBC) to carry out a bat survey. This report provides the results of that survey. Proposals for the site are for demolition of the existing buildings and replacement with new residential dwellings.

Adeyfield is a suburban area comprising primarily brick built two and three bedroom housing designed for Hemel Hempstead New Town. The church location is towards the eastern edge of the town with the M1 motorway corridor to the west. An industrial estate and sports ground are situated to the north; two small woodlands are approximately 1 km to the north-west and south-west and the farmland between the motorway and the edge of Adeyfield is predominantly in arable use. The immediate area provides moderate potential for foraging by bats although the housing stock has good potential to offer roosting opportunities for common and widespread bat species such as the common pipistrelle *Pipistrellus pipistrellus*.

The planning authority act on the advice of the Hertfordshire Biological Records Centre (HBRC). They hold records for flora and fauna for the county. HBRC advise Hertfordshire's local authorities on matters relating to protected species and biodiversity. A Technical Advice Note circulated by HBRC (2010) notes that there are:

"several pieces of recent guidance that provide advice on where bats are most likely to be present. Key documents are:

- **Natural England's Standing Advice to Local Planning Authorities** in the East of England (including Hertfordshire) published in September 2009; and
- **The Bat Conservation's Trust's 'Bat Surveys Good Practice Guidelines'**

These organisations have produced a "**Trigger list of where bats are likely to be present and where developers can be reasonably expected to submit a bat survey**" (BCT 2007).

These trigger lists include:

- Proposals for the modification, conversion, demolition or removal of buildings and structures (especially roof voids), all agricultural buildings particularly of traditional brick or stone with exposed wooden beams;
- All buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre-1960 detached buildings and structures within 200m of woodland and/or water;
- Pre-1914 buildings within 400m of woodland and/or water and those with gable ends or slate roofs, regardless of location;
- All listed buildings;

- Proposals in a rural setting with mature woodland, hedges, trees, grassland, rivers, lakes and ponds; all favoured habitats of bats for feeding, commuting and potentially roosting; and
- All developments affecting buildings, where bats are known to be present."

The local authority have used the list as a guide and requested a bat survey.

All species of UK bats are protected; the level of protection is described in section 2 of this report. Reasonable effort was carried out to determine the likely presence / absence of bats and the potential impacts from the proposed development.

- **This report provides confirmation that no evidence of a bat roost was found during a daytime inspection of the church buildings.**

The property is located at Ordnance Survey map reference TL 078071. A site location plan is provided in Figure 1 and photographs of the site and survey findings are included in Appendix 1.

2 Legal Protection

All bats and their roosts are protected under Schedule 5 of the Wildlife and Countryside Act (WCA) 1981 (as amended). This Act has been amended in part by the Countryside and Rights of Way Act 2000 by the inclusion of "recklessly" in the sentence "intentionally or deliberately kill …." to strengthen the legal protection to bats and make enforcement easier.

Additionally bats are afforded protection under Schedule 2 of The Conservation (Natural Habitats, & c.) Regulations 2010 (as amended). The legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture (take) bats.
- Deliberately or recklessly disturb bats (whether in a roost or not).
- Damage, destroy or obstruct access to bat roosts.

Licenses derogating from the protection afforded to European Protected Species (EPS) can be granted for a number of specified reasons. Licences for development that affect bats and other Schedule 2 species are currently determined by the Wildlife Management & Licensing Service of Natural England, information about which can be viewed on the Natural England web site
http://www.naturalengland.org.uk/conservation/wildlife-management-licensing/advice.htm.

3 Methodology

Desktop Survey
Bat records were requested from Hertfordshire and Middlesex Bat Group (H&MBG), the local bat group, for an area extending for a distance of 2 kilometres from the site.

Site Survey
Bat survey of the main building (Photograph 1), its extensions and the immediate surroundings was carried out by Michael Jennings MIEEM, a consultant ecologist and bat worker with wide experience of protected species work, especially bats, for which he has held numerous EPS licences. Bat surveys requiring building inspections can be carried out at any time of year (English Nature 2004, Bat Conservation Trust 2007).

Daytime inspection 17 December 2012
A survey was undertaken in daylight hours in dry conditions, with high cloud cover varying between 5 to 80% during the time of the survey. These weather conditions were consistent with allowing a comprehensive survey and enabled a thorough internal and external inspection of the buildings and their immediate surroundings.

Development proposals will impact on the entire site so the survey covered the whole area within the site boundaries. The location is shown on the site plan (Figure 1). Full access was gained to all areas of the site, except an area of loft space above a nursery school, which uses part of the buildings. The access limitation was not regarded as significant and this topic is discussed in the results section.

Methodical inspection was undertaken of both the interior and exterior of the buildings. The search of the interiors concentrated on the loft areas of the main church building (Appendix 1, Photographs 4 & 5) and a loft area over a passageway (Figure 2, Area 7 & Appendix 1, Photograph 9). Exposed areas such as floors, windows, window sills, walls and flat surfaces such as the loft floors, and the area under the ridge beams were all examined, using a high powered torch where necessary.

An external visual inspection was carried out of windows, walls, soffits, window ledges, eaves and the ground area surrounding the building. Special attention was given to the roof features (Photograph 8, 11, 12, 13 & 14), including tiles, ridge tiles, vent pipes and fascia boards, where present. Surveys seek to find signs such as the presence of bats, skeletons, lack of cobwebs, oil staining from bats' fur and presence of bat droppings.

Visual checks were made for moth and butterfly wings, the presence of which can help identify a bat feeding perch.

Equipment used during survey included a high powered lamp (Cluson CB2), head torch (Alpkit), a ladder, digital camera (Fuji Finepix T200), binoculars (Opticron Countryman), endoscope (Pro-vision 300) and various mirrors to aid viewing cracks and crevices.

4 Results

Desktop survey
Records from H&MBG show 12 roosts within 2 kilometres of the site, mostly common pipistrelle or assigned as an unknown species, but there is 1 brown long bat roost. This latter roost is approximately 1.1 kilometres to the west of the church buildings, last recorded in July 2007. General flight records were noted at the same time for common pipistrelle and noctule.

The nearest roost record is that of a common pipistrelle roost located 1 kilometre to the north north-west (May 2008).

A flight record in 1989 for pipistrelle species has been recorded approximately 300 metres to the south.

Twelve casualty records exist for the 2 km search area covering the period from 1989 to 2009, with none closer than 850 metres to the church buildings.

Bats are relatively long-lived species, living in extended family groups and it is likely that the same bat species and their various roosts are still active in the area. Although likely to be in the general area there is no evidence from the records to suggest bats may be associated with the church buildings.

Site Survey
Daytime inspection 17 December 2012
An internal inspection was conducted initially. This survey covered all areas within the church and its associated buildings, except for a loft void above the rooms used to house the nursery school. This area was not able to be accessed due to the lack of an entry point. However the eaves of the building have been installed with wire netting as a response to historical use of the loft by squirrels. The presence of this netting would also exclude bats from entry to this loft space. The bitumastic roofing felt used on this part of the building and the flat roof sections at either end of the nursery school are well-fitting and no gaps were observed which could provide entry points to the underneath of the felt.

The main church building has a large loft void of a trussed roof construction. Trussed roofs are generally more cluttered than traditional roof designs but the loft void associated with the main church has a large internal space that, in spite of its design, provides a large flight area. However the only evidence of occupation was that of squirrel and mouse droppings. Squirrel droppings (Appendix 1, Photograph 10) were found both scattered and also gathered into a small pile. Mouse droppings were very few in number and scattered in their distribution. No birds' nests were seen. The entry point to this loft space is likely to be via gaps in the timber cladding which is present above the guttering (Photographs 8 & 11). Cement roof tiles on the main church building are in good repair and provide no entry opportunities for bats.

The ground floor of the main church building comprises a single large room with a raised dais at the south-eastern end (Photograph 4). Entry to the loft above was facilitated by a ladder installed behind a screen in the southern corner of the room. The ground floor provided no evidence of use by bats. Similarly,

no other areas showed any evidence for use by bats. Another loft space (Photograph 9) was searched which is located above the passageway that links the nursery school and the church entrance area. This loft has an air brick installed in a gable end wall. It is partly obscured by an old wasps' nest which adheres to the brick.

Close inspection of the roof areas could be gained from two areas of flat roofs, which are located at either end of the nursery school building (Figure 2, Areas 3 & 5). As a result this made possible the ability to closely inspect the roof areas and subsequently provide a high degree of confidence that the buildings supported limited opportunities for bats to roost.

A fascia board extends along the church entrance area to front and rear. This is in good repair and tight-fitting, offering no opportunities for roosting.

Various mature coniferous and deciduous trees are present, both on the site and just outside the site boundary. However none of the trees have the typical characteristic features that have the potential to support a bat roost. Features such as holes, cracks in branches, crevices or a thick covering of ivy are all absent.

5 Discussion and Recommendations

Site Survey
All the areas searched showed no evidence of use by bats. Opportunities for roosting are limited as a result of i) the installation of wire netting at eaves level above the nursery school in the lower section of the church buildings ii) the good state of repair of the cement tiles on the main church building iii) the good state of repair of the bitumastic roofing felt that has been used as a roof covering for the lower sections of the church buildings. Where there are opportunities for use, such as the large roof void in the main church, there are no signs of use.

As noted in the methodology section of this report bat surveys requiring building inspections can be carried out at any time of year. Reasonable effort was carried out to determine the likely presence / absence of bats. After a thorough investigation the assessment of survey results indicates with a high degree of probability that there is no use by bats of the buildings subject to survey.

Assessment is based on the experience of the surveyor and the evidence from the daytime inspection of the roost.

Although the findings are such that it is considered that the development proposals are not likely to impact on bats a number of recommendations are made, based on the following:

i) Bat species, for example Pipistrelle species, are capable of roosting in small crevices, providing little or no indication of their presence.
ii) The buildings have areas which provide entry points to their interiors. They have small crevices around roof level and the gaps do provide potential for loft access, especially around the timber at the top of the walls on the main church building.
iii) Various bat records are known from the area surrounding the development and it can be assumed that bats will, as a minimum, forage in the general area.

Recommendation 1
Submit this report to comply with the request by the local planning authority in their planning application response for a bat report

Recommendation 2
If a bat(s) are found during the proposed works then:
i) works will stop immediately
ii) the licensed bat ecologist will provide appropriate advice
iii) bats will only be handled by the bat ecologist

Recommendation 3
The current survey results are not indefinitely valid and a re-survey should be carried out if implementation of the planned development is delayed for longer than two years.

6 References

Bat Conservation Trust 2007. *Bat Surveys – Good Practice Guidelines*

English Nature 2004. *Bat Mitigation Guidelines*

Hertfordshire Biological Records Centre 2010. *Technical Advice Note Bats: the planning system, law and best practice*

Figure 1 Site location plan

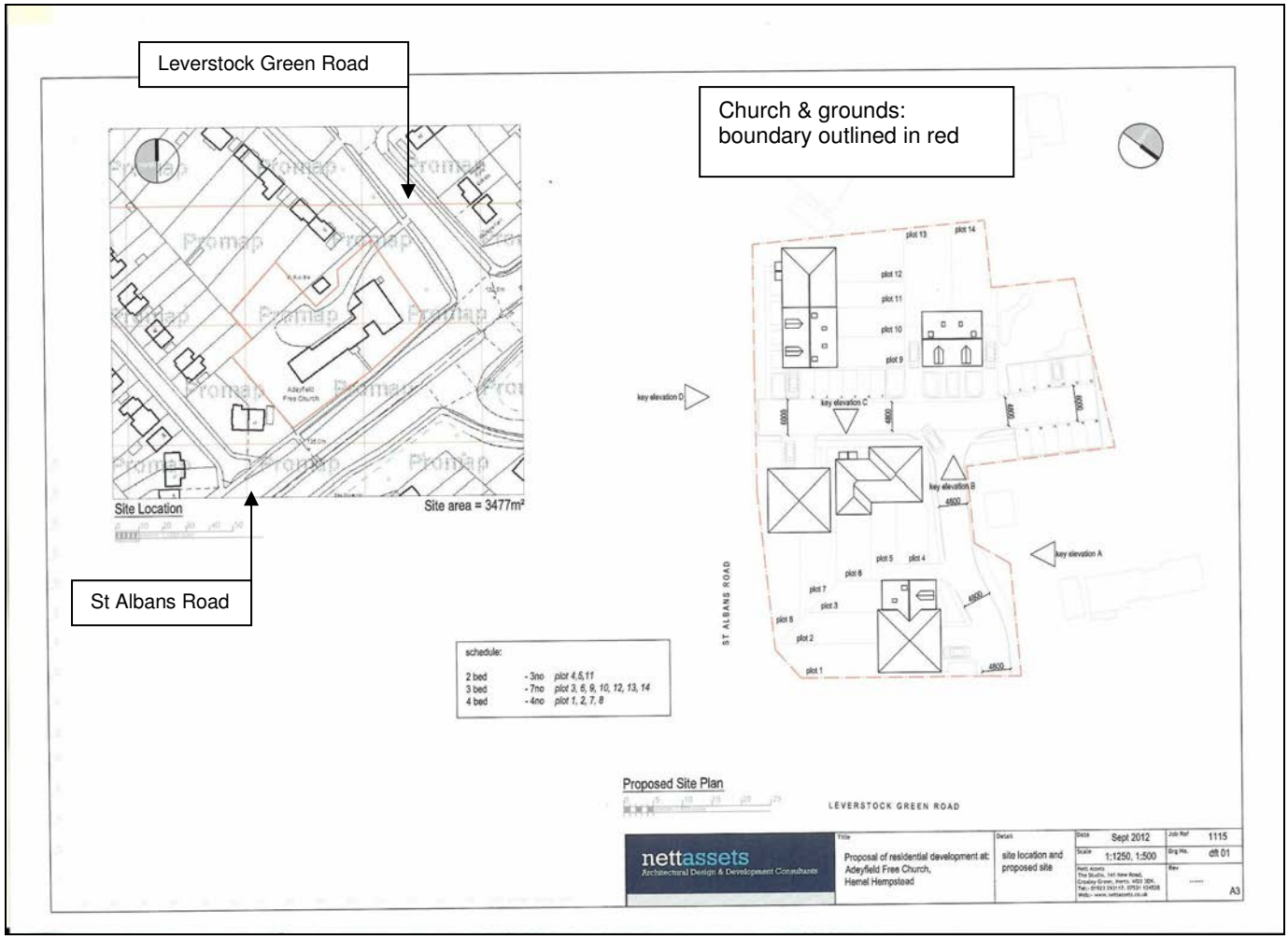
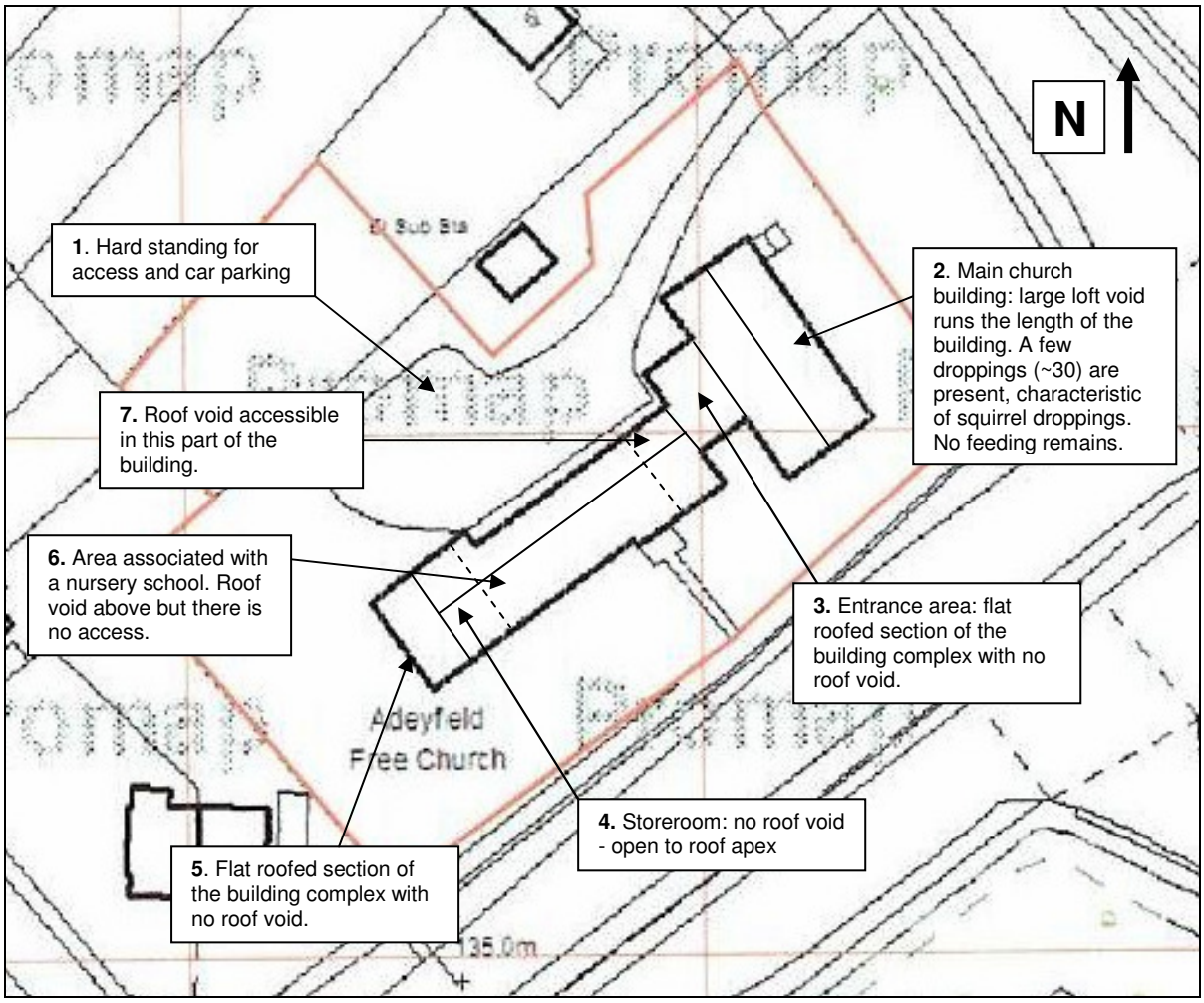


Figure 2 Survey results



Appendix 1 Photographs

Photograph 1

Adeyfield Free Church

The church buildings comprise the tallest section which is used for the church services (shown to the right in the photograph) and various lower sections, the main parts of which are presently used as a nursery school.

Photograph 2

Main Church Building

This tallest section of the building has a large loft space of trussed construction, which is accessed internally via a ladder in the southern corner of the building.

Photograph 3

Main Church Building / Access road to rear

The red dotted line illustrates the approximate location of the ceiling, with the large loft void above, which extends to the ridge apex.

Photograph 4

Main Church Building interior

The interior of the building was searched for evidence of bats, especially droppings. Although churches are cleaned evidence may sometimes be found by viewing areas which are difficult to access and clean (e.g., walls, high window sills). No evidence of use by bats was observed.

Photograph 5

Loft space of main building

The photograph shows the large loft interior at a gable end. The entire loft was searched from end to end, looking for signs of bats or use by bats. None was observed.

Photograph 6

Loft space of main church building

Trussed roof construction, such as used in this building, can inhibit use by certain bat species, due to the cluttered nature of the construction.

However the roof void in this building is sufficiently large that there is potential for adequate flight room for bats, although there was no sign of use.

Photograph 7

Storeroom
Identified as area 4 on Figure 2.

A mammal trap has been installed in a small entrance into the roof void above the nursery with the purpose of capturing and removing squirrels. There have been no recent signs that squirrels are currently using this part of the building after wire netting has been installed at eaves level to prevent squirrel entry.

Photograph 8

Main Church Building

Identified as area 2 on Figure 2.

The location of the gap in the timber facing, as shown in Photograph 11, is arrowed.

Photograph 9

Roof void
Identified as area 7 on Figure 2. A hatchway from the passageway below gives access to a small loft void. There were no signs of bats using this area and no gaps were seen that could provide bat access. Gaps at eaves level had been previously blocked with wire netting to prevent squirrel access. An air brick on the gable end wall had the remains of a wasps nest adhering to the brick, partly obscuring the access.

Photograph 10

Droppings in the loft of the main building
A few mouse droppings and a number of larger droppings in greater numbers (~ 30 in totals) were found. These larger droppings were found both scattered and also gathered into a small pile.

The larger droppings are likely to belong to the grey squirrel (*Sciurus carolinensis)*. A likely entry point is shown in the photograph below.

Photograph 11

Timber facing above gutter (Main Church Building)

The timber facing shows evidence of being gnawed to enlarge the hole. This is likely to have been caused by squirrels which have historically been entering the church buildings. In the past squirrels have periodically been trapped and removed (Pers. Comm. church warden).

Photograph 12

Roof section above nursery school

Identified as area 6 on Figure 2. A nursery school occupies part of the lower single storey buildings attached to the main church building. There is a sealed section of the roof above the nursery school area. Although this area cannot be accessed for survey the eaves and roof line were closely examined and are well sealed (example - see Photograph 13).

Photograph 13

Roof covering above the nursery school

Identified as area 6 on Figure 2.

Bitumastic roofing felt above the nursery is well fitted and sealed, providing no opportunities for access by bats. In the past squirrels have entered the building. Wire netting has now been installed at eaves level to deter squirrels from entry. This will also prevent potential access by bats.

Photograph 14

Flat roofed area

Identified as area 5 on Figure 2.

The bitumastic roofing felt is well fitted and sealed, providing no opportunity for bats. No signs of bats were evident.