



Abacus Belsize Primary School, Hampstead

Preliminary Roost Assessment

Report for Kier Construction

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Executive Summary

The Ecology Consultancy was commissioned by Kier Construction to undertake a Preliminary Ecological Appraisal at the Abacus Belsize Primary School application site, Hampstead, London. The findings of that survey identified three buildings (B1, B2, and B3) with potential to support roosting bats. It was recommended that further surveys be carried out to confirm the status of bats within these three buildings. The findings of the surveys, together with appropriate recommendations, are presented in this report, the main findings of which are:

- A Preliminary Roost Assessment of all buildings on site was carried out on 13 June 2016.
- No bats, or evidence of bats were recorded during the building inspection. However, features with potential to support roosting bats were identified on all buildings and these buildings were assessed as having **low potential** to support roosting bats.
- No bats were recorded emerging from any buildings on site during the emergence survey and no commuting or foraging bats were recorded on or adjacent to the site.
- It is assessed that it is likely that there are no bat roosts within the three buildings on site and no further surveys are required, works can proceed without any significant constraint.

1 Introduction

BACKGROUND

- 1.1 The Ecology Consultancy were commissioned by Kier Construction in June 2016 to carry out a bat survey of two buildings within the Abacus Belsize Primary School application site in Hampstead, London. This followed recommendation within the Preliminary Ecological Appraisal for the site (The Ecology Consultancy, 2015)

SCOPE OF THE REPORT

- 1.2 This report provides an assessment of the current status of bats within the site and outlines any avoidance, mitigation, compensation and enhancement measures that may be required.
- 1.3 The Preliminary Roost Assessment comprised a daytime inspection of buildings onsite to look for evidence of roosting bats and a single dusk emergence survey.
- 1.4 This assessment has been prepared with reference to best practice guidance published by the Bat Conservation Trust (Collins, 2016) and as detailed in British Standard 42020:2013 *Biodiversity – Code of Practice for Biodiversity and Development* (BSI, 2013).

SITE CONTEXT AND STATUS

- 1.5 The site is located in an urban area and is bound by the A502 to the south-west, Downshire Hill to the north-west and residential housing to the north and east. The wider surrounding area largely comprises residential housing with trees lined streets. The proposed development site totals approximately 0.193 hectares (ha) in size. The National Grid Reference for the centre of the site is TQ 269 856).
- 1.6 The nearest area of open green space is Hampstead Heath, a Site of Metropolitan Importance for Nature Conservation (SMINC), located approximately 300 metres (m) to the north east of the site.

DEVELOPMENT PROPOSALS

- 1.7 The outline proposals are for the redevelopment of the site into a new school, including demolition of a single building and expansion and refurbishment of the main police station building.

2 Methodology

BAT SURVEY

Personnel

- 2.1 The building inspection survey was carried out by Charlie Dwight and assisted by George Siskos. Charlie holds a Class 2 Bat Survey Licence (Natural England licence number 2015-11425-CLS-CLS), is a Chartered Ecologist CEcol and full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Charlie has ten years' experience of commercial bat surveys and has designed and overseen numerous bat mitigation projects under European Protected Species Mitigation (EPSM) licence.
- 2.2 George Siskos and Michael Sears provided additional assistance during the dusk emergence and both are experienced in conducting professional bat surveys.

Building Inspection

- 2.3 The building inspection comprised a thorough external and internal inspection of two structures.
- 2.4 The external inspection involved a detailed search of all accessible architectural features for bat droppings, urine staining, scratch marks, staining around suitable crevices and feeding remains. Windowpanes and other external surfaces were visually checked for droppings or other secondary evidence. A high-powered torch was used to illuminate recesses and crevices at height and these were inspected using close focusing binoculars.
- 2.5 All external features, such as soffit boxes, roof tiles, hanging tiles, ridge areas and brickwork, were assessed for their suitability as bat roosting sites. Close focusing binoculars were used to inspect any possible bat access features, such as those that may be found along ridge areas. Any features that could potentially provide access into internal areas such as roof voids and cavity walls were noted.
- 2.6 Any splits, holes and crevices within brickwork or timbers, including around window and door frames, were examined both externally and internally for signs of staining and droppings using a high powered torch and close focusing binoculars. If any bat droppings or other evidence was found the search was then concentrated on any features in the vicinity that may have concealed roosting bats.

- 2.7 During the internal inspection the surveyor worked through the internal roof voids of the buildings, searching each adjoining roof void as well as any small storage areas, such as dormer rooms.
- 2.8 Within the roof voids and other internal spaces all surfaces including floor areas were checked for discarded feeding remains and bat droppings. A high-powered torch was used to illuminate the length of each individual rafter, where appropriate to the roof type, looking for bats, staining and droppings. The roofing material was also inspected for areas of overlapping materials, holes and potential access points into the ridge area. Any open water tanks were inspected for the presence of bat corpses.
- 2.9 The timber frame of the roof and supporting architectural features were closely inspected for any roosting bats. This included searching any accessible timber joints and the junctions between rafters, purlins and braces and any open mortise joints. A sample was collected from any scattered or accumulated bat droppings that were found and a rough estimation of quantity was made.
- 2.10 The survey methodology followed best practice guidelines (Mitchell-Jones & McLeish, 2004; Collins 2016). Equipment used and at hand during the building inspection included an extendable ladder, close-focusing binoculars, endoscope (RIDGID SeeSnake, Micro), hand held LED torch and a high-powered torch.

Assessment criteria - buildings

- 2.11 The potential for the buildings to support roosting bats was assessed using the findings of the survey. The following criteria were used to determine the level of potential of the buildings for roosting bats:
- **Negligible** – While presence cannot be absolutely discounted there were no significant visible features that could be used by bats for roosting.
 - **Low** – Small number of potential roosting features that could be utilised by individual opportunistic roosting bats. Sites situated within isolated habitat that could be used by foraging bats but which is not connected by prominent linear features such as woodland edge, hedgerows and tree lines.
 - **Moderate** – Several potential roosting features in the buildings or other structures. There is surrounding habitat such as woodland, scattered trees, hedgerows suitable to support foraging and roosting bats. The site is connected with the wider

landscape by linear features such as woodland edge, hedgerows and tree lines that could be used by commuting bats.

- **High** – Buildings or other structures, such as mines, caves, tunnels, ice houses and cellars, with numerous features of potential significance for roosting bats. Surrounding landscape has high value habitat for roosting, foraging and commuting that is contiguous with on-site habitats. The site is connected with the wider landscape by strong linear features and may be close to known roosts or other potentially valuable habitat resources.
- **Confirmed roost** – Evidence indicates a building or other structure is used by bats, for example:
 - bats seen roosting or observed flying from a roost or freely in the habitat;
 - droppings, carcasses, feeding remains;
 - bats heard ‘chattering’ inside on a warm day or at dusk.

2.12 Where possible, the number of bats likely to be using the roost site, and the species of bat(s) would be determined from the evidence available.

Dusk emergence surveys

2.13 One dusk emergence survey was carried out in suitable weather conditions on 13 and June 2016. The survey commenced at least 15 minutes before sunset and continued for up to 1.5 hours after sunset.

2.14 The dusk emergence survey focused on features with potential to support roosting bats on B1, B2 and B3. Three surveyors were positioned to allow clear views of each identified feature. Each surveyor was equipped with an Elekon Bat Scanner and Anabat Express bat detector. Recordings were later analysed using Analook V3q software to aid the identification of species according to Russ (2012). The surveyors recorded the time of bat passes, along with the species and activity where apparent. Activity was categorised as emergence/re-entry, commuting, foraging. All surveys followed standard protocols and accepted standards (Mitchell-Jones & McLeish 2004; Collins, 2016).

LIMITATIONS

2.15 Bats are highly mobile animals and can move roost sites both within and between years. Where surveys are not spread throughout the bat active season it is possible that they could miss roosts that are occupied earlier or later in the year. However, where undisturbed, secondary evidence of bats inside a building is likely to be

detectable throughout the year. The detection of small numbers of crevice dwelling species may remain problematic in some cases, such as where droppings accumulate within an inaccessible void.

- 2.16 Access into the void of the store room in B1 could not be gained due to the narrow space. However, the external inspection focussed on features with potential to grant access/egress for bats to this space from the outside and the findings of the building inspection are supported by those of the dusk emergence survey, therefore, it is not considered that this limitation has significantly affected the assessment.

3 Survey results

BUILDING INSPECTION

- 3.1 The building inspection included two buildings; B1: former stable block and store and B2 former police headquarters and court rooms. Each building is detailed individually below with a site plan provided in Appendix 1 and supporting photographs of key features in Appendix 2.

Building 1: Former Stable Block and store

- 3.2 Comprised a single storey brick structure with a pitched tiled roof (Appendix 2, Photograph 1) and a single-storey brick outbuilding with a flat asphalt roof at the west of the building (Appendix 2, Photograph 2). Three timber framed sash dormer windows protruded from the roof of the building and gaps were present under lead flashing at the base of each window. Numerous gaps were also present under the slate roofing tiles of the. Gaps and dense cobwebs were present under a rotted timber fascia which was present upon the southern elevation of the store at the west of the building
- 3.3 The internal roof void of the former stable block was approximately 2m tall x 3m wide x 8m long and was formed from timber rafters and lined with white painted close board timber sarking. Fibreglass roll insulation was used on the floor between the floor joints. Gaps were present at the apex of north and southern gable ends with gaps were also present under the eaves, which were open and did not feature a soffit. Dense cobwebs were present throughout the void and mouse *Mus musculus* droppings were present upon the floor of the void.
- 3.4 The store room had a lowered ceiling which was damaged in places and exposed a narrow gap between the lowered ceiling panels and the roof.
- 3.5 No bats or evidence of roosting bats, such as droppings or staining, was identified within either of these roof voids.
- 3.6 Numerous gaps were seen to be present under the lead flashing, slate tiles and under the eaves and could potentially provide access for roosting bats into the roof voids. However, due to the location of the building close to a busy road within north London and the lack of evidence of roosting bats within the buildings, the risk of a roost being present is much reduced. As such, the building is assessed as having **Low** potential for bats.

Building 2: Former Police Station

- 3.7 Building 2 was a large three storey Victorian red brick built structure with multiple pitched tiled roofs and a flat roofed extension to the rear (Appendix 2, Photograph 3). The internal roof structure comprised timber framed sash windows. The front (south) facing section of the building comprised multiple pitched slate roofs and a slate was missing on the west elevation (Appendix 2, Photograph 4). The ridge was covered with lead and gaps were present under the lead on the western elevation of the building.
- 3.8 The “L” shaped roof void was approximately 2.5m tall x 5m wide x 15m long and was formed from timber rafters and lined with white painted close board timber sarking (Appendix 2, Photograph 5). A window was present within the roof void on the southern facing elevation of the building and the void within this section of the roof void was subject to higher levels of ambient light. Areas of the roof void, inaccessible to the surveyor, extended under the eaves of the building on the north and southern elevations.
- 3.9 No bats or evidence of roosting bats, such as droppings or staining, was identified within this roof void.
- 3.10 Numerous gaps were present under the slate tiles and under the lead along the ridge, which provide potential access into the roof void for roosting bats. However due to the location of the building upon a busy road within north London and lack of evidence of roosting bats within the roof void, the building was assessed as having **Low** potential for roosting bats.

DUSK EMERGENCE/DAWN RE-ENTRY SURVEYS

First Dusk Emergence Survey: 14 June 2016

- 3.11 Sunset was at 21:14, the temperature at the start of the survey was 19°C, cloud cover was 8/8 okta and there was no wind (Beaufort 0). The survey started at 20:45 until 22:30.
- 3.12 No bats were observed emerging from any of the features identified during the building survey and no bat activity was recorded within the site boundaries during the course of the survey.
- 3.13 Two common pipistrelles were recorded by surveyor three who was located on the main road (southern elevation) outside of the site boundary. The bats were observed

commuting across the main road towards Hampstead Heath SMINC. No other commuting or foraging activity by bats was recorded.

4 Conclusions and Recommendations

CONCLUSIONS

- 4.1 No bats were recorded emerging from any of the buildings on site and no foraging or commuting bats were recorded within the site boundary during the survey. Only very low levels of bat activity were recorded during the survey and this was outside of the site to the south of the site. This activity was limited to two pipistrelles commuting from the south west towards Hampstead Heath.
- 4.2 Two dusk/dawn emergence/re-entry surveys were recommended within the Preliminary Ecological Appraisal. However, the site was heavily lit, which was only apparent once the sun had set and the lights on site were activated. High levels of lighting can act as a deterrent for most bat species (Hundt 2012). Furthermore, the initial assessment was based on external building features only and was precautionary due to difficulty in identifying all aspects of the roof from ground level. For this reason the buildings on site were less suitable to support bats than suggested within the original Preliminary Ecological Appraisal and on the basis that no bats were observed on site, a second survey was not considered necessary.
- 4.3 It is assessed that it is likely that there are no bats roosting within any of the two buildings on the site. Works can proceed without specific constraints relating to roosting bats.

RECOMMENDATIONS

- 4.4 In the unlikely event that roosting bats are found during works, works must cease immediately and a licenced bat ecologist should be called to site to re-assess the situation and devise an appropriate mitigation strategy.
- 4.5 It is recommended that if works are delayed beyond two years of the date of the last survey that an update survey is carried out.

References

Department for Communities and Local Government (2012) *National Planning Policy Framework*. Department for Communities and Local Government, London.

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Her Majesty's Stationary Office (2000) *The Countryside and Rights of Way Act* (CRoW).

Her Majesty's Stationary Office (2010) *The Conservation of Habitats and Species Regulations 2010* (as amended).

Collins (2012) *Bat Surveys, Good Practice Guidelines, 3rd Edition*. Bat Conservation Trust, London.

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

Russ, J. (2012). *British Bat Calls: A Guide to Species Identification*. Pelagic Publishing, Exeter.

The Ecology Consultancy (2015) *Abacus Belsize Primary School - Preliminary Ecological Appraisal Assessment Report for Kier Construction*.. The Ecology Consultancy, London.

Appendix 1: Site map



Job title
Abacus Belsize Primary School
TEC Job no. 141284

Client
Kier Construction

Drawing title
HABITAT SURVEY MAP

Section:	N/A	Scale (at A3)	1:300
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Date of survey	13/03/2015
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Surveyor	Matt Pendry
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Drawn	JD	Checked	GS
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Approved	MP	Date	07/04/2015
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KEY

- Site boundary
- Tree
- Introduced shrub
- Semi - improved grassland
- Ephemeral/short perennial
- Hard standing
- Building
- Target note



This plan is provided solely for the purpose of supporting the description of the ecological features of the site as contained in the accompanying report

Appendix 2: Photographs

Photograph 1

Building 1 western elevation of old
stables.



Photograph 2

Building 1, southern elevation of
store.



Photograph 3

Building 2, south western
elevation.



Photograph 4
Missing tile on the western
elevation of B2



Photograph 5
Interior of the roof void in B2.



Appendix 3: Legislation and Planning Policy

BATS

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or taking (capture) of Schedule 2 species (e.g. bats);
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate;
 - b) to affect significantly the local distribution or abundance of the species;
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance whilst occupying a place of shelter or protection;
- Intentional or reckless obstruction of access to any place of shelter or protection; and
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance, which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation, but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

For development activities, a Natural England EPSM Licence application can only be drawn up after planning permission has been granted. However, the granting of planning permission does not guarantee that a licence will be issued by Natural England.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded *de facto* protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost.

PLANNING POLICY

In addition, bats are protected and their conservation promoted through the National Planning Policy Framework (NPPF), Borough of Spelthorne Core Strategy (2009) for example; Policy EN8 states '*The Council will seek to protect and improve the landscape and biodiversity of the Borough by: c) ensuring that new development, wherever possible, contributes to an improvement in the landscape and biodiversity and also avoids harm to features of significance in the landscape or of nature conservation interest, d) refusing permission where development would have a significant harmful impact on the landscape or features of nature conservation value*'.

SPECIES OF PRINCIPAL IMPORTANCE FOR THE PURPOSE OF CONSERVING BIODIVERSITY AND BIODIVERSITY ACTION PLANS

The NERC Act 2006 states that 'every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity', otherwise known as the Biodiversity Duty. Under Section 41 of the Act, the Secretary of State must publish a list of the living organisms and types of habitat which in the Secretary of State's opinion are 'Species of Principal Importance for the Purpose of Conserving Biodiversity'. This list is based on priority species recognised by the UK Biodiversity Framework, and in addition to Annex II species listed under The Conservation of Habitats and Species Regulations 2010, as amended. The Section 41 Species of Principal Importance for the Purpose of Conserving Biodiversity list replaces the list published under Section 74 of the Countryside and Rights of Way (CROW) Act 2000 as those species of material consideration to the planning process. With regard to bats, these are barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule bat *Nyctalus noctula*, soprano pipistrelle

Pipistrellus pygmaeus, brown long-eared bat *Plecotus auritus* and greater and lesser horseshoe bats *Rhinolophus ferrumequinum* and *R. hipposideros*.

All bat species are identified as a key species group within the Greater London Biodiversity Action Plan (BAP).



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