



Ecology Consultancy

King's College Halls / Bat Presence or Likely Absence Surveys / Report for Mount Anvil



King's College Halls, Kidderpore Avenue

Bat Presence or Likely Absence Surveys Report for Mount Anvil

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Executive Summary

The Ecology Consultancy carried out a Preliminary Bat Roost Assessment of buildings at King's College Halls of Residence on Kidderpore Avenue, Hampstead in July 2014. The purpose of the survey was to assess the potential for the buildings to support legally protected roosting bats. Buildings B5, B7 and B8 were assessed as having **moderate** potential to support roosting bats. Buildings B1, B3, B4, B9 and B10 were assessed as having **low** potential to support roosting bats. The Ecology Consultancy was subsequently commissioned by Mount Anvil to undertake a suite of dusk emergence and pre-dawn re-entry surveys to establish the presence or likely absence of bats from buildings B1, B3, B4, B5, B7, B8, B9 and B10. The findings of these surveys and appropriate recommendations are presented in this report, the main findings of which are:

- Bat Presence or Likely Absence Surveys, comprising one dusk emergence survey and three pre-dawn re-entry surveys, were carried out on 24th July, 25th July, 1st August and 20th August 2014.
- No bats were recorded emerging from or entering the buildings on site during these surveys.
- Four species of bat, common and soprano pipistrelle, serotine and Leisler's bat were recorded to be using the site. Common pipistrelle were recorded most frequently, with the majority of activity by both pipistrelle species recorded in the west end of the site. Lower levels of activity were recorded in the centre, north and east of the site. Occasional commuting activity by serotine and Leisler's bat was recorded in the centre and west of the site.
- On the basis of these findings bat roosts are assessed as likely to be absent from the site, therefore, no further surveys are required.
- Recommended mitigation, comprising precautionary working approach, provision of artificial roosting opportunities and protection of existing trees, are provided in Section 4.
- Recommendations regarding site enhancements, including a lighting strategy and planting to be incorporated within the proposed development, are also provided.

1 Introduction

BACKGROUND

- 1.1 The Ecology Consultancy was commissioned in July 2014 to carry out a Preliminary Bat Roost Assessment of ten buildings within the King's College Halls site on the northern side of Kidderpore Avenue, Hampstead. The findings of this survey identified that three of the buildings (B5, B7 and B8) on site had moderate potential to support roosting bats and that another five buildings (B1, B3, B4, B9 and B10) had low potential to support roosting bats. A corresponding number of dusk emergence and/or pre-dawn re-entry surveys were recommended to determine the presence of likely absence of bats within these buildings. The Ecology Consultancy was subsequently commissioned in July 2014 to carry out the recommended surveys.
- 1.2 The surveys and subsequent reporting were undertaken to support and inform a planning application for the demolition of some and refurbishment other (including all listed) existing buildings, and the redevelopment of the site for residential use.

SCOPE OF THE REPORT

- 1.3 This report details the methodology, results and conclusions of the Bat Presence/Likely Absence Surveys, carried out by The Ecology Consultancy on 24th July, 25th July, 1st August and 20th August 2014. The surveys comprised one dusk emergence survey and three dawn re-entry surveys.
- 1.4 The bat activity recorded during the surveys is shown on the plans provided in Appendix 1, survey data are provided in Appendix 2, and the legal protection and planning policy afforded to bats is outlined in Appendix 3.
- 1.5 Any potentially significant ecological constraints that may affect the proposals are discussed. Recommended precautionary measures that should be followed prior to, and during, construction works are described.

SITE CONTEXT AND STATUS

- 1.6 The site comprises ten buildings with associated hard standing, large areas of amenity grassland, introduced shrub, tall ruderal vegetation, a small patch of semi-natural broadleaved woodland with continuous scrub, and a mixture of scattered mature and semi-mature trees.

- 1.7 The site is located in an urban area with Kidderpore Avenue bordering the southwest boundary of the site, a tennis club and residential houses to the north, a church and primary school to the northwest and the residential properties of Croft Way to the east. The wider landscape consisted of residential and commercial properties with the A41 Finchley Road located approximately 85 metres (m) to the west of the site. Green spaces located in the vicinity included Hampstead Cemetery, approximately 200m southwest of the site, and West Heath, part of Hampstead Heath, approximately 575m northeast of the site.
- 1.8 The proposed development site totals approximately 1.23 hectares (ha) in size. The National Grid Reference for the centre of the site is TQ 254 859.

DEVELOPMENT PROPOSALS

- 1.9 The outline development proposal was not finalised at the time of writing, however current proposals consider the potential for buildings B1 and B2, in the south of the site, and a B7 in the west of the site, to be demolished (Appendix 1, Figure 2).
- 1.10 If demolition proceeds, new buildings will be proposed for construction within the demolition footprint, but with an additional extension to B7 in the north of the site. The remaining buildings on site, including the derelict chapel, were to be retained and partially refurbished. In addition, new townhouse buildings would be constructed to the east and west of the chapel. In the current proposal, the majority of the scattered trees on site would be retained, however, a small number of trees to the south of the chapel are to be removed.

2 Methodology

BAT DUSK EMERGENCE AND PRE-DAWN RE-ENTRY SURVEYS

- 2.1 Buildings B5, B7 and B8 were each identified as having **moderate** potential to support roosting bats. Each potential roosting feature on these buildings was subsequently subjected to two dusk emergence and/or dawn re-entry surveys over the 24th and 25 July, and the 1st, and 20th August 2014. Buildings B1, B3, B4, B9 and B10 were each identified as having **low** potential to support roosting bats, and were subject to one dusk emergence survey on 24th July 2014. Buildings B2 and B6 were assessed as having **negligible** potential and no further surveys were undertaken.
- 2.2 The objectives of the surveys were to:
- Determine if any bats are roosting in the buildings;
 - Identify the bat species using the site; and,
 - Determine the nature of activity for different species, for example foraging, commuting and roosting.
- 2.3 A total of twelve surveyor positions were required to cover all potential bat access/egress points and features with potential to support roosting bats identified during the Preliminary Bat Roost Assessment. Six surveyor positions were required to cover the suitable features identified on those buildings requiring two dusk emergence or dawn re-entry surveys.
- 2.4 The surveys were carried out by one licensed bat ecologist (Bat Survey Class Licence CL18 - Registration number CLS02362), supported by a team of experienced bat ecologists.
- 2.5 Each surveyor used a BatBox Duet bat detector to pick up any echolocation calls. All bat activity was recorded using Roland Edirol 24bit 96KHz Wave/MP3 recorders attached to each bat detector. Recordings were later analysed using BatSound to aid the identification of species according to Russ (2012).
- 2.6 The survey methodology followed the Bat Conservation Trust *Bat Survey - Good Practice Guidelines 2nd Edition* (Hundt, 2012).

CONSTRAINTS

- 2.7 It should be noted that, whilst every effort has been made to obtain a comprehensive insight into bat activity on the site, no investigation can ensure the complete characterisation and prediction of the natural environment.

3 Survey results

BAT PRESENCE/LIKELY ABSENCE SURVEY

- 3.1 A dusk emergence survey was carried out on 24th July 2014, and three dawn re-entry surveys were carried out on 25th July, 1st August and 20th August 2014. All surveys were conducted in suitable temperature and weather conditions over an appropriate survey duration (see Appendix 2, Tables 1 - 4), in accordance with survey guidance (Hundt, 2012). The survey findings are mapped in Appendix 1, recorded in detail in Appendix 2, and summarised below.

Dusk Emergence Survey 24th July 2014

- 3.2 Ten surveyors were positioned to observe buildings B1, B3, B4, B5, B8, B9 and B10 during the dusk emergence survey on 24th July 2014.
- 3.3 No bats were recorded emerging from any of the buildings during the survey.
- 3.4 Three bat species, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus* and either a serotine (*Eptesicus serotinus*) or Leisler's bat (*Nyctalus Leisleri*), were recorded using the site during the survey. The first bat on site was a common pipistrelle, recorded between B7 and B8 at the western end of the site at 21:26, 25 minutes after sunset. This record fell within the anticipated emergence time for this species (Russ, 2012).
- 3.5 The highest levels of bat activity recorded on the site were in the un-lit area in the west extent of the site, between and around B7 and B8. The activity was mostly by common pipistrelle with occasional passes by soprano pipistrelle. Occasional passes by both of these species were recorded in the centre and south of the site, with the northern and eastern site boundaries appearing to be used for commuting. A single pass by a serotine or Leisler's bat was recorded in the north of the site but the recording was very faint, indicating that this bat was flying outside the site. No bat activity was recorded on the Kidderpore Avenue side of the site.

Dawn Re-Entry Survey 25th July 2014

- 3.6 Two surveyors were positioned to observe B7 during the dawn re-entry survey on 25th July 2014.

- 3.7 No bats were recorded entering B7 during the survey. Activity by a pipistrelle species bat was observed over the roof of B7 at 04:38, 36 minutes before sunrise but was not observed entering the building. This bat was not echolocating so could not be identified to species level.
- 3.8 Three bat species, common pipistrelle, soprano pipistrelle and serotine, were recorded on the site during the survey. The majority of bat activity was recorded to the north of B7 with occasional passes also recorded to the south of B7. Common pipistrelle bats were observed foraging around the trees in the un-lit area in the west extent of the site, between and around B7 and B8. Soprano pipistrelle bats were observed foraging around a large tree to the southwest of B7. A single, unseen pass by a serotine bat was recorded early in the survey period.

Dawn Re-Entry Survey 1st August 2014

- 3.9 Two surveyors were positioned to observe B7 during the dawn re-entry survey on 1st August 2014.
- 3.10 No bats were recorded entering B7 during the survey. At least two bat species, common pipistrelle and Leisler's bat, were recorded on the site during the survey. The majority of bat activity was recorded to the north of B7 with occasional passes also recorded to the south of B7. Common pipistrelle bats were observed foraging around the trees in the dark area in the western end of the site, between and around B7 and B8. A single pass by a Leisler's bat was recorded late in the survey period as it flew high across the site in a westerly direction.

Dawn Re-Entry Survey 20th August 2014

- 3.11 Four surveyors were positioned to observe B5 and B8 during the dawn re-entry survey on 20th August 2014, although the surveyor positioned to the south of B8 also focused on the north elevation of B7.
- 3.12 No bats were recorded on the site during the survey.

4 Conclusions and Recommendations

CONCLUSIONS

Bat Presence/Likely Absence Surveys

- 4.1 No bats were recorded emerging from or entering any of the buildings on site during the four survey sessions. It is therefore concluded that bat roosts are likely absent from the site.
- 4.2 Four species of bat were recorded during the surveys on site. Common pipistrelle were recorded most frequently, with foraging activity appearing to be concentrated in the un-lit area in the west extent of the site, in the vicinity of B7 and B8, with other activity recorded along the northern and eastern site boundaries. Occasional passes by soprano pipistrelle were recorded in similar areas of the site.
- 4.3 Single passes by serotine and/or Leisler's bat were also recorded during three survey sessions. When observed, a Leisler's bat was commuting high across the site and it is believed that the other activity by these species, comprising occasional unseen or high altitude passes, is indicative of commuting behaviour.
- 4.4 While no specific constraints regarding roosting bats would apply to the proposed demolition of B1, B2, B7 or the removal of trees, a precautionary approach, which must be adhered to throughout the development, is detailed below.

Constraint to works

- 4.5 Contractors involved with site vegetation clearance and building demolition must be made aware that bats are known to commute and forage in the area and be encouraged to be vigilant for signs of bats during works. In the unlikely event that bats are discovered then all work must cease immediately and a licensed bat ecologist must immediately be called to site.
- 4.6 The survey findings have, however, identified that roosts are present in the immediate vicinity of the site (notably the southern boundary). Under current legislation it is an offence to disturb roosting bats; this would include disturbance to bats in local roosts, where these are close enough to be potentially affected by the proposed works. Therefore, some mitigation measures would be required to minimise the disturbance of the works upon these roosting bats.

- 4.7 Appropriate mitigation measures, which can be included as part of the Construction Environmental Management Plan (CEMP) include not working at night and not using flood lighting, since this may deter bats from using foraging and commuting habitat, such as that along the southern boundary. Erecting hoardings around the working area would also minimise potential disturbance arising from dust and noise which may impact upon locally roosting bats.
- 4.8 Although foraging areas and commuting routes are not legally protected, the effects of development proposals on these may be taken into consideration when assessing the impact of the proposal on the maintenance of Favourable Conservation Status (Jones, 2004). Similarly, they may be taken into account by planning authorities during the planning application process, in accordance with planning policy. Therefore, the following recommendations are provided in order to guide the development to protecting the existing commuting and foraging habitats on site, where this is possible, in accordance with the National Planning Policy Framework's commitment to sustainable development.

RECOMMENDATIONS

Mitigation

Precautionary Approach

- 4.9 Although no bat roosts were recorded on the site, bat activity was recorded in the vicinity of B7 during the emergence and re-entry period for pipistrelle species bats on 24th and 25th July 2014. To mitigate for the small residual risk that a bat roost is present, it is recommended that the ridge tiles and top sections of the roof tiles of B7 are removed carefully by hand, under the supervision of a suitably licensed ecologist.
- 4.10 From the vantage of a scaffold or Mobile Elevated Working Platform (MEWP), tiles will be removed by hand or using hand tools, using minimal force and without scraping and roofing materials together. Each tile will be checked for the presence of bats before being removed. In the event that a bat is found to be present works must cease immediately and a licence to continue with the works legally must be sought from Natural England.

Provision of Artificial Bat Roosting Opportunities

- 4.11 It is recommended that bat boxes suitable for use by pipistrelle species bats are installed on trees in the western end of the site prior to demolition of B7. In addition to providing enhancement of roosting opportunities on the site, this will provide a safe and suitable

place to remove a bat to in the unlikely event that a bat is found during demolition works on the site.

- 4.12 If possible, it is recommended that artificial roosting opportunities are incorporated into the design of any new building to be constructed in the west of the site. It is recommended that this takes the form of open ridge vent tiles, or raised roofing tiles in pitched roofs, allowing bat access/egress into the roof structure. Where this is undertaken, breathable roofing membranes must not be used and it is recommended that a bitumen roofing felt is used. Breathable membranes have been found to be damaged by the presence of bats, and in turn pose a danger of entanglement to the bats (Waring *et al.*, 2013).
- 4.13 If suitable features absolutely cannot be included into the roof, and to provide enhancement of roosting features on the site, a range of roosting features can be incorporated into the walls of new buildings. These can take the form of self-contained boxes mounted on, or included within the plane of the wall, or of features providing bat access into cavity walls. A suitably trained ecologist should be consulted during the design of the new buildings regarding the suitable type and placement of artificial roosting opportunities.

Artificial Lighting

- 4.14 Foraging activity was recorded in the un-lit area in the west extent of the site and along the northern and eastern site boundaries, which were lit at a lower intensity than some surrounding areas within and outside the site. Any proposed artificial lighting strategy for the new development has the potential to deter bats from commuting and foraging in these areas. In order to maintain the value of the site to foraging and commuting bats, it is recommended that the following mitigation measures are incorporated into any lighting scheme implemented on the site.
- 4.15 The following mitigation strategies have been taken from Bat Conservation Trust Landscape and Urban Design for Bats and Biodiversity (Gunnell *et al.*, 2012) and other referenced sources:
- Minimise light spill by eliminating any bare bulbs and upward pointing light fixtures. The spread of light should be kept near to or below the horizontal plane, by using as steep a downward angle as possible and/or shield hood. Flat, cut-off lanterns are best;
 - Use light sources that emit minimal ultra-violet light (Langevelde *et al.*, 2001) and avoid the white and blue wavelengths of the light spectrum, so as to avoid attracting insects

and thus potentially reducing numbers in adjacent areas, which bats may use for foraging;

- For road lighting, limiting the height of lighting columns to eight metres and increase the spacing of lighting columns (Fure, 2006) can reduce the spill of light into unwanted areas such as the aforementioned habitats;
- For pedestrian lighting, low level lighting that is directional and below three lux at ground level, but preferably below one lux should be used;
- Use embedded road lights to illuminate the roadway and light only high-risk stretches of roads (crossings and junctions);
- Avoid using reflective surfaces under lights or light reflecting off windows (e.g. onto bat flight lines);
- Only the minimum amount of light needed for safety and access should be used and or turned off when the site is not in use;
- Artificial lighting proposals should not directly illuminate tree lines, which may be of value to foraging or commuting bats and birds (e.g. the trees along the northern and southern boundaries of the site);
- Artificial lighting should not directly illuminate any bat roosting features that are installed within the proposed development;
- Lux levels should be below five lux and the lights should be controlled via a passive infrared (PIR) sensor, only operating when activated by motion within proximity of the light;
- Lighting that is required for security reasons should use a lamp of no greater than 2000 lumens (150 Watts) and be PIR sensor activated, to ensure that the lights are not on only when required (Jones, 2000; BCT, 2009);
- Uplighters should be avoided, particularly at the base of trees and within the aforementioned habitats; and
- If possible 'dark zones' could be created by limiting or removing lighting within a 5 - 10m buffer between lit areas and the dark, vegetated areas of habitat to the west of the site boundary.

Protection of Vegetation

- 4.16 It is understood that the majority of the trees in this area are to be retained as part of the development. This is encouraged and it is recommended that suitable protection measures are undertaken in line with BS5837: *Trees in Relation to Design, Development and Construction* (BSI, 2012).

Planting and Landscaping

- 4.17 The following mitigation strategies have been adapted from Bat Conservation Trust Landscape and Urban Design for Bats and Biodiversity (Gunnell *et al.*, 2012) and other referenced sources.
- 4.18 It is recommended that the site boundary trees are retained. Any new landscaping and tree planting as part of the proposed development should seek to enhance the commuting and foraging value of the site for bats. This may include the strengthening of existing commuting routes, especially around the boundaries of the site, by planting native trees and shrubs or planting additional hedges through the site.
- 4.19 It is acknowledged that using native species and species of value to biodiversity in planting schemes attract insects and provide a potential food source for bats (BCT, Undated). The landscaping proposals should seek to enhance the value of the site for foraging and commuting bats by including such species.

Survey Validity

- 4.20 In the event that works are delayed beyond 24 months after the final survey (20th August 2014), it is necessary that an update survey be carried out to ensure that the conditions on site remain consistent with the findings of this report.

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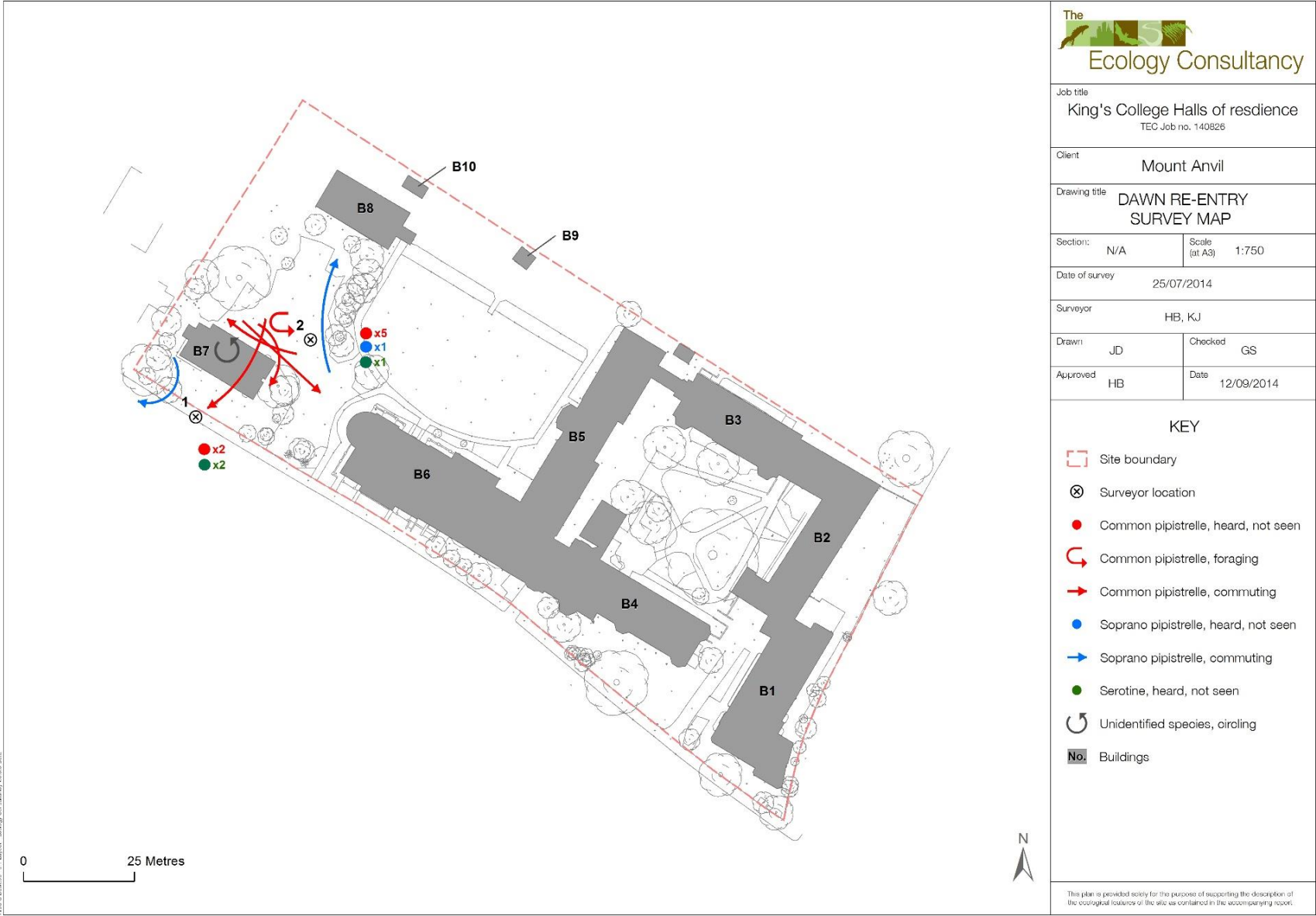
Appendix 1: Bat Survey Plans

0 25 Metres

AND E. Davies, '3.1 Layout - Building Configuration V2.0 S. Bates

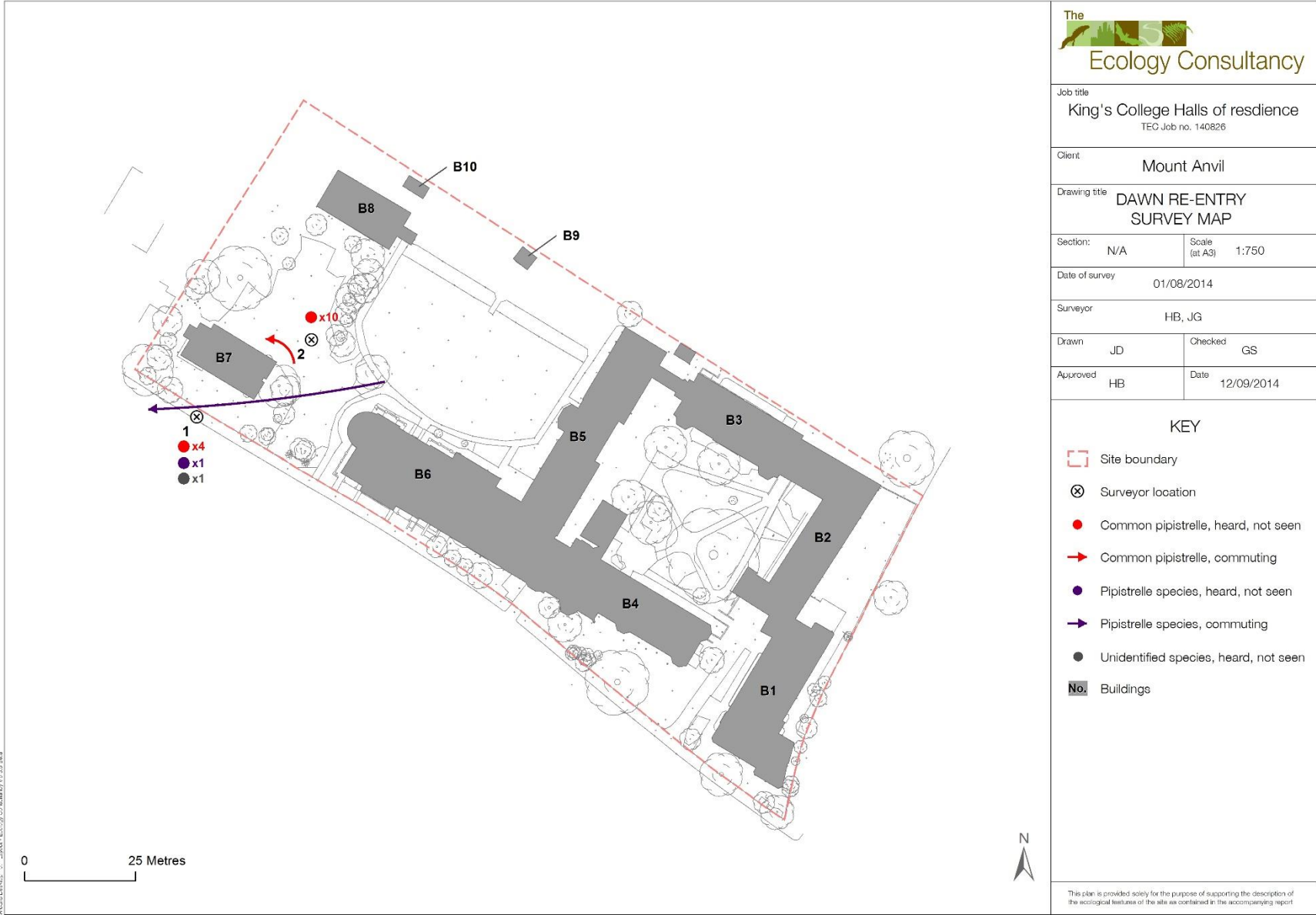
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Plan 2: Dawn Re-Entry Survey 25th July 2014



And Ecology Consultancy Ltd. Mount Anvil, Sydney, NSW 2015

Plan 3: Dawn Re-Entry Survey 1st August 2014



<div>The Ecology Consultancy</div>	
Job title King's College Halls of residence TEG Job no. 140826	
Client Mount Anvil	
Drawing title DAWN RE-ENTRY SURVEY MAP	
Section: N/A	Scale (at A3) 1:750
Date of survey 01/08/2014	
Surveyor HB, JG	
Drawn JD	Checked GS
Approved HB	Date 12/09/2014
KEY <ul style="list-style-type: none">Site boundarySurveyor locationCommon pipistrelle, heard, not seenCommon pipistrelle, commutingPipistrelle species, heard, not seenPipistrelle species, commutingUnidentified species, heard, not seenNo. Buildings	
<small>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</small>	

Appendix 2: Bat Survey Data

Table 1: King's College Halls, Dusk Bat Emergence Survey – 24/07/2014

Sunset: 21:01

Start time: 20:46

End: 22:31

Weather conditions: 24°C, cloud cover 15%, gentle breeze with stronger gusts

Surveyor Position 3: South of B8			
Time	Minutes after sunset	Species	Comments
21:26	25	Common pipistrelle	Circling to the north of B7 before flying east
21:45	44	Soprano pipistrelle	Flew from east of B7, foraged between B7 and B8 before flying south
21:46	45	Common pipistrelle	Unseen pass
21:52	51	Pipistrelle species	Unseen pass
21:54	53	Common pipistrelle	Foraged between B7 and B8 before flying south
22:03	62	Common pipistrelle	Flew from south east of surveyor position, foraged between B7 and B8 before flying back the way it came
22:06	65	Common pipistrelle	Unseen pass

Surveyor Position 4: East of B8			
Time	Minutes after sunset	Species	Comments
21:52	51	Common pipistrelle	Unseen pass

Surveyor Position 5: South of B9			
Time	Minutes after sunset	Species	Comments
21:52	51	Common pipistrelle	Two bats flying east, parallel to northern site boundary
22:04	63	Serotine or Leisler's Bat	Unseen pass

Surveyor Position 6: West of B5			
Time	Minutes after sunset	Species	Comments
21:52	51	Common pipistrelle	Flying east, parallel to northern site boundary
21:57	56	Pipistrelle species	Unseen pass

Surveyor Position 7: North west of B3

Time	Minutes after sunset	Species	Comments
21:35	34	Soprano pipistrelle	Flying west, parallel to northern site boundary
21:52	51	Pipistrelle species	Unseen pass
21:56	55	Common pipistrelle	Unseen pass
21:58	57	Soprano pipistrelle	Unseen pass

Surveyor Position 8: East of B5

Time	Minutes after sunset	Species	Comments
21:35	34	Soprano pipistrelle	Unseen pass
22:03	62	Common pipistrelle	Unseen pass

Surveyor Position 9: North of B4

Time	Minutes after sunset	Species	Comments
22:06	65	Soprano pipistrelle	Unseen pass

Surveyor Position 10: North east of B1

Time	Minutes after sunset	Species	Comments
21:36	35	Unidentified bat species	Unseen pass
21:46	45	Soprano pipistrelle	Flew north over car park, east of B2
21:54	53	Common pipistrelle	Unseen pass
21:48	57	Soprano pipistrelle	Unseen pass
21:58	57	Common pipistrelle	Unseen pass
22:05	64	Common pipistrelle	Unseen pass
22:14	73	Common pipistrelle	Unseen pass

22:23	82	Common pipistrelle	Unseen pass
22:27	86	Common pipistrelle	Unseen pass

Surveyor Position 11: East of B1

Time	Minutes after sunset	Species	Comments
21:39	38	Soprano pipistrelle	Unseen pass
22:05	64	Soprano pipistrelle	Unseen pass
22:23	82	Soprano pipistrelle	Unseen pass

Surveyor Position 12: South west of B1

Time	Minutes after sunset	Species	Comments
No activity recorded			

Table 2: King's College Halls, Dawn Bat Re-Entry Survey – 25/07/2014

Sunrise: 05:14

Start time: 03:14

End: 05:14

Weather conditions: 17°C, cloud cover 10%, Light air

Surveyor Position 1: South of B7

Time	Minutes before sunrise	Species	Comments
04:02	72	Common pipistrelle	Unseen pass
04:14	60	Common pipistrelle	Flew south over B7
04:19	55	Common pipistrelle	Unseen pass
04:20	54	Pipistrelle species	Unseen pass
04:34	40	Soprano pipistrelle	Circling around large tree south west of B7
04:38	36	Pipistrelle species	Circling over B7, not echolocating
04:45	29	Pipistrelle species	Unseen pass

Surveyor Position 2: North west of B7			
Time	Minutes before sunrise	Species	Comments
03:47	87	Serotine	Unseen pass
03:55	79	Soprano pipistrelle	Unseen pass
03:58	76	Common pipistrelle	Unseen pass
04:02	72	Common pipistrelle	Unseen pass
04:04	70	Common pipistrelle	Unseen pass
04:12 – 04:13	62 - 61	Common pipistrelle	At least three bats seen flying in from east of B8, circling north of B7 and flying away to south, west and east
04:14	60	Common pipistrelle	Unseen pass
04:24	50	Common pipistrelle	Unseen pass
04:34	40	Common pipistrelle	Flew east, to the north of B7
04:45	29	Soprano pipistrelle	Unseen pass

Table 3: King's College Halls, Dawn Bat Re-Entry Survey – 01/08/2014

Sunrise: 05:23

Start time: 03:23

End: 05:23

Weather conditions: 17°C, cloud cover 30%, light breeze

Surveyor Position 1: South of B7			
Time	Time	Time	Time
03:45	98	Common pipistrelle	Unseen pass
04:00	83	Common pipistrelle	Unseen pass
04:23	60	Common pipistrelle	Unseen pass
04:33	50	Common pipistrelle	Unseen pass by two bats
04:51	32	Leisler's Bat	Unseen pass
05:01	22	Unidentified Bat Species	Unseen pass

Surveyor Position 2: North west of B7			
Time	Minutes before sunrise	Species	Comments
03:43	100	Common pipistrelle	Unseen pass
04:00	83	Common pipistrelle	Unseen pass
04:20	63	Common pipistrelle	Unseen pass
04:23	60	Common pipistrelle	Unseen pass
04:24	59	Common pipistrelle	Unseen pass
04:26	57	Common pipistrelle	Unseen pass
04:30	53	Common pipistrelle	Unseen pass
04:35	48	Common pipistrelle	Two bats heard, one bat seen flying west to the north of B7
04:37	46	Common pipistrelle	Unseen pass
04:38	45	Common pipistrelle	Unseen pass
04:47	36	Common pipistrelle	Unseen pass
04:51	32	Leisler's Bat	Flew west high over B7

Table 4: King's College Halls, Dawn Bat Re-Entry Survey – 20/08/2014

Sunrise: 05:53

Start time: 03:53

End: 05:53

Weather conditions: 11.5°C, cloud cover 40%, Still.

Surveyor Position 3: South of B8			
Time	Minutes after sunset	Species	Comments
No activity recorded			

Surveyor Position 4: East of B8			
Time	Minutes after sunset	Species	Comments
No activity recorded			

Surveyor Position 6: West of B5

Time	Minutes after sunset	Species	Comments
No activity recorded			

Surveyor Position 8: East of B5

Time	Minutes after sunset	Species	Comments
No activity recorded			

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), The London Plan, Spatial Development Strategy for Greater London, London Borough of Barnet Core Strategy (2012) for example; Policy CS 7 states '*We will create a greener Barnet by: ensuring that development protects existing site ecology and makes the fullest contributions to enhancing biodiversity, both through on-site measures and by contribution to local biodiversity improvements.*'

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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