The Ecology Consultancy

Middlesex Annex Hospital / Bat Surveys / Report for Llewellyn Davies

Middlesex Annex Hospital

Preliminary Bat Roost Assessment: Bat Emergence / Re-entry Survey

Report for Llewellyn Davies

Job no.	4624			
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Executive Summary

The Ecology Consultancy was commissioned by Temple Group on behalf of Llewelyn Davies to carry out bat emergence / re-entry surveys at Middlesex Annex Hospital, Cleveland Street, London Borough of Camden on 31 August 2016 and 28 September 2016 as a result of the PRA (Preliminary Roost Assessment) carried out on 11 August 2016.The main findings of the survey are as follows:

- During the dusk emergence survey on 31 August 2016, a common pipistrelle bat was recorded on site in the vicinity of the roof of building 3 section B3.2 during the typical emergence time for the species. Later in the dusk survey, common pipistrelle bats were recorded foraging and commuting on site.
- Due to the uncertainty of the emergence point of the common pipistrelle bat recorded early in the dusk survey, a follow up dawn re-entry survey was recommended to verify the potential presence/absence of a bat roost on site.
- No bats were seen to re-enter the building during the dawn re-entry survey on 28 September 2016, and no bat activity was recorded throughout the survey.
- Based on the results of the surveys, bat roosts are considered likely absent from the building, and there are no further constraints to the proposed development with regard to bats. However, advice is provided in the unlikely event that bats are encountered during works.
- Recommendations are provided in this report to enhance the site for biodiversity, including a lighting strategy where lux must not exceed what is on site at present to minimise the impact of the new development on commuting and foraging bats and possible roosting bats.

1 Introduction

BACKGROUND

1.1 The Ecology Consultancy was commissioned by Temple Group on behalf of Llewelyn Davies in June 2016 to carry out bat emergence / re-entry surveys of the proposed development site at Middlesex Annex Hospital, Cleveland Street, London Borough of Camden.

1.2 A Preliminary Ecological Appraisal / Preliminary Roost Assessment (PEA / PRA), carried out in June 2016 (The Ecology Consultancy, 2016) identified the following:

- Buildings / building section 2.2, 3.1 and 5 all have negligible potential to support rooting bats, therefore no further action is required.
- Building / building section 1, 2.1, 3.2, 3.3, 3.4 and 4 on site were considered to have low potential to support roosting bats.

1.3 Further dusk emergence surveys were recommended on the four buildings with potential to support roosting bats in the PEA/PRA report which should be read in conjunction with this report.

SCOPE OF REPORT

1.4 This report provides an assessment of the status of bats at the site based on the results of two dusk emergence / dawn re-re-entry surveys. The assessment is based on the following sources of information:

- a single dusk emergence survey and one dawn re-entry survey (Collins, 2016)

1.5 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).

1.6 All species of bat are protected under The Conservation of Habitats and Species Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended). Among other provisions, this legislation protects bats against killing or injury, disturbance, obstruction of a roost entrance and damage/destruction of a habitat used for sheltering/resting (see Appendix 4). All UK bat species are listed as London BAP species.

SITE CONTEXT AND STATUS

1.7 The proposed development site is 0.31 hectares (ha) in size and is centred on Ordnance Survey National Grid reference TQ 2981 2782. The site is located on the south western boundary of The London Borough of Camden and is not subject to any nature conservation designations. It is bordered by Cleveland Street to the west and by other commercial properties to the north, east and south. The wider surroundings are dominated by commercial properties in all directions

DEVELOPMENT PROPOSALS

1.8 The proposed development comprises three main elements. Firstly the part-demolition of the existing hospital annex building with the listed part of the structure; the former Strand Union Workhouse fronting onto Cleveland Street being retained and refurbished as mix of high quality market and affordable residential units.

1.9 Secondly, the existing buildings to the north and south of the listed Workhouse and also fronting onto Cleveland Street are to be retained and refurbished to provide a mix of market and affordable housing units. All other existing buildings on site will be demolished.

1.10 Thirdly, to the rear of the retained Workhouse a new 3-8 storey development is proposed; with its footprint enabling the reformation of the historic “Bedford passage route through the southern part of the site. The new build element comprises of a mix uses including residential (Use Class C3) of which all units proposed will be affordable and B1 business space.

1.11 In addition to incorporating the Bedford passage the proposed development will provide further public open space, using the space defined by the new build element to the rear of the retained Workhouse building. Private amenity space for the market housing and shared amenity space for the affordable housing is also incorporated into the scheme.

RELEVANT LEGISLATION AND PLANNING POLICY

1.12 The following key pieces of nature conservation legislation are relevant to this assessment. A more detailed description of this legislation is provided in Appendix 4.

- The Conservation of Habitats and Species Regulations 2010 (as amended)
- Wildlife and Countryside 1981 (as amended).

1.13 The National Planning Policy Framework (Department of Communities and Local Government, 2012) requires local authorities to avoid and minimise impacts on biodiversity and, where possible, to provide net gains in biodiversity when taking planning decisions. Other planning policies at the local level which are of relevance to this development include the of Camden's Local Development Framework (LDF), Further information is provided in Appendix 5.

2 Methodology

BAT SURVEY

Personnel

2.1 All surveys and inspections were led by George Siskos BSc (Hons) ACIEEM, an ecologist with over two years' commercial bat survey

2.2 George was assisted on surveys by ecologists Natalie Hughes, Verity Heard, Michael Sears, Natalie Hughes, and John Myerscough, all of which have sufficient commercial bat survey experience.

Survey Area

2.3 The surveys covered all buildings likely to be impacted by the development within the red-line boundary of the site (see Fig 1, Appendix 1). This included Building 1, 2, 3, 4 and 5.

2.4 Due to the complexity of the aspects of some of the buildings on site building 2 and building 3 were split into different sections. Building 2 was split into two sections; B2.1 and B2.2 and building 3 was split into four sections; B3.1, B3.2, B3.3, and B3.4.

Aims and Objectives

2.5 The aim of the survey methodologies outlined below is to establish the presence/likely absence of bat roosts within the trees and buildings within the site boundary. Once presence has been established the secondary aim is to obtain sufficient information to characterise the type of roost according to criteria set out in the current guidelines (Collins, 2016). The gathered information is then used to inform an assessment of the potential impacts of the development proposals and to devise an appropriate and proportionate mitigation strategy.

Dusk Emergence / Dawn Re-entry Survey

2.6 The two dusk emergence / dawn re-entry surveys of the buildings were carried out in suitable weather conditions.

2.7 *Survey 1:* 31 August 2016, temperature at start of survey 21°C, temperature at end of survey 20°C, light wind, 7/8 oktas cloud cover and no rain. Sunset was at 19:48 and the survey commenced at 19:32 and continued until 21:18.

2.8 *Survey 2:* 28 September 2016, temperature at start of survey 13°C, temperature at end of survey 13°C, very little wind, 1/8 oktas cloud cover and no rain. Sunrise was at 06:57 and the survey commenced at 05:15 and continued until 06:45.

2.9 The dusk emergence/dawn re-entry surveys were focused on potential bat access points around the buildings as identified during the building inspection survey. Surveyors were positioned to allow clear views of all elevations of the building.

2.10 Each surveyor carried an Elekon Batscanner and an Anabat Express to detect and record any bat echolocations. The surveyors recorded the time of bat passes, along with the species and activity where apparent. All surveys followed standard protocols and accepted standards (Mitchell-Jones & McLeish 2004; Collins, 2016).

Sound analysis

2.11 All sound recordings were analysed post survey using AnalookTM V3.3q to confirm identification of bat calls to species level wherever possible.

EVALUATION AND IMPACT ASSESSMENT

Evaluation

2.12 The ecological value of the bat populations using the site has been assessed broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016) which ranks nature conservation value according to a geographic scale of reference; international, national, county, district, local or of value at the site scale. The following factors are considered when making this evaluation: nature conservation designations, rarity, vulnerability, distribution and the conservation significance of any roosts.

Impact Assessment

2.13 An assessment is provided on the likely impacts of the development proposals on the bats, bat roosts, foraging and commuting habitats located within or immediately adjacent to the site boundary. This assessment is made with reference to Section 6[1] of the Bat Mitigation Guidelines (Mitchell-Jones & McLeish, 2004) and Natural England's standing advice[2]. This includes a summary of the scale of impact according to roost type and development effect.

[1] Predicting the Impact of Development, the Bat Mitigation Guidelines (Mitchell-Jones & McLeish, 2004)
[2] Bats: surveys and mitigation for development projects, first published 28 March 2015

DATA VALIDITY, CONSTRAINTS AND LIMITATIONS

2.14 It is important to note that even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

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 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.

3 Results

DUSK EMERGENCE AND BAT ACTIVITY TRANSECT SURVEYS

3.1 The results of the dusk emergence survey and dawn re-entry survey are summarised below. The full results for each survey can be found in Appendix 3.

First Dusk Emergence Survey – 31 August 2016

3.2 Sunset was at 19:48. No bats were seen emerging or were suspected to have emerged from building B3.2, B3.3, B2.1 or B1.

3.3 The first bat recorded was a common pipistrelle at 20:07 (19 minutes after sunset), which was seen commuting in a westerly direction over the southern pitch of the roof of the building. The record was within the typical emergence period for this species; however, it was not clear whether the bat had emerged from within the site, or adjacent to it. Consequently a second survey was recommended to verify whether a bat roost was likely present/absent on site.

3.4 *Bat Activity:* A total of three passes were recorded on site by commuting and foraging common pipistrelle. The first pass by a common pipistrelle was at 20:07. This was inside the likely emergence time for this species i.e. within the species-specific timeframe that this species usually leave their roost; suggesting this animal's roost was on or very near the site. The last pass was a common pipistrelle recorded at 21:14.

Dawn Re-entry Survey – 23 August 2016

3.5 *Re-entry*: Dawn was at 06:57. No bats were recorded re-entering the building or were suspected to have re-entered building B3.2 or B3.3.

3.6 *Bat Activity* No bat activity was seen or recorded for the duration of the survey.

3.7 *Sound Analysis:* All calls recorded during the dusk emergence surveys and the bat activity transects were identified to species level.

4 Evaluation and Impacts

EVALUATION

Common pipistrelle

4.1 The most common and widespread species; found throughout the UK with pre-breeding population estimates grouped with the soprano pipistrelle at up to two million (Harris and Yalden, 2008). This species is common and widespread across London and given the widespread distribution of this species, it is likely that the gaps in their distribution across the city are more representative of an absence of survey data rather than an absence of the species.

4.2 A single common pipistrelle was recorded foraging and commuting during the dusk emergence survey; however, was absent during the dawn re-entry survey.

Roosting bats and buildings

4.3 No evidence of roosting bats was found within Buildings B1, B2.1, B2.2, B3.1, B3.2, B3.3, B3.4, B4, and B5 and no roosting bats were recorded emerging from B1, B2.1, B3.3, B3.4 and B4. It is likely therefore that no bats are roosting within the structures on site.

Foraging and commuting habitats

4.4 The site is currently being utilised by at least one species of bat species; common pipistrelle. Common pipistrelles were recorded foraging on site, mostly concentrated in the courtyard in the centre of the site.

Site

4.5 The site is assessed as having value at site level only. This is due to the presence of foraging and commuting habitat of at least one species.

IMPACT ASSESSMENT

Foraging and commuting habitats

4.6 The construction and operational phases of the development will result in disruption to commuting and foraging routes through the centre of the site. The disruption would be due to both habitat loss and the use of additional artificial lighting. This could result in a fragmentation effect at a low scale of impact.

4.7 The construction and especially operational phases of development are likely to impact bat commuting routes due to higher levels of artificial lighting. It is therefore recommended that the final lighting scheme be designed to minimise any light on any newly created planted areas. Recommendations are given below on how this can be achieved.

5 Conclusion and Recommendations

SUMMARY

5.1 This section summarises the data gathered during the surveys and the likely impacts on bats, bat roosts and supporting habitats that are present on the site, as described in previous sections of this report.

5.2 The following key ecological issues have been identified:

- No bats were confirmed to emerge/re-enter the building during the surveys. During the dusk survey a common pipistrelle bat was observed on site within the expected emergence time for this species (Russ, 2012). However, its exact emergence point was uncertain and a follow up dawn re-entry survey was carried out to verify the record. No bats were recorded during the dawn re-entry survey, therefore it was considered unlikely that a bat roost was present on site.
- The operational phase of development is likely to impact bat commuting routes due to higher levels of artificial lighting and the removal of vegetation within the central courtyard. It is therefore recommended that the final lighting scheme should be designed to minimise any light spillage to trees and planting on site.

RECOMMENDATIONS

5.3 In the highly unlikely event that bats are found during development works of any building on site, construction works should cease immediately and an ecologist contacted for advice on how to proceed.

ENHANCEMENTS

Plants for Bats

5.4 To enhance the biodiversity potential of site it is recommended that the biodiverse roof in the post-development landscaping plans include plants of known benefit to insects. This would encourage bats to use the site for foraging purposes. See the Bat Conservations Trusts Landscape and Urban Design for Bats and the Royal Horticultural Society's Plants for Bats list: https://www.rhs.org.uk/advice/pdfs/plants-for-bats

Lighting

5.5 Research has found that some bat species are sensitive to artificial lighting. Excessive and/or poorly directed lighting may delay bats in emerging from their roosts; shortening the time available for foraging, as well as causing bats to move away from suitable foraging grounds, movement corridors or roosting sites, to alternative dark areas (Jones, 2000).

5.6 To minimise indirect impacts from lighting associated with the proposed development it is recommended that artificial lighting is only directed where necessary for health and safety reasons. Lighting should not illuminate any trees and hedgerows on-site, or suspected or confirmed bat roosting sites. Lighting should only be used for the period of time for which it is required (Jones, 2000). This can be achieved by following accepted best practice (Fure, 2006; Institute of Lighting Engineers 2009; Bat Conservation Trust 2011):

- The level of artificial lighting including flood lighting should be kept to an absolute minimum;
- Where this does not conflict with health and safety and/or security requirements, the site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Lighting required for security or safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor-activated lamps;
- Lights utilising LED technology are the preferred option as these lights do not emit on the UV spectrum, are easily controllable in terms of direction/spill and can be turned on and off instantly;
- Avoid the use of sodium or metal halide lamps, these gas lamps require a lengthy period in which to turn off and the diffuse nature of the light emitted makes light spillage a significant problem.
- Lights required for night time deliveries or security patrols could be set to activate with pressure activated sensors set into the ground;
- Lighting should be directed to where it is needed to minimise light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a shield/hood/cowl/ that directs the light below the horizontal plane and restricts the lit area;
- Artificial lighting should not directly illuminate any confirmed or potential bat roosting features or habitats of value to commuting/foraging bats. Similarly, any newly planted linear features or compensatory bat roosting features should not be directly lit; and
- Lighting design computer programs can be used to predict the potential impacts of light spillage.

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Appendix 1: Survey Map

Figure 1: Preliminary Roost Assessment

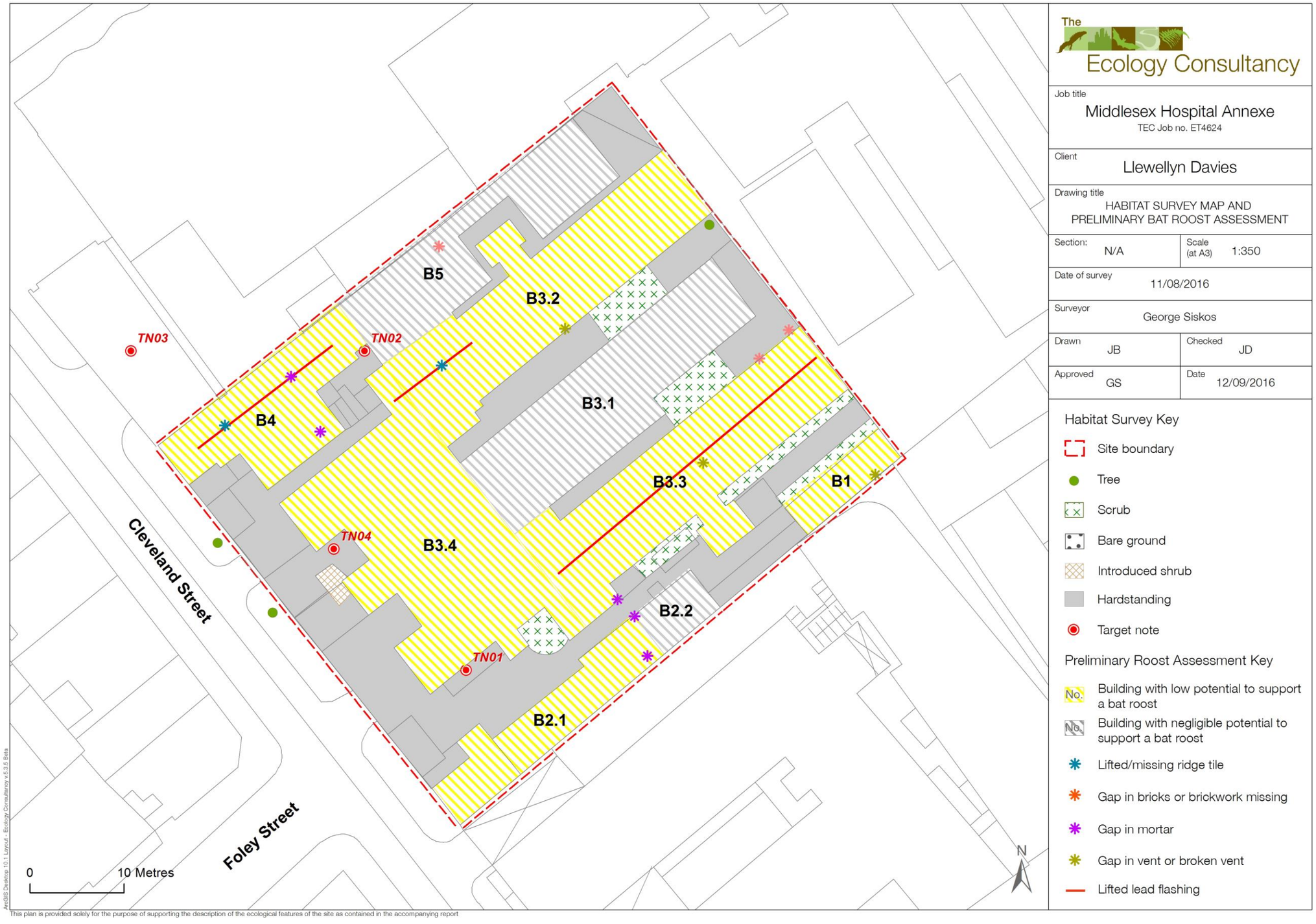
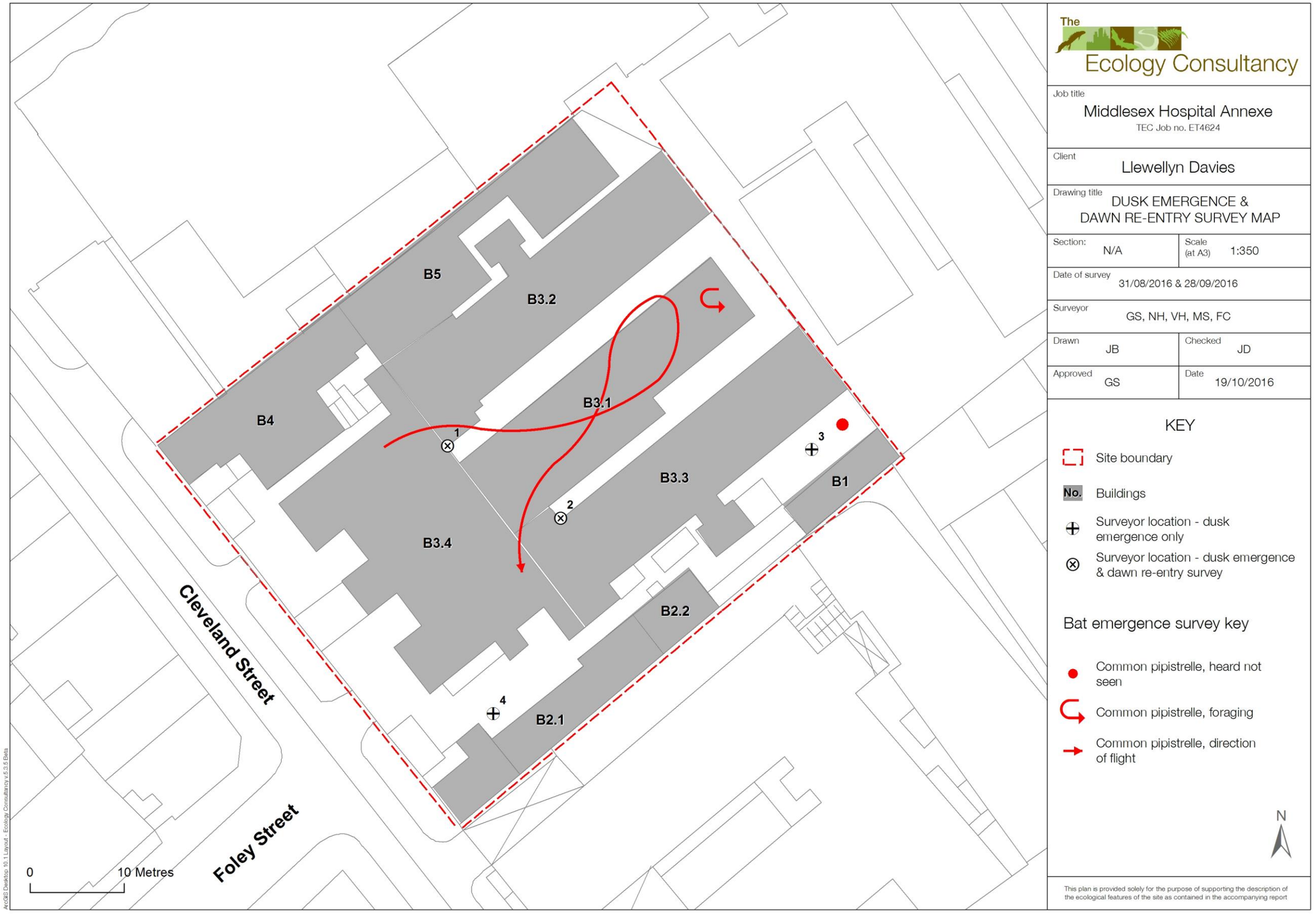


Figure 2: Bat Dusk Emergence Survey



Appendix 2: Survey Data

Project		4624 - Middlesex Annex		Building reference		B3.3	
Surveyor		JM		Date		31/08/2016	
Survey no				Survey start/end times		19:32 / 21:18	
Sunset/rise time		19:48		Equipment reference		EX4	
Surveyor-Easting, Northing				Surveyor location		1	
General weather conditions		Warm, with light cloud cover and gentle breeze					
Temperature (start and end)	21C - 20C	Cloud cover (0-8)	7/8	Wind (Beaufort 0-12)	3	Rain (0-5)	0

Species - (CP=common pipistrelle, SP=soprano pipistrelle, LE=long-eared, N=Noctule, S=Serotine, M=Myotis, U=Unknown

Activity type - (E = Emergence, R = Return to roost, C = Commuting, F = Foraging, S = Socialising)

Time	Species	Number of bats	Seen/not seen (S/NS)	Activity type	Direction of flight	Notes (inc map ref)
20:06 - 20:10	Common pipistrelle	1	Seen	Foraging	East	Possible emergence then bat seen foraging in courtyard until 20:10
20:12	Common pipistrelle	2	Seen	Foraging		Foraging in courtyard around vegetation
20:14 - 20:31	Common pipistrelle	1	Seen	Foraging	North	Foraging in courtyard around vegetation
21:10 - 21:14	Common pipistrelle	1	Not seen	Foraging		Foraging in courtyard around vegetation

Project		4624 - Middlesex Annex		Building reference		B3.2	
Surveyor		NH		Date		31/08/2016	
Survey no				Survey start/end times		19:32 / 21:18	
Sunset/rise time		19:48		Equipment reference		EX5	
Surveyor-Easting, Northing				Surveyor location		2	
General weather conditions		Warm, with light cloud cover and gentle breeze					
Temperature (start and end)	21C - 20C	Cloud cover (0-8)	7/8	Wind (Beaufort 0-12)	3	Rain (0-5)	0

Species - (CP=common pipistrelle, SP=soprano pipistrelle, LE=long-eared, N=Noctule, S=Serotine, M=Myotis, U=Unknown

Activity type - (E = Emergence, R = Return to roost, C = Commuting, F = Foraging, S = Socialising)

Time	Species	Number of bats	Seen/not seen (S/NS)	Activity type	Direction of flight	Notes (inc map ref)
20:07 - 20:12	Common pipistrelle	1	Seen	Foraging	East	Appeared from above B3 but not seen emerging, then foraged within courtyard
20:14 - 20:30	Common pipistrelle	1	Seen	Foraging	North	Foraging in courtyard around vegetation
21:10 - 21:14	Common pipistrelle	1	Not seen	Foraging		Foraging in courtyard around vegetation

Project		4624 - Middlesex Annex		Building reference		B31	
Surveyor		MS		Date		31/08/2016	
Survey no				Survey start/end times		19:32 / 21:18	
Sunset/rise time		19:48		Equipment reference		EX5	
Surveyor-Easting, Northing				Surveyor location		3	
General weather conditions		Warm, with light cloud cover and gentle breeze					
Temperature (start and end)	21C - 20C	Cloud cover (0-8)	7/8	Wind (Beaufort 0-12)	3	Rain (0-5)	0

Species - (CP=common pipistrelle, SP=soprano pipistrelle, LE=long-eared, N=Noctule, S=Serotine, M=Myotis, U=Unknown

Activity type - (E = Emergence, R = Return to roost, C = Commuting, F = Foraging, S = Socialising)

Time	Species	Number of bats	Seen/not seen (S/NS)	Activity type	Direction of flight	Notes (inc map ref)
20:14	Common pipistrelle	1	Not seen	Commuting		Heard not seen

Project		4624 - Middlesex Annex		Building reference		B2.1	
Surveyor		VH		Date		31/08/2016	
Survey no		1		Survey start/end times		19:32 / 21:18	
Sunset/rise time		19:48		Equipment reference		EX5	
Surveyor-Easting, Northing				Surveyor location		4	
General weather conditions		Warm, with light cloud cover and gentle breeze					
Temperature (start and end)	21C - 20C	Cloud cover (0-8)	7/8	Wind (Beaufort 0-12)	3	Rain (0-5)	0

Species - (CP=common pipistrelle, SP=soprano pipistrelle, LE=long-eared, N=Noctule, S=Serotine, M=Myotis, U=Unknown						
Activity type - (E = Emergence, R = Return to roost, C = Commuting, F = Foraging, S = Socialising)						
Time	Species	Number of bats	Seen/not seen (S/NS)	Activity type	Direction of flight	Notes (inc map ref)
						No bats seen throughout the whole survey - brightly lit on eastern elevation from office block adjacent for first hour

Project		4624 - Middlesex Annex		Building reference		B3.3	
Surveyor		GS		Date		28/09/2016	
Survey no		2		Survey start/end times		05:15 - 06:45	
Sunset/rise time		06:57		Equipment reference		EX1	
Surveyor-Easting, Northing				Surveyor location		1	
General weather conditions		Fair, light cloud cover, cold breeze					
Temperature (start and end)	13C	Cloud cover (0-8)	1/8	Wind (Beaufort 0-12)	1	Rain (0-5)	0

Species - (CP=common pipistrelle, SP=soprano pipistrelle, LE=long-eared, N=Noctule, S=Serotine, M=Myotis, U=Unknown						
Activity type - (E = Emergence, R = Return to roost, C = Commuting, F = Foraging, S = Socialising)						
Time	Species	Number of bats	Seen/not seen (S/NS)	Activity type	Direction of flight	Notes (inc map ref)
						No bats heard or seen throughout the whole survey

Project		4624 - Middlesex Annex		Building reference		B3.2	
Surveyor		FC		Date		28/09/2016	
Survey no		2		Survey start/end times		05:15 - 06:45	
Sunset/rise time		06:57		Equipment reference		EX6	
Surveyor-Easting, Northing				Surveyor location		2	
General weather conditions		Fair, light cloud cover, cold breeze					
Temperature (start and end)	13C	Cloud cover (0-8)	1/8	Wind (Beaufort 0-12)	1	Rain (0-5)	0

Species - (CP=common pipistrelle, SP=soprano pipistrelle, LE=long-eared, N=Noctule, S=Serotine, M=Myotis, U=Unknown						
Activity type - (E = Emergence, R = Return to roost, C = Commuting, F = Foraging, S = Socialising)						
Time	Species	Number of bats	Seen/not seen (S/NS)	Activity type	Direction of flight	Notes (inc map ref)
						No bats heard or seen throught the whole survey

Appendix 3: Legislation and Policy

LEGISLATION

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 capturing of Schedule 2 species (e.g. all 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[3]
  b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- 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 (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

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.

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[3].

NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) replaced Planning Policy Statement 9 – biodiversity and geological conservation in April 2012 as the key national planning policy concerning nature conservation. The NPPF emphasises the need for suitable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species. An emphasis is also made for the need for ecological networks via

[3] Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. **150**. The Mammal Society, Southampton.

preservation, restoration and re-creation. The protection and recovery of priority species – that is those listed as UK Biodiversity Action Plan priority species – is also listed as a requirement of planning policy. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

LOCAL PLANNING POLICY

Camden Local Development Framework

A number of policies outlined in Camden Local Development Framework: Camden Development Policies, adopted version 2010 (Camden Council, 2010) are relevant to the site, detailed below.

Policy DP22 - Promoting sustainable design and construction

The Council will require development to incorporate sustainable design and construction measures. Schemes must:

a) demonstrate how sustainable development principles, including the relevant measures set out in paragraph 22.5 below, have been incorporated into the design and proposed implementation; and

b) incorporate green or brown roofs and green walls wherever suitable.

The Council will promote and measure sustainable design and construction by:

c) expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.

d) expecting developments (except new build) of 500 sq m of residential floorspace or above

or 5 or more dwellings to achieve “very good” in EcoHomes assessments prior to 2013 and

encouraging “excellent” from 2013;

e) expecting non-domestic developments of 500sqm of floorspace or above to achieve “very

good” in BREEAM assessments and “excellent” from 2016 and encouraging zero carbon

from 2019.

The Council will require development to be resilient to climate change by ensuring schemes

include appropriate climate change adaptation measures, such as:

f) summer shading and planting;

g) limiting run-off;

h) reducing water consumption;

i) reducing air pollution; and

j) not locating vulnerable uses in basements in flood-prone areas.

Green and brown roofs and green walls

22.7 Green and brown roofs and green walls play important roles in achieving a sustainable development. They retain rainfall and slow its movement, provide additional insulation, provide valuable habitat to promote biodiversity, provide opportunities for growing food, reduce the heating up of buildings and the wider city and provide valuable amenity space. They should be designed to enable the benefits that are most suitable for the site. This will include ensuring a sufficient soil depth is provided and selecting the correct substrate and vegetation. The design of green walls should ensure sufficient irrigation for plants without the need for excessive energy consumption for pumping water.

22.8 Green and brown roofs can be easily incorporated into a flat roof and, where carefully designed, on a pitched roof. Therefore, it is important that the inclusion of a green or brown roof is considered at the initial design stage. In historic areas where a specific roof form dominates, it may be possible to incorporate a green or brown roof at the rear of buildings where they would not be visible from the street. Further details on our expectation for green and brown roofs and green walls can be found in our Camden Planning Guidance supplementary document.

Designing to adapt to climate change

22.15 It is predicted that in the future we will experience warmer and wetter winters and hotter and drier summers. These changes could lead to more intense rainfall and local flooding; subsidence due to increased shrinking and expanding of Camden's clay base; poorer air quality; a hotter micro-climate; and increased summer electricity use due to increased demand for cooling. Alongside the measures to reduce the effects of climate change set out above, we will require developments to incorporate appropriate measures to enable occupants to adapt and cope with climatic changes. Measures include:

- natural ventilation;

- summer shading;
- planting trees and vegetation;
- openable windows;
- the provision of external space; and
- the inclusion of pervious surfaces to enable water to infiltrate the ground to reduce clay shrinking and flooding.

LOCAL BAPs

The Camden BAP (Camden Council, 2015) contains a number of habitats and species priorities in Camden. Specific habitat and species action plans listed in the Camden BAP, which are of potential relevance to this site, include:

- Common pipistrelle
- Soprano pipistrelle

The Ecology Consultancy is part of the Temple Group.

Experience and quality that make a difference

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