

**Kidderpore Avenue, Hampstead** / Bat Surveys / Report for Barratt West London



Ecology Consultancy



## Kidderpore Avenue, Hampstead

### Bat Surveys

### Report for Barratt West London

Author	[REDACTED] BSc (Hons) MSc MIEEM		
Job No	120057		
	Date	Checked by	Approved by
Initial	04.12.12	SY-L	JK
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# Executive Summary

- The Ecology Consultancy was commissioned by Barratt West London to carry out bat emergence and re-entry surveys of seven buildings at 328-338 Finchley Road and 17-25 Kidderpore Avenue, Hampstead in the London Borough of Camden. A preliminary bat assessment had identified these buildings as having moderate potential to support roosting bats (The Ecology, Consultancy, 2011).
- Three emergence and re-entry surveys were undertaken for each building, over a series of survey visits, to determine the presence or likely absence of bats within the buildings assessed as having potential to support roosts during the preliminary assessment.
- The results of these surveys would also inform any appropriate mitigation measures that may be required as a result of proposed works and, subsequently, any application to Natural England for a European Protected Species Mitigation (EPSM) licence.
- The emergence and re-entry surveys were conducted under suitable conditions on the weeks commencing 6<sup>th</sup> August, 27<sup>th</sup> August and 3<sup>rd</sup> September 2012. The survey methodology followed the Bat Conservation Trust survey guidelines - *Bat Surveys: Good Practice Guidelines 2<sup>nd</sup> Edition* (Hundt, 2012).
- A summer roost of at least three common pipistrelle bats was confirmed in 25 Kidderpore Avenue. Access / egress points for bats were recorded under tiles on the double bay window on the eastern elevation. One common pipistrelle bat was recorded emerging from under one of the hanging tiles on the top section of the double bay window and two common pipistrelles were seen re-entering roosts under tiles on the south aspect of the pitched roof. These bats were recorded during the second survey visit on 28<sup>th</sup> August 2012.
- Overall, four species of bats were recorded foraging and commuting during the surveys at Kidderpore Avenue. Common pipistrelle was the predominant species present during all surveys, while soprano pipistrelles were also present, but in reduced numbers. Noctule and serotine bats were recorded occasionally. Some records could not be identified to species level.
- On all three survey visits, both common and soprano pipistrelle bats were recorded within the typical emergence period for these species. Bats predominantly commuted and foraged through the north east section of the site, with continuous bat activity recorded within the habitats of scattered trees and scrub between 17 to 25 Kidderpore Avenue and the Caroline Skeel Library.

- On site habitat used by bats to forage and commute along linked to further habitats within the wider landscape, including Kings College Hampstead Campus Site of Nature Conservation (Borough BII) and Westfield Gardens.
- The foraging and commuting habitat recorded within the site is considered to be of value to the local bat population.
- Records indicated that there are further roosts for these two species near to, but outside, the site.
- No bats were recorded during any of the surveys on Finchley Road.
- Recommendations regarding working constraints and mitigation measures, including the requirement to apply to Natural England for an EPSM licence, are provided in Section 5.

# 1 Introduction

## BACKGROUND

- 1.1 A preliminary bat roost assessment was conducted by The Ecology Consultancy on 4<sup>th</sup> November 2011 at 328-338 Finchley Road and 17-25 Kidderpore Avenue, Hampstead in the London Borough of Camden (The Ecology Consultancy, 2011). As a result, buildings 328-338 Finchley Road and 17-25 Kidderpore Avenue were assessed as having moderate potential to support roosting bats and the Caroline Skeel Library and Kings College London Halls of Residence (comprising Chesney House, Ellison House and Hampstead Bar) were assessed as having negligible potential to support roosting bats.
- 1.2 Further survey effort in the form of three dusk emergence and/or dawn re-entry bat surveys were recommended for all buildings assessed as having moderate potential to support roosting bats. The Ecology Consultancy was commissioned in 2012 to carry out these further bat surveys.
- 1.3 The surveys aim to determine the presence or likely absence of bat roosts within the buildings on 328-338 Finchley Road and 17-25 Kidderpore Avenue and to advise appropriate mitigation and/or site enhancement measures.

## SCOPE OF THE REPORT

- 1.4 This report outlines the methodologies and findings of the dusk emergence and dawn re-entry surveys conducted on the weeks commencing; 6<sup>th</sup> August 2012, 27<sup>th</sup> August 2012 and 3<sup>rd</sup> September 2012. The surveys targeted all elevations of the buildings. Survey findings are presented in the report with plans in Appendix 1, data in Appendix 2 and photographs in Appendix 3.
- 1.5 Any potentially significant ecological constraints that may affect the proposals, such as the need to apply for a Natural England European Protected Species Mitigation (EPSM) licence, and the timings of works are also discussed. Any potentially significant ecological constraints that may affect the proposals, such as the unlikely risk of bats being discovered during demolition is also discussed. In addition, advice regarding appropriate enhancements for the site following redevelopment is also provided.
- 1.6 The methodology of the surveys was based on the Bat Conservation Trust - *Bat Surveys: Good Practice Guidelines 2<sup>nd</sup> Edition* (Hundt, 2012).

## SITE CONTEXT AND STATUS

- 1.7 The site is located between Kidderpore Avenue and the A41 Finchley Road in Hampstead, London. The site itself consists of a number of differing buildings in varying states of condition and occupation. The entire site once comprised the King's College Hampstead Campus South Site however only the north-west of the site, comprising 2 – 6 Platt's Lane and 27 – 29 Kidderpore Avenue, remain under the ownership and use by KCL as student accommodation (Phase 2). The south-east portion of the site, comprising 328 – 338 Finchley Road, 17a – 25 Kidderpore Avenue and the Caroline Skeel Library, is under the ownership of BWL (Phase 1).
- 1.8 The National Grid Reference for the site is TQ 252 858 and is predominantly surrounding by residential housing, with the Hampstead School of Art located on the northern side of Kidderpore Avenue.
- 1.9 No statutory or non-statutory designations apply to the site. The nearest statutory site is Westbere Copse Local Nature Reserve, located approximately 907m to the south west. It is a small reserve (approximately 0.38 ha) comprising meadow, woodland and a pond. Hampstead Cemetery also lies approximately 100m south-west of the site. Extensive woodland (including ancient and semi-natural woodland) and grassland habitat lie from 730m north-east of the site and include West Heath, Bishops Wood (ancient and semi-natural woodland) and Hampstead Heath (which includes Hampstead Heath Wood Site of Special Scientific Interest), all of which would provide suitable foraging and commuting habitats for bats.
- 1.10 To the south east of the site is Westfield Open Space and north of the site is Kings College Hampstead Campus Site of Nature Conservation Importance (Borough II) (as shown on the London Borough of Camden Proposals Map, 2010). Both sites comprise scattered trees and amenity grassland, which also would provide suitable foraging and commuting habitats for bats.
- 1.11 The development site is connected to Westfield Open Space and Hampstead Heath through a series of residential gardens, which offer suitable treelines for bats to utilise as commuting routes. This habitat connectivity may increase the possibility of bats finding and using suitable roosting features within the site.

## DEVELOPMENT PROPOSALS

- 1.12 An overview of the development proposals as per the planning application submission is provided below.

- 1.13 The proposed development comprises the demolition of properties 328 - 338 Finchley Road and conversion of properties 17- 25 Kidderpore Avenue.
- 1.14 These works form part of a wider development involving works to other buildings within the site. These other buildings were excluded from this bat survey owing to their being assessed as having negligible potential to support roosting bats in the Preliminary Roost Assessment<sup>1</sup>.
- 1.15 The overall development would provide approximately 125 residential dwellings, together with basement car parking and landscape communal and private gardens and approximately 400 sq m of community floorspace.
- 1.16 A new street through the site is proposed to provide shared surface to cars entering the car park from Kidderpore Avenue within Phase 1 and opening up and improving the existing pedestrian route from Finchley Road to Kidderpore Avenue. A new entrance from Kidderpore Avenue is also proposed closer to the junction with Platt's Lane, to provide an entrance to the car park in Phase 2.
- 1.17 Landscaping proposals aim to preserve as many of the existing trees as possible and to increase amenity green space.

#### Kidderpore Avenue:

- Buildings 17 to 25 Kidderpore Avenue would be retained. Refurbishment to 25 Kidderpore Avenue would be extensive, including the removal of all internal floors, walls and roofs. The existing properties at 17 – 25 Kidderpore Avenue would be converted into duplex flats and restored. The external appearance would be refurbished, but would otherwise be largely unchanged. A light-weight bridge is proposed to link numbers 23 and 25 Kidderpore Avenue at first floor level.

#### Finchley Road:

- Demolition of the existing buildings including 328-338 Finchley Road and the erection of a new a building to provide 31 flats.

#### Caroline Skeel Library:

- Stripping the Caroline Skeel library back to the concrete frame and converting it into residential use, plus a new external elevation.

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<sup>1</sup> The Ecology Consultancy, 2011, Building Inspection for bats.



King's College Hall of Residence (Chesney House and Ellison House):

- Demolition of the existing buildings and the erection of three new blocks to provide new residential flats.

Landscaping:

- Barratt West London and King's College London wish to create a high-quality development with substantial landscaping to establish an attractive environment for existing and new residents;
- Green roofs are proposed; and
- Planting will prioritise native trees and other species of value to wildlife.

## 2 Legislation

### UNITED KINGDOM AND EUROPEAN UNION

- 2.1 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.
- 2.2 Bats are also protected under the Wildlife and Countryside Act (WCA) 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;  
and
  - Intentional or reckless obstruction of access to any place of shelter or protection.
- 2.3 A European Protected Species Mitigation (EPSM) licence issued by Natural England will be required for any works liable to affect a bat roost or for operations likely to result in a level of disturbance that might impair the bats ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The awarding of such a licence enables derogation (under condition) from the relevant legislation and also ensures appropriate mitigation measures are put in place and their efficacy is monitored.
- 2.4 **NB:** 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.
- 2.5 The species protection provision of the Habitats Directive, as implemented by The Conservation of Habitats and Species Regulations 2010 (as amended), contains three

“derogation tests” which must be applied by the Competent Authority when deciding whether to grant planning permission for a development that could harm a European Protective Species. The three tests are that:

- The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
- There must be no satisfactory alternative; and
- Favourable conservation status of the species must be maintained.

2.6 It is the responsibility of the applicant to submit sufficient information to address these tests when applying for planning permission.

2.7 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’ (SPIBs). This list is based on priority species recognised by the UK Biodiversity Action Plan (BAP, see below), and in addition to Annex II species listed under The Conservation of Habitats and Species Regulations 2010. The S41 SPIBs 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*.

2.8 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 area is crucial to maintaining the integrity and long-term viability of a bat roost.

### LOCAL PLANNING POLICY

2.9 In addition, bats are protected and their conservation promoted through the National Planning Policy Framework (NPPF), The London Plan, Camden’s Planning Guidance: Sustainability CPG3 and the Camden Borough Council Local Development Framework

Core Strategy (The London Borough of Camden, 2010). Relevant local policy is set out below.

2.10 Camden's Planning Guidance: Sustainability CPG3 states that *"Biodiversity is integral to the planning process and we will expect it to be fully incorporated into the design and construction stages. In principle, all development activity should have minimal impacts on biodiversity and enhance it wherever possible"*.

2.11 CPG3 sets out appropriate measures for biodiversity to be considered at the design stage. This requires planning proposals for all sites to demonstrate:

- how biodiversity considerations have been incorporated into the development;
- if any mitigation measures will be included; and
- what positive measures for enhancing biodiversity are planned.

2.12 The guidance also identified that *"It is also important to conserve and improve land outside designated areas as these areas support biodiversity networks through connecting, stepping stone and buffering qualities. Opportunities to improve biodiversity must be considered in all developments"*.

2.13 The process by which planning proposals demonstrate that these aspects are considered is by following a 'five-point approach' to planning decisions for biodiversity. These points are based on the five following principles – information, avoidance, mitigation, compensation and new benefits. (based on Royal Town Planning Institute Good Practice Guide - 'Planning for Biodiversity'):

1. Information – We will require appropriate information at the outset on habitats and species and the impact of development on them;
2. Avoidance – Developments should avoid adverse effects to wildlife and habitats as far as reasonably possible;
3. Mitigation - Where avoidance is not possible, biodiversity impacts should be reduced as far as reasonably possible. We may use conditions or planning obligations/agreements to achieve this;
4. Compensation - Appropriate replacement and compensation will be required, where, exceptionally development that is harmful to biodiversity is permitted;
5. New benefits - In all cases, opportunities should be taken to enhance on-site biodiversity, or within the locality or borough, to provide new benefits for wildlife, for example, by habitat creation or enhancement.

- 2.14 Policy CS15 of Camden Borough Council's Core Strategy – Protecting and improving our parks and open spaces and encouraging biodiversity *“seeks to ensure that the growth in the number of residents and visitors to Camden, identified in policy CS1 – Distribution of growth, will be supported by increases and improvements in open space provision, including outdoor sport and recreation opportunities, and that development protects and makes provision for biodiversity.*
- 2.15 *The Council will protect and improve sites of nature conservation and biodiversity, in particular habitats and biodiversity identified in the Camden and London Biodiversity Action Plans in the borough by:*
- a) protecting other green areas with nature conservation value, including gardens, where possible;*
  - b) expecting the provision of new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls;*
  - c) identifying habitat corridors and securing biodiversity improvements along gaps in habitat corridors.*

## 3 Methodology

### DUSK EMERGENCE SURVEYS

- 3.1 A suite of three dusk emergence and dawn return to roost surveys were carried out at 16 surveyor locations surrounding buildings 328-338 Finchley Road and 17-25 Kidderpore Avenue.
- 3.2 For one complete survey parcel (i.e., a single survey of all sections of buildings included within the survey), 16 surveyors were required to cover all features included within the survey. Survey effort for each survey parcel was therefore divided into multiple visits, totalling 13 survey visits for the site overall, with between two and five surveyors. This enabled the site to be monitored over a longer period and to potentially capture more detailed data than a complete survey completed with 16 surveyors over three survey visits.
- 3.3 These surveys were conducted on the weeks commencing 6<sup>th</sup> August 2012, 27<sup>th</sup> August 2012 and 3<sup>rd</sup> September 2012. The objectives of the surveys were to:
  - Determine if any bats are roosting in the buildings present within the site;
  - Identify the bat species using the site;
  - Record the nature of activity for different species, for example foraging, commuting and roosting; and
  - Determine the habitats within the site that are of value for bats (i.e. by being frequently used; used by high numbers of bats; linking habitats beyond the site and across the landscape).
- 3.4 The dusk emergence surveys commenced at least 15 minutes before sunset and finished at least 90 minutes after. The pre-dawn re-entry surveys commenced 120 minutes before sunrise and finished at sunrise.
- 3.5 Ecologists experienced in bat activity surveys were present for each survey. The surveyors were positioned around the buildings in such a way that all potential access/egress points were observed and, where possible, with a degree of overlap between the visual range of each surveyor in order to reduce the likelihood of bats being missed (see Appendix 1).
- 3.6 Surveyor locations were rotated during visits one to three so that each location was covered by both dusk emergence and pre-dawn re-entry surveys. On the third survey

visit, the surveyor location on Finchley Road covering buildings 332-338 was removed due to absence of bats recorded on the first and second surveys and survey effort was increased to cover the buildings on Kidderpore Avenue.

- 3.7 Each surveyor used a BatBox Duet bat detector to pick up any echolocation calls. All bat activity was recorded using Roland Edirol 24 bit 96 kHz Wave/MP3 recorders attached to each bat detector. Recordings were later analysed using BatSound to aid the identification of species according to Russ (1999).

### **LIMITATIONS**

- 3.8 The view of the roof was restricted on the south elevation of the buildings 328-338 Finchley Road owing to the street lighting located on the pavement in front of the buildings. However, it was possible to determine whether bats recorded by the surveyor in this location were likely to have emerged from the building by comparing recordings with those of surveyors in other positions. Therefore, this is not considered to significantly affect the results of the surveys.

## 4 Results

### DESK STUDY

- 4.1 The data search conducted by Greenspace Information for Greater London (GiGL) on behalf of The Ecology Consultancy in 2011, as part of the preliminary bat roost assessment, found 69 records for pipistrelle bats *Pipistrellus* spp. (26 for common pipistrelles *P. pipistrellus*, 15 for soprano pipistrelles *P. Pygmaeus* and 28 unidentified pipistrelle species), were recorded within 2km of the site since 1985. The closest records are located 327m north of the site. The data search revealed nine records of Daubenton's *Myotis daubentonii*, four for Natterer's *M. nattereri*, ten for noctule *Nyctalus noctula*, two for serotine *Eptesicus serotinus* and 37 records for brown long-eared bat *Plecotus auritus*, within 2km of the site since 1985 (The Ecology Consultancy, 2011).

### BAT EMERGENCE / RE-ENTRY SURVEYS

- 4.2 Over the suite of surveys, at least four species of bats were recorded using the site, namely (common pipistrelle, soprano pipistrelle, noctule, serotine and some pipistrelle species and other bats, which could not be identified to species level).
- 4.3 A bat roost was recorded at 25 Kidderpore Avenue during the emergence survey on 28<sup>th</sup> August.
- 4.4 During this survey, one common pipistrelle bat was recorded emerging from under the hanging tiles on the top section of the double bay window, on the east elevation of the building at 20:38, 43 minutes after sunset (see Appendix 3, Photographs 1 and 3).
- 4.5 During the same survey, two common pipistrelle bats were recorded re-entering the building under lifted or missing tiles on the southern pitch of the double bay window which was on the east elevation of the building (see Appendix 3, Photographs 2 and 3).
- 4.6 No other roosts were identified during the survey.
- 4.7 Bats predominantly commuted and foraged through the north east section of the site around buildings 17-25 Kidderpore Avenue. Activity was continuous at points during the dusk and dawn surveys in the area between buildings 17-25 Kidderpore Avenue and the Caroline Skeel Library, where there were scattered trees and shrubs. Species using this foraging habitat and recorded commuting in both directions were common



and soprano pipistrelles, pipistrelle bats unidentified to species level and a serotine bat, which was heard but not seen in the vicinity of number 25 Kidderpore Avenue.

- 4.8 Commuting and foraging bat activity, of common and soprano pipistrelle bats and pipistrelle bats unidentified to species level, was recorded along the north of Kidderpore Avenue. High levels of bat passes were recorded here, but bats were often unseen, suggesting that these bats were using the tree line on the opposite side of the road and outside of the site.
- 4.9 Lower numbers of bat passes were recorded along Finchley Road, to the southwest of the site. Most activity in this section was recorded in habitat comprising scattered trees, tall ruderal vegetation and amenity grassland, located to the east of buildings 328-330, 332-334 and 336-338 Finchley Road. Species recorded here were common and soprano pipistrelle bats, pipistrelle bats unidentified to species level and noctule bats.
- 4.10 Low bat activity was recorded during the surveys on Finchley Road, with no activity recorded to the south-west of the buildings.
- 4.11 The survey findings are mapped in Appendix 1, Plans 1-3 and recorded in detail in Appendix 2, Tables 1-13.

## 5 Conclusions and Recommendations

### CONCLUSION

- 5.1 A suite of bat surveys, comprising evening emergence and dawn re-entry surveys, were undertaken on the buildings at 17-25 Kidderpore Avenue and 328-338 Finchley Road.
- 5.2 Number 25 Kidderpore Avenue was confirmed to be a roost for common pipistrelle bats. Three bats were recorded using this roost during the emergence survey on 28<sup>th</sup> August. Two access / egress points were identified under tiles on the double bay window on the east elevation of the property. The roost is likely to be a summer roost for low numbers of common pipistrelle bats.
- 5.3 Overall, four species of bats were recorded during the surveys at Kidderpore Avenue, common pipistrelle, soprano pipistrelle, noctule and serotine. Common pipistrelle was the predominant species during all surveys, while soprano pipistrelles were also present, but in reduced numbers.
- 5.4 On all three survey visits, both common and soprano pipistrelle bats were recorded within the typical emergence period for these species (32 minutes after sunset, Jones & Rydell, 1994) suggesting that there are further roosts for these two species near to, but outside of, the site.
- 5.5 During the 13 survey visits, key habitats were identified which were consistently used by foraging and commuting bats. In particular, the commuting/foraging route extending from the southeast of the site, progressing along the habitat comprising scattered semi-mature and mature broadleaved trees, scrub and introduced shrubs between buildings 17, 19-21, 23 and 25 Kidderpore Avenue (south side) and the Caroline Skeel Library (north side), and continuing northwards between buildings 19-21, 23 and 25 Kidderpore Avenue was frequently used by high numbers of bats. Species using this route, travelling in both directions, were common and soprano pipistrelles, pipistrelle bats unidentified to species level and a serotine bat. To the south east of the site and extending beyond the site boundary to the south east is a dense area of scattered trees and amenity grassland referred to as Westfield Gardens, which is a protected area of private open space as designated on the London Borough of Camden Proposals Map, 2010.

- 5.6 Bat activity, for common and soprano pipistrelle bats and pipistrelle bats unidentified to species level, was high to the north of Kidderpore Avenue. Habitat here connected to further open space referred to as Kings College Hampstead Campus Site of Nature Conservation (Borough BII). Activity recorded on site is likely to be associated with these open spaces and the surrounding habitat.
- 5.7 Bat activity north of buildings 328-338 Finchley Road was low. Common and soprano pipistrelle bats, pipistrelle bats unidentified to species level and noctule bats were recorded commuting and foraging over scattered trees, tall ruderal vegetation and amenity grassland which formed a commuting route across the site to the Westfield Open Space located east of the site. This habitat was lit by security lighting present around the neighbouring buildings (Hampstead Bar, Ellison House and the Caroline Skeel Library), which may deter bat activity to some degree.
- 5.8 No bats were recorded to the south of buildings 328-338 Finchley Road, which is likely to be due to this area being brightly lit at night.
- 5.9 Owing to the high numbers of bats using key commuting and foraging routes within the site, these habitats are considered to be of value to the local bat population.

#### IMPLICATIONS FOR DEVELOPMENT

- 5.10 Development proposals comprise complete refurbishment of buildings 17-25 Kidderpore Avenue (including the removal of all internal floors, walls and roofs), stripping back of Caroline Skeel library to the concrete frame and converting it into residential use and demolition of buildings 328-338 Finchley Road and the Halls of Residence (Chesney House and Ellison House).
- 5.11 The refurbishment works will cause destruction and disturbance to the summer roost of common pipistrelle within building 25 Kidderpore Avenue.
- 5.12 All bats and their roosts are protected by law (through their inclusion on Schedule 2 of The Conservation of Habitats and Species Regulations 2010, as amended).
- 5.13 Therefore, if these works are to progress, it will be necessary to apply to Natural England for a European Protected Species Mitigation (EPSM) licence. This licence permits action that is otherwise unlawful, and is issued on the basis that appropriate mitigation measures and proportionate compensation are put into place before and during development. The following recommendations stipulate the measures required

to provide appropriate mitigation and proportional compensation at the Kidderpore Avenue site and have been informed by the findings of the roost characterisation surveys detailed above.

## RECOMMENDATIONS

### EPSM Licence Application

- 5.1 Planning permission will need to be obtained before a licence application can be submitted to Natural England. In order to comply with the Habitats Directive as implemented by the Conservation of Habitats and Species Regulations 2010 (as amended), planning permission would only be granted if the proposed activities meet the three derogation tests described below:
  - the purpose of the actions authorised must be for “preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment”; and,
  - there must be “no satisfactory alternative” to the actions authorised; and,
  - the actions authorised “will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range”.
- 5.2 It is the responsibility of the applicant to submit sufficient information to address these tests when applying for planning permission.
- 5.3 For development activities, a Natural England EPSM Licence application can only be issued after planning permission has been granted. However, the granting of planning permission does not guarantee that a licence will be issued by Natural England.
- 5.4 The licence application must include a Method Statement (produced by the commissioned ecologist on behalf of the applicant) which describes the proposed course of action and timing of works. Additionally the application would include detailed remedial methods that will be adopted to minimise adverse impacts to bats during the re-development works and post-development.
- 5.5 Compensatory measures to ensure no net loss of bat roosting habitats in the long-term must be provided. Future monitoring of these features will be required to assess the value of the mitigation and (where necessary) to inform any changes to the mitigation strategy. A summary of these details are described below.

5.6 The measures adopted should be sensitive to the requirements of the species for which they are intended and should seek as far as is practicably possible to replicate the conditions found at the property prior to development.

5.7 It is likely that mitigation and compensation will be required in the following ways:

- Timing of the work to 25 Kidderpore Avenue would be confined to April and/or September-October to avoid the maternity and hibernation seasons. Where working programmes require a longer timeline, it is recommended that works are timed to commence in April, as soon as weather conditions are suitable to enable bat mitigation measures to be implemented and that the programme of works is designed to be as efficient as possible.
- The provision of a dedicated compensatory roost (bat boxes) should be established one month prior to works commencing to maintain ecological functionality of the site between demolition of existing roosts and establishment of permanent compensatory roosts;
- Exclusion of bats from the roost at 25 Kidderpore Avenue would take place prior to works commencing;
- An ecological watching brief and soft-strip (dismantling of structures by hand) of the roof and hanging tiles will be required prior to the demolition of 25 Kidderpore Avenue; and
- Replacement roosts would be incorporated into the redevelopment for crevice-dwelling pipistrelle species.

### Compensatory roosts

5.8 Redevelopment of existing residential premises provides opportunities to incorporate compensatory roosts into the final structure. This approach is generally preferred and can be achieved at significantly lower cost than establishing dedicated free standing bat lofts (Bat Conservation Trust, 2007).

5.9 Interim roosting habitats must be provided so as to maintain ecological functionality of the site between the demolition and construction phase. Differing interim roosting habitats must be established one month prior to demolition. These habitats must meet the requirements of the species of bat that roost within the site. Bat boxes must be erected on mature trees or buildings outside the development curtilage, but no more than 100m from the existing roost, to cater for crevice-dwelling pipistrelle bats.

- 5.10 The most critical considerations for provision of compensatory roosts are the size and suitability of the final roost, and the disposition of the entrances and flight paths, including the location of any exterior lighting and vegetation.
- 5.11 The roosts should be replaced / re-instated following renovations works and should be replaced with like for like materials to replicate the conditions of the existing roosts.
- 5.12 Where the existing hanging tiles are removed on the top section of the double bay window, following renovation, hanging tiles can be re-fitted to horizontal timber batons (20 – 25mm thick) on this elevation of the building with two to three tiles being adapted hanging tiles (see Bat Conservation Trust, 2012), which allows access for bats to roost beneath them. The location of these access tiles will correspond with the identified access / egress points observed in the survey. Behind the hanging tiles will be bitumen felt or a rough plywood.
- 5.13 Where the roof tiles are to be replaced and the roof re-lined on 25 Kidderpore Avenue, traditional bitumen and hessian roofing felt must be used in preference to breathable membranes.
- 5.14 Building materials, such as paints, timber treatments and roof lining material would be sympathetic to bats. Lists of non-toxic paints and treatments are available (Natural England, 2011).

#### Habitat Enhancement - Planting

- 5.14 It is recommended that as many as possible of the existing trees on site are retained and habitat connectivity between the site and surrounding areas is maintained through further planting of trees and shrubs.
- 5.15 It is acknowledged that using native species in planting schemes attract insects and provide a potential food source for bats (BCT, Undated). Where possible, the landscaping proposals should seek to enhance the value of the site for foraging and commuting bats by including such species.
- 5.16 Any new planting schemes should comprise native plant species that will attract insects and provide a potential food source for bats throughout the bat activity period (spring to autumn). Suitable tree and shrub species include silver birch *Betula pendula*, hazel *Corylus avellana*, oak *Quercus* spp., alder *Alnus glutinosa*, honeysuckle *Lonicera periclymenum*, dog rose *Rosa canina*, guelder-rose *Viburnum opulus*, hawthorn *Crataegus monogyna* and elder *Sambucus nigra* (JNCC, 2001; BCT, Undated). Ideally

any new planting schemes should seek to create a gradation of vegetation types that include native trees and shrubs and tall grasses and herb species. A graded planting scheme would provide a suitably diverse and sheltered habitat for insects and should maximise the value of these habitats for foraging bats.

#### Habitat Enhancement - Lighting

- 5.17 Research has found that some bat species are sensitive to artificial lighting and that excessive lighting can delay bats from emerging, thus shortening the time available for foraging, as well as causing bats to move away from suitable foraging grounds or roost sites (Jones, 2000).
- 5.18 Lighting that is required for security or safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor activated low pressure sodium or mercury lamps (Jones, 2000; BCT, 2008).
- 5.19 Lighting should be directed to where it is needed with minimal 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 or hood that directs the light below the horizontal plane (Jones, 2000; BCT, 2008).
- 5.20 Artificial lighting should not directly illuminate any bat roosting features that are included within the proposed development.

#### Habitat Enhancement – Artificial Roosts

- 5.21 Additional bat boxes following redevelopment of the site could be installed on the existing mature trees and new builds. Suitable bat box models to install on trees include; the Schwegler 1FF and Schwegler 2F bat boxes, which are suitable for pipistrelle species. Suitable bat box models to install onto buildings or that can be built into the building include; Schwegler 1FQ, Schwegler 1FR and Ibstock enclosed bat box. The boxes should not be lit by any new lighting proposals and should be erected 3-7 m above ground, typically on the south east side of the tree.
- 5.22 Bat boxes are increasingly found to be unsuccessful in the absence of specific ecological advice (BCT, *pers. comm.*). Therefore, it is recommended that opportunities are explored in consultation with an ecologist, with specifications for roosting features being drawn up.

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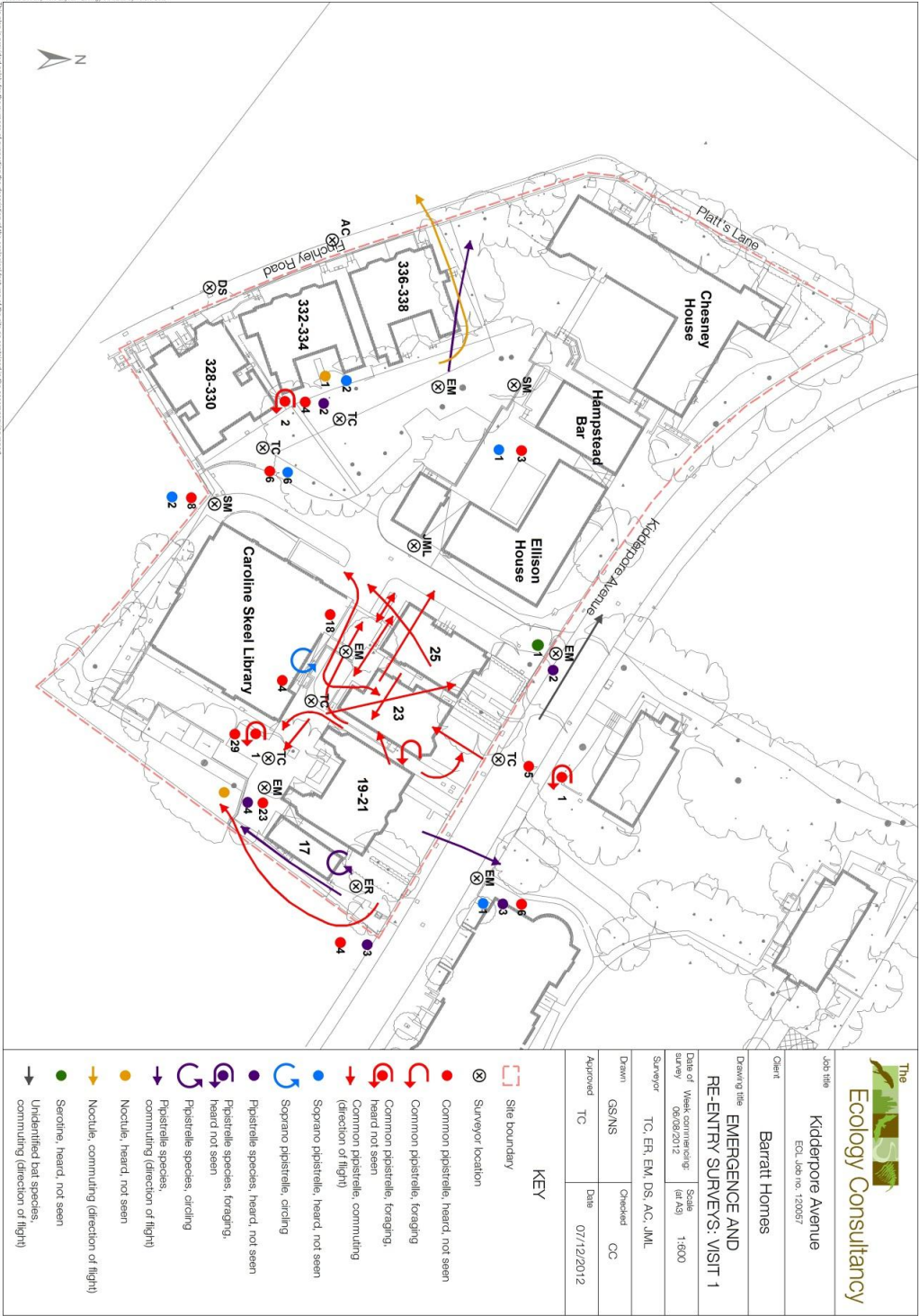


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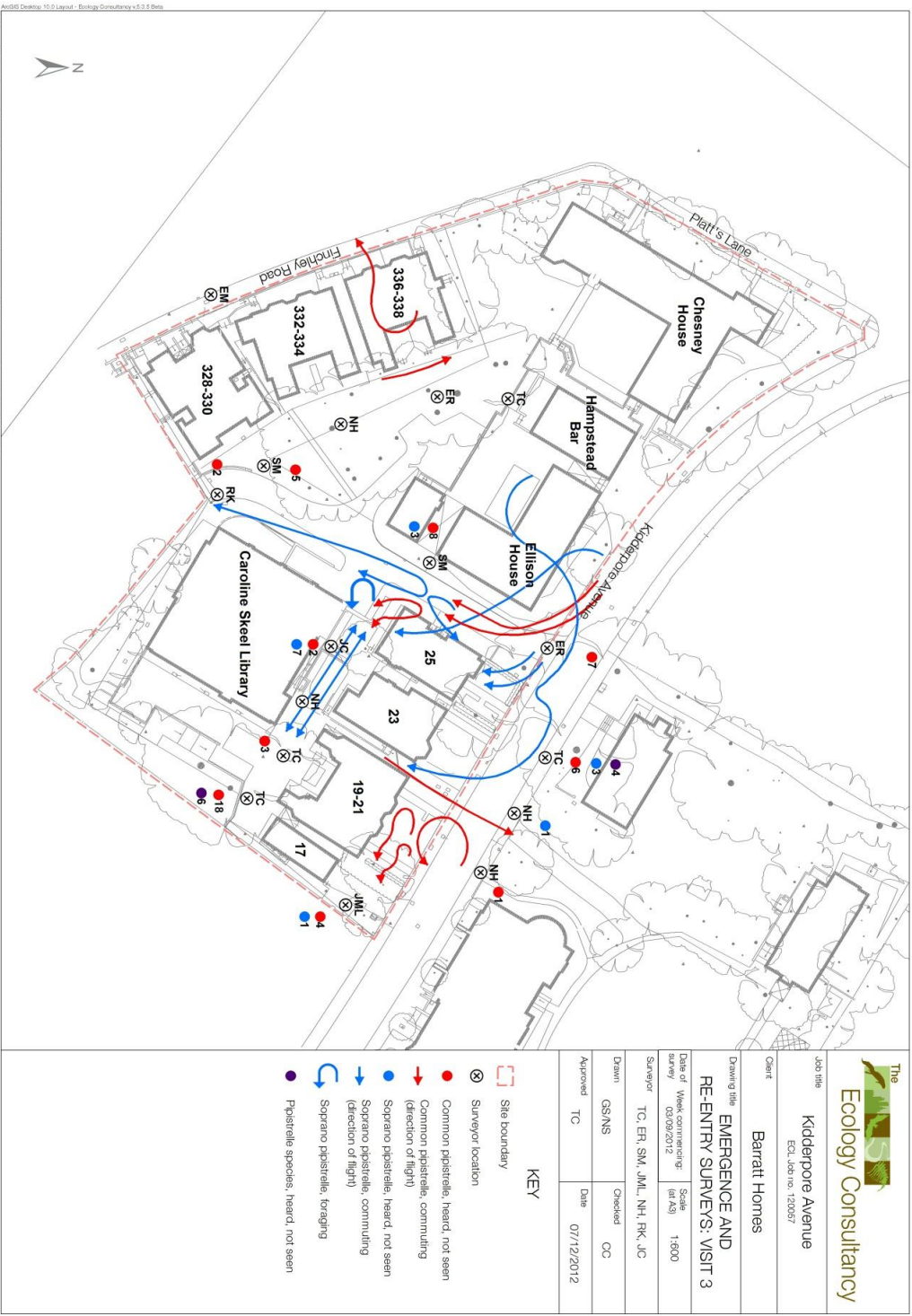
## Appendix 1: Bat Survey Plans

Plan 1: Bat Survey Plan, Kidderpore Avenue, Week Commencing 6<sup>th</sup> August 2012, Survey Parcel 1





Plan 3: Bat Survey Plan, Kidderpore Avenue, Week Commencing 3<sup>rd</sup> September 2012, Survey Parcel 3





**Plan 4:** Aerial Photo of the Site and the Surrounding Area



## Appendix 2: Survey Data

**Table 1: Kidderpore Avenue Dusk Emergence Survey - Survey Parcel 1: 06/08/2012**

**Sunset:** 20:39 hrs

**Start time:** 20:24 hrs

**End:** 22:09 hrs

**Weather conditions:** 16°C, 100% Cloud Cover, Wind at Beaufort 2, Drizzle between 20:24 and 20:59, Dry After

Surveyor: TC - Located on Kidderpore Avenue north east of Buildings 23 - 25			
Time (hrs)	Minutes after sunset	Species	Comments
21:30	51	Common pipistrelle	Heard, not seen
21:34	55	Common pipistrelle	Heard, not seen
21:39	60	Common pipistrelle	Three passes, seen commuting south between buildings 19-21 and 23
21:49	70	Common pipistrelle	Two passes, heard, not seen
21:51	72	Common pipistrelle	Three passes, seen passing over building 23 from west to east and from north to south towards building 23
21:56	77	Common pipistrelle	Seen foraging over the front garden of building 23
22:01	82	Common pipistrelle	Two passes, one foraging, heard not seen

Surveyor: ER - Located on the driveway north east of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
21:08	29	Pipistrelle species	Seen flying from Kidderpore Avenue towards the south-east down the side of Building 17
21:28	49	Pipistrelle species	Heard, not seen
21:34	55	Pipistrelle species	Circling over the front of Building 17
21:37	58	Common pipistrelle	Heard, not seen
21:47	68	Pipistrelle species	Heard, not seen
21:48	69	Pipistrelle species	Heard, not seen
21:54	75	Common pipistrelle	Seen flying from Kidderpore Avenue towards the south-east down the side of Building 17
21:58	79	Common pipistrelle	Heard, not seen
22:01	82	Common pipistrelle	Heard, not seen



Surveyor: ER - Located on the driveway north east of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
22:05	86	Common pipistrelle	Heard, not seen

Surveyor: EM - Located on Kidderpore Avenue north east of Building 19-21			
Time (hrs)	Minutes after sunset	Species	Comments
21:28	49	Pipistrelle species	Heard, not seen, very faint
21:33	53	Pipistrelle species	Seen flying north from across building 19-21
21:37	58	Common pipistrelle	Heard, not seen
21:38	59	Common pipistrelle	Heard, not seen
21:48	69	Soprano pipistrelle	Heard, not seen
21:54	75	Pipistrelle species	Heard, not seen
21:55	76	Pipistrelle species	Heard, not seen
21:59	80	Common pipistrelle	Heard, not seen
21:59	80	Common pipistrelle	Heard, not seen
22:04	85	Common pipistrelle	Heard, not seen
22:08	89	Common pipistrelle	Heard, not seen

Surveyor: DS - Located on Finchley Road south west of Buildings 328-334			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

Surveyor: AC - Located on Finchley Road south west of Buildings 332-338			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

**Table 2: Kidderpore Avenue Dawn Re-Entry Survey - Survey Parcel 1: 07/08/2012**

**Sunrise:** 05:34 hrs      **Start time:** 03:34 hrs      **End:** 05:34 hrs

**Weather conditions:** 11°C, 100% Cloud Cover, Wind at Beaufort 2, Dry

Surveyor: TC - Located south of Buildings 19-21 and 23 on Kidderpore Avenue			
Time (hrs)	Minutes before sunrise	Species	Comments
04:07	77	Common pipistrelle	Two passes, heard not seen
04:30	64	Common pipistrelle	Two passes, seen commuting over Building 25 from north to south
04:31	63	Common pipistrelle	Seen commuting, flying between Buildings 23 and 19-21 and then moving west round the back of the buildings
04:31	63	Common pipistrelle	Two passes, flying along the corridor at the rear of Buildings 23 and 25 from west to east and vice versa
04:33	61	Common pipistrelle	Two passes, heard not seen
04:52	42	Common pipistrelle	Seen commuting from east to west over the top of Building 23 to 25
05:13	21	Common pipistrelle	Two passes, seen flying between Buildings 23 and 19-21 and then moving east towards the Caroline Skeel Library

Surveyor: EM - Located on Kidderpore Avenue, north west of Building 25			
Time (hrs)	Minutes before sunrise	Species	Comments
04:09	75	Unidentified	Seen not heard, flying beneath the street lamps along Kidderpore Avenue from east to west
04:29	65	Pipistrelle species	Heard, not seen
04:30	64	Pipistrelle species	Heard, not seen
04:51	43	Serotine	Heard, not seen

Surveyor: JML - Located south west of Building 25 adjacent to Ellison House			
Time (hrs)	Minutes before sunrise	Species	Comments
N/A			No bats seen or heard

**Table 3: Kidderpore Avenue Dawn Re-entry Survey - Survey Parcel 1: 08/08/2012**

**Sunrise:** 05:35 hrs      **Start time:** 03:35 hrs      **End:** 05:35 hrs

**Weather conditions:** 20°C, 100% Cloud Cover, Wind at Beaufort 1, Dry

Surveyor: TC - Located to the south of Building 19 - 21 Kidderpore Avenue			
Time (hrs)	Minutes before sunrise	Species	Comments
03:45	110	Common pipistrelle	Foraging above trees – circling continuously, heard, not seen from 03:35 until 03:54
03:57	98	Common pipistrelle	Continuous activity from one to two bats, heard, not seen from 03:57 until 04:02
04:07	88	Common pipistrelle	Continuous circling and foraging activity for three minutes – unseen
04:20	75	Common pipistrelle	Circling, foraging and social calls – made eleven passes
04:23	72	Common pipistrelle	Circling, foraging and social calls – made three passes
04:27	68	Common pipistrelle	Nine passes, heard, not seen
04:35	60	Common pipistrelle	Three passes, heard, not seen
04:59	36	Common pipistrelle	Three passes, heard, not seen

Surveyor: EM - Located to the north of Building 336-338 Finchley Road			
Time (hrs)	Minutes before sunrise	Species	Comments
N/A			No bats seen or heard

**Table 4: Kidderpore Avenue Dusk Emergence Survey - Survey Parcel 1: 08/08/2012**

**Sunset:** 20:36 hrs      **Start time:** 20:21 hrs      **End:** 22:06 hrs

**Weather conditions:** 20°C, 20% Cloud Cover, Wind at Beaufort 0, Dry

Surveyor: EM - Located to the south of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
21:07	31	Common pipistrelle	Seen foraging amongst trees south of 17, heard faintly
21:22	46	Common pipistrelle	Heard, not seen
21:30	54	Noctule	Heard, not seen

21:35	59	Common pipistrelle	Heard, not seen
21:36	60	Common pipistrelle	Two passes, heard, not seen
21:39	63	Common pipistrelle	Heard, not seen
21:40	64	Pipistrelle species	Heard, not seen, very faint
21:42	66	Pipistrelle species	Two passes, heard, not seen
21:45	69	Pipistrelle species	Heard, not seen
21:47	71	Common pipistrelle	Five passes, heard not seen
21:50	74	Common pipistrelle	Three passes, heard not seen
21:53	77	Common pipistrelle	Heard, not seen
21:54	78	Common pipistrelle	Three passes, heard not seen
21:56	80	Common pipistrelle	Heard, not seen
21:58	82	Common pipistrelle	Heard, not seen
21:59	83	Common pipistrelle	Three passes, heard, not seen
22:01	85	Common pipistrelle	Heard, not seen

Surveyor: TC - Located to the east of buildings 332 - 334 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
21:09	33	Common pipistrelle	Heard, not seen
21:15	39	Common pipistrelle	Heard, not seen
21:28	52	Noctule	Heard, not seen
21:32	56	Soprano pipistrelle	Heard, not seen
21:36	60	Pipistrelle species	Brief pass, heard not seen
21:36	60	Common pipistrelle	Heard foraging, not seen
21:41	65	Common pipistrelle	Three passes, heard, not seen
21:47	71	Soprano pipistrelle	Heard, not seen
21:55	79	Pipistrelle species	Heard, not seen – brief and quiet

Surveyor: SM - Located to the north east of Building 336 - 338 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
21:10	34	Pipistrelle species	Seen flying across house nearest to surveyor and out towards Finchley Road
21:25	49	Noctule	Seen flying across house nearest to surveyor and out towards Finchley Road
21:34	58	Soprano pipistrelle	Heard, not seen
21:37	61	Common pipistrelle	Two passes, heard, not seen
21:41	65	Common pipistrelle	Heard, not seen

**Table 5: Kidderpore Avenue Dusk Bat Emergence Survey - Survey Parcel 1: 09/08/2012**

**Sunset:** 20:34 hrs      **Start time:** 20:19 hrs      **End:** 22:04 hrs

**Weather conditions:** 22°C, 5% Cloud Cover, Wind at Beaufort 1, Dry

Surveyor: EM - Located to the south of Buildings 23 and 25 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
21:04	30	Soprano pipistrelle	Seen circling behind building 23
21:12	38	Common pipistrelle	Seen flying from east to west behind buildings 23 to 25
21:14	40	Common pipistrelle	Consistently flying between building 23 and 25 and the library
21:26	52	Common pipistrelle	Seen commuting across building 23 towards the north from the south east
21:29	55	Common pipistrelle	Heard, not seen
21:30	56	Common pipistrelle	Heard, not seen
21:31	57	Common pipistrelle	Seen flying high (around 20 – 25 metres) behind building 19-21 towards the east
21:34	60	Common pipistrelle	Flying high around the library (not circling) from east to west
21:38	64	Common pipistrelle	Five passes, heard, not seen, continuous activity
21:44	70	Common pipistrelle	Six passes, heard, not seen
21:55	81	Common pipistrelle	Heard, not seen
21:57	83	Common pipistrelle	Heard, not seen
22:02	88	Common pipistrelle	Heard, not seen
22:05	91	Common pipistrelle	Two passes, heard not seen

Surveyor: SM - Located to the east of Building 328 - 330 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
21:01	27	Soprano pipistrelle	Heard, not seen
21:02	28	Soprano pipistrelle	Heard, not seen
21:13	37	Common pipistrelle	Heard, not seen
21:36	60	Common pipistrelle	Heard, not seen
21:41	65	Common pipistrelle	Heard, not seen
21:43	67	Common pipistrelle	Heard, not seen
21:56	80	Common pipistrelle	Heard, not seen
21:58	82	Common pipistrelle	Heard, not seen
22:03	87	Common pipistrelle	Heard, not seen
22:04	88	Common pipistrelle	Heard, not seen

Surveyor: TC - Located to the east of Building 328 - 330 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
21:00	24	Soprano pipistrelle	Three passes, heard, not seen
21:12	36	Common pipistrelle	Heard, not seen
21:36	60	Common pipistrelle	Heard, not seen
21:41	65	Common pipistrelle	Heard, not seen
21:54	78	Common pipistrelle	Heard, not seen
21:56	80	Common pipistrelle	Two passes, heard not seen
21:01	85	Soprano pipistrelle	Heard, not seen
22:04	88	Soprano pipistrelle	Two passes and foraging, heard not seen

**Table 6:** Kidderpore Avenue Dusk Emergence Survey - Survey Parcel 2: 28/08/2012

**Sunset:** 19:55 hrs      **Start time:** 19:40 hrs      **End:** 21:25 hrs

**Weather conditions:** 19°C, 70% Cloud Cover, Wind at Beaufort 2-3, Dry

Surveyor: JML- Located to the south of building 19-21 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
20:11	16	Unidentified	Seen, but not heard – two bats passing, no echolocation, see flying from the south to the north towards Building 17
20:41	46	Soprano pipistrelle	Brief and quiet pass, heard, not seen
20:59	64	Pipistrelle species	One pass and social call, heard, not seen
21:04	73	Common pipistrelle	Two passes, heard, not seen
21:09	78	Common pipistrelle	Seven passes, heard, not seen
21:11	80	Common pipistrelle	Six passes, heard foraging, not seen

Surveyor: SM -Located south west of building 25 adjacent to Ellison House			
Time (hrs)	Minutes after sunset	Species	Comments
20:42	47	Common pipistrelle	Two passes, heard, not seen
20:59	64	Pipistrelle species	Heard, not seen – brief and quiet
21:09	74	Pipistrelle species	Heard, not seen – brief and quiet
21:21	86	Common pipistrelle	Heard, not seen – social calls recorded
21:22	87	Pipistrelle species	Heard, not seen – social calls recorded

Surveyor: ER - Located on Kidderpore Avenue, north west of Building 25			
Time (hrs)	Minutes after sunset	Species	Comments
20:25	30	Soprano pipistrelle	Flew in front of Building 25, heading east
20:35	40	Common pipistrelle	Four passes, heard, not seen
20:38	43	Common pipistrelle	One common pipistrelle emerged from under one of the hanging tiles on the east face of the double bay window on 25 Kidderpore Avenue

Surveyor: ER - Located on Kidderpore Avenue, north west of Building 25			
Time (hrs)	Minutes after sunset	Species	Comments
20:38	43	Common pipistrelle	Two bats seen returning to the south aspect of the pitched roof on the dormer, which is located on the east elevation of 25 Kidderpore Avenue. Likely to be returning to a point on the roof under lifted/missing tiles
20:57	62	Common pipistrelle	Three passes, heard, not seen
20:59	64	Common pipistrelle	Two passes, heard, not seen
21:05	70	Common pipistrelle	Heard, not seen
21:11	76	Common pipistrelle	Heard, not seen
21:19	84	Common pipistrelle	Heard, not seen

Surveyor: JC - Located to the south west of Building 336-338 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
20:44	49	Common pipistrelle	Heard, not seen
21:23	88	Common pipistrelle	Heard, not seen - foraging

Surveyor: TC - Located to the south of Buildings 19-21 and 23 on Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
20:28	33	Soprano pipistrelle	Appeared from around the south west corner of Building 23, flew east and then back on itself heading west towards Ellison House
20:41	46	Common pipistrelle	Three passes, seen commuting west to north east in between Buildings 23 and 19-21 down the alleyway and vice versa. Social calls recorded
20:56	61	Common pipistrelle	Heard, but not seen
20:56	61	Common pipistrelle	Two passes and foraging, heard, not seen
20:59	64	Common pipistrelle	One foraging pass heard, not seen
21:00	65	Common pipistrelle	Heard, not seen – two passes and social calling
21:04	69	Common pipistrelle	Heard, not seen – four passes
21:09	74	Common pipistrelle	Heard, not seen



Surveyor: TC - Located to the south of Buildings 19-21 and 23 on Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
21:10	75	Common pipistrelle	Heard, not seen – two passes
21:12	77	Common pipistrelle	Four passes, seen circling over the holly tree south of Building 25
21:13	78	Common pipistrelle	Heard, not seen – three passes
21:15	80	Common pipistrelle	Heard, not seen - four passes
21:18	83	Common pipistrelle	Heard, not seen – two passes
21:21	86	Common pipistrelle	Heard, not seen – six passes
21:26	91	Common pipistrelle	Heard, not seen – two passes

**Table 7:** Kidderpore Avenue Dawn Re-entry Survey - Survey Parcel 2: 29/08/2012

**Sunrise:** 06:09 hrs      **Start time:** 04:09 hrs      **End:** 06:09 hrs

**Weather conditions:** 15°C, 20% Cloud Cover, Wind at Beaufort 1, Dry

Surveyor: TC - Located on Kidderpore Avenue north of Buildings 23 - 25			
Time (hrs)	Minutes before sunrise	Species	Comments
05:16	53	Common pipistrelle	Heard, not seen

Surveyor: SM - Located on Kidderpore Avenue north of Building 19-21			
Time (hrs)	Minutes before sunrise	Species	Comments
04:33	106	Common pipistrelle	Heard, not seen
05:09	60	Soprano pipistrelle	Heard, not seen

Surveyor: EM - Located on the driveway north east of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes before sunrise	Species	Comments
04:20	109	Soprano pipistrelle	Heard, not seen
04:30	99	Common pipistrelle	Heard, not seen – very faint
04:34	95	Common pipistrelle	Heard, not seen

Surveyor: EM - Located on the driveway north east of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes before sunrise	Species	Comments
05:08	61	Common pipistrelle	Heard, not seen
05:09	60	Common pipistrelle	Heard, not seen

Surveyor: JC - Located to the south of 17 Kidderpore Avenue			
Time (hrs)	Minutes before sunrise	Species	Comments
04:20	109	Soprano pipistrelle	Heard, but not seen
05:10	59	Common pipistrelle	Heard, but not seen - multiple passes over one minute

**Table 8:** Kidderpore Avenue Dusk Emergence Survey - Survey Parcel 2: - 29/08/2012

**Sunset:** 19:53 hrs      **Start time:** 19:38 hrs      **End:** 21:23 hrs

**Weather conditions:** 15° C, 95% Cloud Cover, Wind at Beaufort 3, Dry

Surveyor: EM - Located east of Building 332 -334 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
21:07	74	Common pipistrelle	Heard, not seen

Surveyor: SM - Located on Finchley Road, west of Buildings 328-334			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

Surveyor: JC - Located to the east of Building 328 - 330 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

Surveyor: TC - Located to the south of Buildings 23 - 25 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
20:25	32	Common pipistrelle	First bat was seen to come over the top of Building 23 from the north and fly back round towards the alley between Building 23 and 25. Three passes with bats, circling

Surveyor: TC - Located to the south of Buildings 23 - 25 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
			and foraging south of Building 23 and 25
20:26	33	Common pipistrelle	Four passes, bat circling and foraging south of Building 23 and circling around Building 23 within the alleys between Buildings 23 and 25 and 23 and 19-21
20:28	35	Common pipistrelle	Nine passes between 20:28 and 20:32 with bat circling and foraging south of Building 23 and circling around Building 23 within the alleys between Buildings 23 and 25 and 23 and 19-21
20:37	44	Common pipistrelle	Heard, not seen
20:37	44	Common pipistrelle	Over 20 passes, continuous circling and social calls above Building 23 and the trees. Activity lasted for 10 minutes.
21:03	70	Common pipistrelle	Three passes, heard, not seen
21:09	76	Common pipistrelle	Six passes, heard, not seen
21:14	81	Common pipistrelle	11 passes, heard, not seen
22:21	88	Common pipistrelle	Two passes, heard, not seen
21:22	89	Common pipistrelle	Two passes, heard, not seen

**Table 9:** Kidderpore Avenue Dawn Re-entry Survey - Survey Parcel 2: 30/08/2012

**Sunrise:** 06:10 hrs      **Start time:** 04:10 hrs      **End:** 06:10 hrs

**Weather conditions:** 14°C, 99% Cloud Cover, Wind at Beaufort 2, Dry, Light Drizzle from 05:13 until 05:39

Surveyor: TC - Located to the north east of Building 336 - 338 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

Surveyor: JC - Located on Finchley Road west of Buildings 336 - 338			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

Surveyor: EM - Located to the east of Building 328 - 330 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
N/A			No bats seen or heard

**Table 10:** Kidderpore Avenue Dusk Bat Emergence Survey - Survey Parcel 3: 03/09/12

**Sunset:** 19:42 hrs      **Start time:** 19:27 hrs      **End:** 21:12 hrs

**Weather conditions:** 20°C, 5% Cloud Cover, Wind at Beaufort 0, Dry

Surveyor: TC - Located on Kidderpore Avenue north east of Buildings 23 - 25			
Time (hrs)	Minutes after sunset	Species	Comments
19:58	16	Soprano pipistrelle	Bat was seen to come from the west along Kidderpore Avenue flying east and round towards the alley way between Buildings 19-21 and 23
20:08	26	Common pipistrelle	Bat was seen to circle over Kidderpore Avenue and the front garden of Building 19-21
20:15	33	Common pipistrelle	Heard, not seen
20:16	34	Common pipistrelle	Two bats seen flying in front of Building 19-21 over the front garden
20:20	38	Common pipistrelle	Bat was seen flying north over Kidderpore Avenue from the direction of the alley way between Buildings 19-21 and 23
20:22	40	Common pipistrelle	Heard, not seen, brief pass
20:34	52	Soprano pipistrelle	Heard, not seen
20:40	58	Common pipistrelle	Heard, not seen
20:42	60	Pipistrelle species	Heard, not seen
20:44	62	Pipistrelle species	Two passes, heard, not seen
20:47	65	Pipistrelle species	Heard, not seen
20:56	74	Soprano pipistrelle	Two passes, heard, not seen
21:01	79	Common pipistrelle	Heard, not seen
21:02	80	Common pipistrelle	Heard, not seen

Surveyor: JC - Located to the south of Buildings 23 and 25 Kidderpore Avenue
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Time (hrs)	Minutes after sunset	Species	Comments
19:53	11	Soprano pipistrelle	Came from the south east and flew back and forth over the area to the rear of Building 23. Was heard foraging
19:57	15	Soprano pipistrelle	As above
20:07	25	Soprano pipistrelle	Heard, not seen
20:07	25	Common pipistrelle	Heard, not seen
20:09	27	Common pipistrelle	Heard, not seen, brief and faint
20:13	31	Soprano pipistrelle	Two bats – constantly foraging to the west of Building 25
20:16	34	Soprano pipistrelle	Pass from north to south-east at the rear of Building 23
20:17	35	Soprano pipistrelle	Heard, not seen
20:34	52	Soprano pipistrelle	Heard, not seen
20:35	53	Soprano pipistrelle	Heard, not seen
20:45	63	Soprano pipistrelle	Heard, not seen
20:50	68	Soprano pipistrelle	Heard, not seen
21:02	80	Soprano pipistrelle	Heard, not seen

Surveyor: NH - Located to the south of Buildings 19-21 and 23 on Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
19:54	12	Soprano pipistrelle	Eight passes, seen foraging to the rear of Building 23 and 25 and the library
19:58	16	Soprano pipistrelle	Three passes, seen foraging to the rear of Building 23 and 25 and the library
20:16	34	Common pipistrelle	Four passes, seen foraging to the rear of Building 23 and 25 and the library
20:25	43	Common pipistrelle	Continuous activity until the end of the survey, although faint

Surveyor: SM - Located to the south west of Building 25 adjacent to Ellison House			
Time (hrs)	Minutes after sunset	Species	Comments
19:58	16	Soprano pipistrelle	Circling on at least three occasions – appeared from the south heading north towards Kidderpore Avenue and flew back again

Surveyor: SM - Located to the south west of Building 25 adjacent to Ellison House			
Time (hrs)	Minutes after sunset	Species	Comments
20:10	28	Common pipistrelle	Bat circling and foraging from west to east and vice versa towards Ellison House and back towards the area between the library and Buildings 23 and 25 on Kidderpore Avenue
20:17	35	Common pipistrelle	Heard, not seen
20:19	37	Common pipistrelle	Heard, not seen
20:20	38	Common pipistrelle	Heard, not seen
20:27	45	Soprano pipistrelle	Heard, not seen
20:34	52	Soprano pipistrelle	Heard, not seen
20:35	53	Common pipistrelle	Heard, not seen
20:45	63	Soprano pipistrelle	Heard, not seen
20:50	68	Common pipistrelle	Heard, not seen
20:56	74	Common pipistrelle	Heard, not seen
21:02	80	Common pipistrelle	Heard, not seen
21:06	84	Common pipistrelle	Heard, not seen

Surveyor: ER - Located to the north west of Building 25 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
19:57	15	Soprano pipistrelle	Seen flying from southwest towards Kidderpore Avenue
20:06	24	Soprano pipistrelle	Two bats seen flying together from the north heading south towards Building 25
20:15	33	Common pipistrelle	Heard, not seen
20:19	37	Common pipistrelle	Heard, not seen
20:19	37	Common pipistrelle	Two bats flying together from the north and heading south down the access road between Ellison House and Building 25
20:42	60	Common pipistrelle	Two passes, heard, not seen
20:56	74	Common pipistrelle	Heard, not seen

Surveyor: ER - Located to the north west of Building 25 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
21:02	80	Common pipistrelle	Two passes, heard, not seen

**Table 11:** Kidderpore Avenue Dawn Re-Entry Survey - Survey Parcel 3: 04/09/12

**Sunrise:** 06:18 hrs      **Start time:** 04:18 hrs      **End:** 06:18 hrs

**Weather conditions:** 15°C, 0% Cloud Cover, Wind at Beaufort 0, Dry

Surveyor: TC - Located to the south of Building 19 - 21 Kidderpore Avenue			
Time (hrs)	Minutes before sunrise	Species	Comments
04:50	88	Common pipistrelle	Three passes, heard, not seen

Surveyor: NH - Located on Kidderpore Avenue north of Building 19-21			
Time (hrs)	Minutes before sunrise	Species	Comments
05:22	56	Common pipistrelle	Heard, not seen

**Table 12:** Kidderpore Avenue Dusk Bat Emergence Survey - Survey Parcel 3: 04/09/12

**Sunset:** 19:39 hrs      **Start time:** 19:24 hrs      **End:** 21:09 hrs

**Weather conditions:** 21°C, 100% Cloud Cover, Wind at Beaufort 3, Dry

Surveyor: ER - Located east of Building 336 -338 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
20:25	46	Common pipistrelle	Seen circling over the top of Building 336-338 and flying south-west towards Finchley Road
20:45	66	Common pipistrelle	Seen passing in front of Building 336-338

Surveyor: JML - Located on the driveway north east of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
20:32	53	Soprano pipistrelle	Heard, not seen
20:34	55	Common pipistrelle	Heard, not seen - foraging
20:37	58	Common pipistrelle	Heard, not seen – social call heard

Surveyor: JML - Located on the driveway north east of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
20:46	67	Common pipistrelle	Heard, not seen
21:07	78	Common pipistrelle	Heard, not seen - foraging

Surveyor: TC - Located to the south of Building 17 Kidderpore Avenue			
Time (hrs)	Minutes after sunset	Species	Comments
20:46	67	Pipistrelle species	Heard, not seen, very faint
20:50	71	Pipistrelle species	Five passes, heard, not seen, very faint
20:53	74	Common pipistrelle	18 passes, heard, not seen, very faint, likely to be above trees

Surveyor: SM - Located to the east of Building 328-330 Finchley Road			
Time (hrs)	Minutes after sunset	Species	Comments
20:12	33	Common pipistrelle	Two passes, heard, not seen, very faint
20:24	45	Common pipistrelle	Heard, not seen
20:45	66	Common pipistrelle	Heard, not seen
21:06	87	Common pipistrelle	Heard, not seen, very brief

Surveyor: NH - Located on Kidderpore Avenue north of the alley way between Buildings 19-21 and 23			
Time (hrs)	Minutes after sunset	Species	Comments
20:48	69	Soprano pipistrelle	Heard, not seen

**Table 13:** Kidderpore Avenue Dawn Re-entry Survey - Survey Parcel 3: 05/09/12

**Sunrise:** 06:21 hrs      **Start time:** 04:21 hrs      **End:** 06:21 hrs

**Weather conditions:** 12°C, 20% Cloud Cover, Wind at Beaufort 1, Dry

Surveyor: RK - Located to the east of Building 328 - 330 Finchley Road			
Time (hrs)	Minutes before sunrise	Species	Comments
05:32	49	Common pipistrelle	Two passes, heard, not seen



Surveyor: NH - Located to the east of Building 332 - 334 Finchley Road			
Time (hrs)	Minutes before sunrise	Species	Comments
N/A			No bats seen or heard

Surveyor: TC - Located to the north north east of Building 336 - 338 Finchley Road			
Time (hrs)	Minutes before sunrise	Species	Comments
N/A			No bats seen or heard

Surveyor: EM - Located on Finchley Road south of Buildings 328-334			
Time (hrs)	Minutes before sunrise	Species	Comments
N/A			No bats seen or heard

## Appendix 3: Photographs

**Photograph 1**

Hanging tiles on the top section of the double bay window on 25 Kidderpore Avenue. A common pipistrelle emerged from under one of the hanging tiles.



**Photograph 2**

The southern pitch of the double bay window of 25 Kidderpore Avenue. Two common pipistrelle bats were seen to re-enter a section of the roof, likely to be under lifted and or missing tiles.



**Photograph 3**

View of the east elevation of 25 Kidderpore Avenue, showing the bay window where the above bat emergence / re-entry was observed.





Ecology Consultancy

The Ecology Consultancy 6-8 Cole Street London SE1 4YH T. 020 7378 1914 W. [www.ecologyconsultancy.co.uk](http://www.ecologyconsultancy.co.uk)

■ The Old Granary Upper Stoneham Lewes East Sussex BN8 5RH T. 01273 471369

■ 79 Thorpe Road Norwich NR1 1UA T. 01603 628408

■ Suite 10 3 Coates Place Edinburgh EH3 7AA T. 0131 225 8610