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Appendix 1 B

Ecology Survey - Initial Bat Survey
'The Cottage', Spaniards Road, London, NW3 7JH

July 2014

INITIAL BAT SURVEY

**THE COTTAGE, SPANIARDS ROAD,
LONDON**

A Report to: SidellGibson Architects

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INITIAL BAT SURVEY

**THE COTTAGE, SPANIARDS ROAD,
LONDON**

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01 OF 02

01 SIDELLGIBSON ARCHITECTS
02 MIDDLEMARCH ENVIRONMENTAL LTD

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The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Contract Number C113683

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1. INTRODUCTION

1.1 PROJECT BACKGROUND

In April 2013 SidellGibson Architects commissioned Middlemarch Environmental Ltd to undertake an initial bat survey of the site of a proposed development at Spaniards Road, London. It is understood by Middlemarch Environmental Ltd that the proposed works include the demolition of the existing building and the construction of a new residential property.

Middlemarch Environmental Ltd was also commissioned by Sidell Gibson Architects to carry out an Extended Phase 1 Habitat Survey at this site. Details can be found at Report RT-MME-113683-01.

To fulfil the above brief to assess the potential for the existing structures and trees on site to support roosting bats, an initial bat survey was undertaken on 30th April 2013.

1.2 SITE DESCRIPTION

The development site is located on Spaniards Road, London at National Grid Reference TQ 266 872. The site measures approximately 0.5 hectares in size and is situated in a semi-residential area. Spaniards Road abutted the site to the west, a residential property was present to the south and the remaining of the site was surrounded by woodland.

At the time of the survey the site was dominated by amenity grassland and buildings, with a number of scattered trees and overgrown shrub beds also present.

1.3 LEGISLATION

Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2010 (as amended) (Habitats Regulations 2010 (as amended)). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981 (as amended). This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2010 (as amended) states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2010 (as amended) for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* (rather than deliberately) kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or *obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CRoW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The following bat species are considered to be Species of Principal Importance for Conservation in England: Barbastelle *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros*.

The Biodiversity Action Plan for the City of London deals with all species of bat currently found in the UK.

The reader should refer to the original legislation for the definitive interpretation.

2. METHODOLOGY

2.1 DESK STUDY

A desk study was undertaken as part of the Extended Phase 1 Habitat Survey (Report Number RT-MME-113683-01) in order to determine the presence of any protected species, including bats, recorded within a 1 km radius of the site. This involved contacting the Local Biological Records Centre which holds ecological data relating to the survey area. Middlemarch Environmental Ltd then assimilated and reviewed the desk study data provided.

In addition, a search of National Biodiversity Network (NBN) Gateway was undertaken to identify any records of bat species within the 10 km grid square in which the site is located. These records are summarised within Section 3.

2.2 INITIAL BAT SURVEY OF STRUCTURES

In line with the specifications detailed by English Nature (2004), Hundt, L (2012) Bat Surveys: Good Practice Guidelines - 2nd Edition and The Bat Conservation Trust Guidelines (2012), a daytime survey of the site was conducted. A visual assessment of the site was undertaken to identify evidence of possible bat presence. Any accessible holes, cracks and crevices which could allow bat access into potential roosting areas were inspected using a torch and endoscope.

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

2.3 INITIAL BAT SURVEY OF TREES

The trees were surveyed to identify potential features suitable for roosting bats. A visual assessment of the trees was undertaken to identify evidence of possible bat presence. Any accessible holes, cracks and crevices which could allow bat access into potential roosting areas were inspected using a torch and endoscope.

For reasons of health and safety, the survey was only undertaken in areas accessible from 3.5 m ladders.

Based on the features present, each tree was categorised into one of the four categories (1*, 1, 2 and 3) in accordance with the Bat Conservation Trust guidelines (Hundt, 2012). These categories are detailed in Table 2.1. Trees with features present that are suitable to support roosting bats (Categories 1* and 1 trees) are discussed more fully in the report. Any trees within the survey area without suitable features to support roosting bats (Categories 2 and 3) are not discussed individually within the report.

BCT Categories	1*	1	2	3
Description	Trees with multiple, highly suitable features capable of supporting bats.	Tree with definite potential, supporting fewer suitable features than category 1* trees, or with potential for use by single bats	Trees with no obvious potential for bats, although the tree is of a size and age where suitable features could be present, or where the tree supports features with limited potential to support bats	Trees with no potential to support bats
Example of features	Woodpecker holes. Cracks/crevices. Loose or flaking bark. Medium to dense ivy cover. Deadwood in canopy or stem. Snagged branches. Hollow stem or limb. Hole in branch or trunk. Buttresses/ hollow core.	A single feature as listed for Category 1*. or Few small cracks or crevices. Low to medium ivy cover. Deadwood in canopy or stem.	No obvious features but tree of suitable size and age that a detailed inspection of the tree at height may identify minor features. Low ivy cover.	No cracks, crevices, hollows, deadwood etc. No flaking bark.

Table 2.1: BCT Trees assessment and categories

3. RESULTS

3.1 DESK STUDY

Table 3.1 provides a summary of bat records within a 1 km radius of the study area provided by the local record centre. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance for Nature Conservation?	Local BAP?	Legislation / Conservation Status
Common pipistrelle <i>Pipistrellus pipistrellus</i>	20	2009	150 m south	-	✓	ECH 4, WCA 5, WCA 6
Unidentified bat <i>Pipistrellus</i> sp.	30	2005	163 m east	#	✓	ECH 4, WCA 5, WCA 6
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	72	2011	219 m north east	✓	✓	ECH 4, WCA 5, WCA 6
Noctule bat <i>Nyctalus noctula</i>	18	2009	355 m east	✓	✓	ECH 4, WCA 5, WCA 6
Daubenton's bat <i>Myotis daubentonii</i>	26	2009	454 m east	-	✓	ECH 4, WCA 5, WCA 6
Natterer's bat <i>Myotis nattereri</i>	12	2008	454 m east	-	✓	ECH 4, WCA 5, WCA 6
Brown long-eared bat <i>Plecotus auritus</i>	35	2009	479 m east	✓	✓	ECH 4, WCA 5, WCA 6
Lesser noctule <i>Nyctalus leisleri</i>	7	2008	479 m east	-	✓	ECH 4, WCA 5, WCA 6
Nathusius's pipistrelle <i>Pipistrellus nathusii</i>	6	2008	479 m east	✓	✓	ECH 4, WCA 5, WCA 6
Serotine bat <i>Eptesicus serotinus</i>	6	2007	479 m east	-	✓	ECH 2, ECH 4, WCA 5, WCA 6
Unidentified bat Vespertilionidae	2	1985	653 m east	#	✓	ECH2,4 WCA5,6
Unidentified bat <i>Myotis</i> sp.	2	2005	885 m east	#	✓	ECH2,4 WCA5,6

Key:
 ECH2: Annex II of the European Communities Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Conservation Areas.
 ECH4: Annex IV of the European Communities Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection.
 WCA 5: Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).
 WCA 6: Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.
 Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.
 Local BAP: City of London Biodiversity Action Plan

Table 3.1: Summary of records of bats within 1 km of the site

An assessment of the National Biological Network (NBN) dataset was also completed to determine any records of bat species from within the local area. Records indicated that within a 10 km radius of the site (National Grid Reference point (TQ 28) the following bat species have been recorded;

- 6 records of unidentified *Myotis* sp. Closest record located approximately 0.16 km south. Latest record from 2012.

- 3 records of brown long-eared bat *Plecotus auritus*. Closest record located approximately 0.16 km south. Latest record from 2012.
- 2 records of Natterer's bat *Myotis nattererii*. Closest record located approximately 0.16 km south. Latest record from 2012.
- 10 records of common pipistrelle *Pipistrellus pipistrellus*. Closest record located approximately 0.35 km south-east. Latest record from 2011.
- 10 records of soprano pipistrelle *Pipistrellus pygmaeus*. Closest record located approximately 0.35 km south-east. Latest record from 2011.
- 5 records of noctule bat *Nyctalus noctula*. Closest record located approximately 0.35 km south-east. Latest record from 2007.
- 2 records of lesser noctule *Nyctalus leisleri*. Closest record located approximately 1.15 km north-east. Latest record from 2012.
- 4 records of Daubenton's Bat *Myotis daubentonii*. Closest record located approximately 1.15 km north east. Latest record from 2011.
- 2 records of serotine bat *Eptesicus serotinus*. Closest record located approximately 6.02 km north. Latest record from 2007.
- 3 records of Nathusius' pipistrelle *Pipistrells nathusii*. Closest record located approximately 7.52 km south. Latest record from 2010.

It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

3.2 WEATHER AND PERSONNEL

The daytime bat survey was conducted on 30th April 2013 by Sophie Meredith (Senior Ecological Consultant and Licensed Bat Worker). Weather conditions at the time of the initial bat survey were recorded and are presented in Table 3.2.

Parameter	Result
Temperature (°C)	10
Cloud Cover (%)	80
Precipitation	Dry
Wind Speed (Beaufort)	F1

Table 3.2: Weather Conditions during Daytime Bat Survey

3.3 BUILDING 1

3.3.1 External Assessment

This building was a two-storey building of brick construction with a concrete flat roof covered with felt (Plate 3.1). Soffit boxing was present in places around the building and was of wooden construction. The soffit boxing was generally in good condition. A few small gaps

were noted which bats could utilise. A full inspection of these features could not be undertaken due to their height. However, upon inspection using binoculars and a torch it was noted that these gaps were covered in thick cobwebs indicating that no bats have recently used these gaps. In addition no evidence of bats (e.g. droppings, urine staining) was noted below these features. The roofing felt was noted to be generally tightly fitted to the soffit boxing and overhang providing no features suitable for use by roosting bats.

The rear of the building had corrugated galvanised steel panelling attached to the walls (Plate 3.1). No features were noted around this panelling for bats to utilise and no bats or evidence of bats (such as droppings, feeding remains, or staining) was found.

All of the window frames were noted to be of steel construction and the ground floor windows were boarded up. These window frames were tightly fitting to the brickwork and no gaps were noted for bats to utilise. No bats or evidence of bats was found in these locations.

In a number of locations the mortar had degraded, however upon further inspection it was noted that this did not create any cavities or access points suitable for bats to utilise. No bats or evidence of bats was found in or around these features.

Weep holes were present above the windows on the ground floor of the building (Plate 3.2). Weep holes provide a potential access point into the cavity wall of the building which are suitable for use by crevice dwelling bats. These features were fully inspected using a ladder, torch and endoscope. The weep holes were found to be generally filled with dense cobwebs indicating that these features have not been recently utilised by bats as access points. No evidence of bats or bat activity was found in or around these features.

Present on the front elevation of the building was a small flat roof entrance hall. This was noted to be in good condition with no gaps suitable for bats to utilise. Small areas of ivy *hedera helix* noted present on this section of the building, however it did not create features suitable for bats to use. No bats or evidence of bats (such as droppings, feeding remains, or staining) were found.



Plate 3.1: Rear of Building 1



Plate 3.2: Example of weep holes (denoted by red arrow)

No bats or evidence of bats (e.g. droppings, feeding remains, scratch marks or urine staining) was identified during the external assessment of Building 1.

3.3.2 Internal Assessment

As the building was of flat roof construction no roof spaces/voids were present which could be accessed during the survey. The internal space was fully inspected and no bats or evidence of bats (such as droppings, feeding remains, or staining) were found.

3.4 GARAGE

3.4.1 External Assessment

This building was a single-storey, flat roof brick building adjoining the southern elevation of Building 1 (Plate 3.3). No features suitable for bats to utilise were identified on this building. No evidence of bats or bat activity was found.

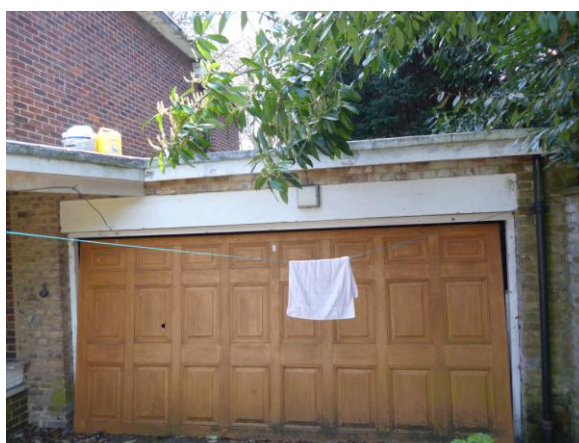


Plate 3.3: Garage

3.4.2 Internal Assessment

No loft space was located within the garage and no bats or evidence of bats (e.g. droppings, feeding remains, scratch marks or urine staining) was identified during the internal assessment.

3.5 TUNNEL

A tunnel was identified of brick construction (Plate 3.4 and 3.5), within which a number of cracks were present (Plate 3.6 and 3.7). Further to this missing mortar was present in a number of locations, with the potential to be utilised by bats. In the majority of locations the features were covered in thick cobwebs, indicating the lack of recent use by bats. All features were fully inspected using a torch and an endoscope no evidence of bats or bat activity was found.



Plate 3.4: External view of tunnel



Plate 3.5: Internal view of the tunnel



Plate 3.6: Example of cracks in the brickwork



Plate 3.7: Example of cavity within brickwork of the tunnel

3.6 TREES

A group of 5 semi-mature lime *Tilia* sp., trees measuring up to 20 m in height were identified in the south-eastern part of the survey area (Plate 3.8). Rot holes, which can offer suitable roosting locations for bats were present on three of these trees (Plate 3.9). Due to the presence of such features these trees are considered to be Category 1 of the BCT tree index (Table 2.1). The features which could be reached using the ladders (up to 3.5 m) were fully inspected using an endoscope and torch. No bats or evidence of bats (e.g. droppings, feeding remains, scratch marks or urine staining) was identified. The rot holes present at heights greater than could be reached with the ladders were considered unsuitable for bats to utilise because they were open to the elements.



Plate 3.8: Group of lime trees



Plate 3.9: Example of rot hole in one of the lime trees

None of the other trees present within the survey area had any features suitable for use by roosting bats.

3.7 SURROUNDING HABITAT

Immediately surrounding the site to the north and east is a large area of woodland and to the south a small area of this woodland behind which was hardstanding and a large building. Immediately to the west of the site was a road. Dominating the surrounding landscape of the site was woodland with small pockets of residential housing and associated roads. The surrounding landscape therefore provides potential foraging, roosting and commuting habitat.

In the surrounding habitat are features for bats to utilise for roosting, commuting and foraging and the following are found within 1 km of the site:

- Houses and associated gardens;
- Open grassland; and,
- Woodland.

4. DISCUSSION AND CONCLUSIONS

4.1 DESK STUDY AND SITE ASSESSMENT

The desk study has indicated that twelve bat species have been recorded within 1 km of the site; the nearest record being of a common pipistrelle made 150 m south of the survey site. The National Biological Network (NBN) provided records of all of the species which were present in the Local Biological Records Centre data and unidentified myotis bat species within the 10 km grid square of the site. This indicates that the surrounding landscape contains features and resources utilised by bat species, therefore it is likely that bats may utilise the site for either foraging or roosting.

The site and its surroundings are considered to provide suitable roosting sites for bats and the landscaping provide suitable foraging and commuting habitat, therefore it is highly likely that bats will utilise this site in some capacity.

4.2 PROPOSED DEVELOPMENT

It is understood that the proposed development will involve the demolition of Building 1 and the adjoining garage. It is not considered that the tunnel will be impacted by the proposed works but it is not known if any trees will need to be removed to facilitate the development.

4.3 BUILDING 1

Only limited features suitable for use by roosting bats (comprising weep holes and small gaps in soffit boxing) were recorded during the assessment of this building. The weep holes were fully inspected with a torch and endoscope with no evidence of bats or bat activity identified. Whilst the gaps in the soffit box could not be fully inspected due to their height they were all heavily cobwebbed indicating no recent use by bats and no evidence of bats was noted below the features. As such it can be determined that bats are not currently using this building for roosting.

4.4 GARAGE

No features suitable for bats to utilise as either an access point or for roosting were identified on this building. As such it can be considered that no bats are currently using this building.

4.5 TUNNEL

Features were present such as cracks in the brickwork and missing mortar which could provide suitable roost locations for bats. However all features could be fully inspected at the

time of the survey and were found to be filled with dense cobwebs. This structure is therefore not considered to contain a bat roost at this time.

4.6 TREES

Three trees present within the survey area were considered to be Category 1 trees due to the presence of rot holes which may provide suitable roosting features for bats. However, all suitable features which could be accessed using the ladders were fully inspected using a torch and endoscope and no evidence of bats or bat activity was found. All features above this height which not be accessed using the ladders were considered unsuitable for bat to use because they were open to the elements. As such it was considered that no bats were currently using the trees for roosting. All other trees within the survey area were in good condition with no features suitable for use by roosting bats.

4.7 SURROUNDING HABITAT

The surrounding landscape consists of woodland, open parkland and residential properties with associated gardens, which may provide roosting sites and foraging habitat for bats. As such it is considered likely that bats may use the site for foraging and commuting purposes.

5. RECOMMENDATIONS

5.1 BUILDING 1, GARAGE, TUNNEL AND TREES

- R1** If works do not commence within 18 months of this survey, then it will be necessary to undertake an up-dated daytime survey to ascertain how their status, with regard to roosting bats, has changed in the interim.
- R2** Should a bat be found during the works, all works should cease and a licensed bat worker contacted.

5.2 DEVELOPMENT DESIGN

In accordance with the provision of National Planning Policy Framework and Local Planning Policy, a habitat/species enhancement scheme should be incorporated into the landscaping scheme of the proposed works to maximise the ecological value of the site. As such, it is recommended that the following features are incorporated into the proposed development.

- Due to the suitability of the adjacent woodland for foraging and commuting bats it is recommended that a dark corridor is maintained along the woodland edge. If lighting is required in close proximity to the woodland it should be low level and directional, pointing away from the woodland.
- Any soft landscaping in the development should incorporate a high proportion of native species of plants which are attractive to night-flying moths and other nocturnal invertebrates so as to provide a potential foraging resource for bats.

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Wildlife & Countryside Act (1981) as amended

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