Stephenson House, Hampstead Road, London

Biodiversity Report

Lazari Properties 2 Limited

June 2017

CONTENTS

1. EXECUTIVE SUMMARY

1.1 BACKGROUND

It is understood that Lazari Properties 2 Ltd is soon to be submitting a planning application for the re-development of Stephenson House, 75 Hampstead Road, London, NW1 2PL to Camden Council.

The re-development of Stephenson House (which is an existing commercial office block with elements of retail and an NHS facility) is to comprise the extensive remodelling of the existing building including removal of the existing façade, part demolition and reconstruction / extension.

The project team commissioned FOA Ecology Ltd to conduct an ecology survey of the site, including a building inspection of the site building, to inform planning and to provide the basis of the scheme's separate, stand-alone BREEAM Land Use & Ecology report.

The ecology survey area is hereafter referred to as the 'site'.

1.2 DESIGNATED SITES AND ANCIENT WOODLAND

No statutory designated sites or ancient woodland occur within a 1 km radius of the site.

Five non-statutory designated sites lie within a 1 km radius of the site, all of which are Sites of Importance for Nature Conservation (SINC's). These five SINC's are described below, starting with the closest to the site:

- St James' Garden; a SINC of Local Importance, located 150 m to the north-east of the site.
- Regents Park; a SINC of Metropolitan Importance, located 475 m to the west of the site.
- Park Square Gardens; a SINC of Borough Grade II Importance, located 475 m to the west of the site.
- Gordon Square; a SINC of Local Importance, located 550 m to the south-east of the site.
- Russel Square; a SINC of Local Importance, located 950 m to the south-east of the site.

Given the significant spatial separation, the intervening urban land use and the nature (relatively small-scale, i.e. restricted to the site itself and its immediate boundaries) of the proposed works at the site, the works are not expected to have any impact on the identified designated sites.

1.3 ON-SITE HABITATS

The site currently encompasses a 2-7 storey building, with associated hard landscaping.

The only semi-natural habitat present at the site is the trivial amount of scattered ephemeral, short perennial 'weedy-type' vegetation.

1.4 NATIONAL AND LOCAL PRIORITY HABITATS AND SPECIES

The site does not contain any national priority habitats.

One local priority habitats in the Camden Biodiversity Action Plan (2013) are relevant to the site, namely the 'Built Environment' HAP (in the form of the on-site building).

No national priority species were noted on-site during the survey, however, potentially relevant National BAP priority species include certain mammal and bat species (e.g. soprano pipistrelle) as well as certain notable bird species (e.g. starling and house sparrow).

No local Camden priority species were noted on-site during the survey, however, potentially relevant Camden BAP priority species include certain mammal species (e.g. bats) as well as certain notable bird species (e.g. sparrows and swifts) and notable invertebrates (e.g. butterflies and bees).

1.5 Faunal Species

Feral pigeon and a species of gull were directly observed during the site survey. In addition, a sheltered area on the 6th floor rooftop with a high density of pigeon droppings was encountered, interpreted as being used, at least, as a roosting site. In addition, an old disused nest was located on a ledge within the basement car park.

The site also has the potential to support additional protected / notable faunal species (e.g. roosting bats, and other bird species of conservation concern.

1.6 Invasive Species

No species subject to control under the Wildlife and Countryside Act 1981 (as amended) were noted on-site.

1.7 Recommendations

The following recommendations for survey and / or mitigation works are summarised, by faunal species / species group, as follows:

- Bats & Buildings – The site overall is considered to be of negligible suitability for roosting bats. *Recommendations* – Precautionary mitigation measures alone are recommended.

- Bats – General - The site overall is considered to be of negligible quality for foraging and commuting bats. *Recommendations* – Precautionary mitigation measures only. External lighting spillage should be minimised during and post construction. Replacement planting is recommended and should be bat friendly.

- Other Wild mammals – The site overall is considered to be of negligible suitability for other wild mammals. *Recommendations* – Adoption of good construction/building/material storage practices on the ground floor level e.g. covering of all deep holes and trenches overnight and/or the provision of planked escape routes for any trapped wildlife.

- Nesting birds – This site includes some suitable nesting bird habitat in the form of the site building itself. *Recommendations* – Clearance of all suitable nesting bird habitat (i.e. building works) must be completed outside of the nesting bird season (September to February inclusive) if possible. Should it prove necessary to clear bird nesting habitat during the nesting bird season, then a pre-works check for nesting birds should be undertaken by a suitably experienced ecologist. Specifically for the area on the 6th floor where a high density of pigeon droppings were encountered, as it is possible this area could be used for nesting by feral pigeon at any time of year a pre-works check will need to be undertaken by a suitably experienced ecologist regardless of the time of year.

- Reptiles and Amphibians – The site overall is considered to be of negligible suitability for reptiles and amphibians. *Recommendations* – Although the proposed works are not expected to be constrained by reptiles or amphibians, precautionary mitigation measures only are recommended: sensitive clearance, contractor awareness of reptiles should be raised and formalisation of the protocol that should be followed in the instance that a reptile/amphibian is encountered.

- Generic – retention and protection of existing ecological features where practicable, consideration of creating living roof sections, use of wildlife-friendly species in new planting for the re-development and provision of artificial habitats.

1.8 Opportunities for Ecological Enhancement

Some example opportunities to maximise the ecological value of the re-development are described in the text of the report.

2. INTRODUCTION

2.1 DEVELOPMENT BACKGROUND

It is understood that Lazari Properties 2 Ltd is soon to be submitting a planning application for the re-development of Stephenson House, 75 Hampstead Road, London, NW1 2PL to Camden Council.

The re-development of Stephenson House (which is an existing commercial office block with elements of retail and an NHS facility) is to comprise the extensive remodelling of the existing building including removal of the existing façade, part demolition and reconstruction / extension.

The project team commissioned FOA Ecology Ltd to conduct an ecology survey of the site, including a building inspection of the site building, to inform planning and to provide the basis of the scheme's separate, stand-alone BREEAM Land Use & Ecology report.

The ecology survey area is hereafter referred to as the 'site'.

2.2 SCOPE OF THE WORKS

The main objectives of the extended Phase 1 habitat survey, bat roost potential assessment of the site's building and a formal desk study were to:

- carry out a formal (Greenspace Information for Greater London, GiGL) desk study to identify all sites (statutory and non-statutory) designated for nature conservation and ancient woodland within a 1 km radius and to obtain records of protected / notable species (from GiGl and London Bat Group) within a 1 km and 2 km radius, respectively.
- produce a map of the main ecological features within the site and compile a higher plant species list for each habitat type;
- inspect the site's building (externally and internally), to check for evidence of roosting bats and / or nesting birds;
- make an initial assessment of the presence or likely absence of protected species and species of conservation concern;
- identify any legal and planning policy constraints relevant to nature conservation which may affect the development;
- determine any potential further ecological issues; and;
- determine the need for further surveys and / or mitigation;
- outline opportunities for ecological enhancement.

3. METHODOLOGY

3.1 DESK STUDY

A formal desk study was commissioned for which Greenspace Information for Greater London (GiGL) was commissioned to provide its records of designated sites and protected/important species within a 1 km radius of the site, whilst London Bat Group provided bat records for a 2 km radius of the site.

3.2 EXTENDED PHASE 1 HABITAT SURVEY

An extended Phase 1 habitat survey (JNCC, 1993 and IEA, 1995) was conducted throughout the site. This is a standard technique for obtaining baseline ecological information for areas of land, including this proposed development.

During the Phase 1 habitat survey the standard habitat definitions were used and all higher plant species (which were identifiable) within each of the various habitat parcels were recorded.

Incidental records of fauna were, however, made during the survey and the site's habitats were evaluated for their potential to support legally protected species and other species of conservation concern, including Biodiversity Action Plan Priority species. With the exception of the building inspection, no specific faunal surveys were undertaken or commissioned.

The extended Phase 1 habitat survey was conducted on 10th January 2017 by suitably experienced ecologists. Access was available to most external areas of the site, excluding the exterior of the western face of the building for which a suitable vantage point was not available.

In terms on internal access, the interior of the building which was in use at the time of survey, and therefore the internal inspection was restricted to the basement level car park.

3.3 BUILDINGS INSPECTION

On 10th January 2017, an external inspection for evidence of use by bats of the existing on-site building was undertaken.

The perimeter of the building was walked and the exterior was assessed with the aid of binoculars and high powered torch. Notes were made on the construction type and features providing potential access points and roosting opportunities for bats, including (but not exclusively):

- Suitable gaps beneath roof tiles;
- Suitable access points via head of gable end walls;
- Gaps around lead flashing;
- Access via eaves; and,
- Access points via soffits / barge boards, etc.

As part of the building inspection, the interiors of the basement level car park and the 6th floor lift motor room were accessed and inspected.

Bat Evidence

The following signs of bats were looked for:

- Bat droppings;
- Dark staining caused by bat faeces;

- Polished surfaces at a possible access point;
- Staining caused by the natural oils in bat fur; and,
- Scratch marks made by bat claws.

In terms of survey timing, external inspections are not seasonally constrained and can be carried out at any time of year.

Every effort was made to conduct a thorough inspection of each level of the building, within the constraints of accessibility and safety.

Evidence of any other protected / notable species, e.g. nesting birds, was also recorded where incidentally noted.

Bat Potential

Following the inspection, the on-site building was assigned a rating of suitability for supporting bats. The rating was based on a combination of factors, including the building's location in the landscape. This incorporated the building's proximity to features that could be of positive value to bats i.e. close to good commuting and foraging habitat, in particular, hedges, trees and/or rivers; or of negative value i.e. highly urbanised situation, high levels of disturbance and/or high-powered lights.

Ratings were also based on a combination of the surveyor's experience of bat roosts and the number and type of suitable features recorded.

Rating categories range from High value, i.e. the building has a strong likelihood of supporting a bat roost, to Negligible value, i.e. the building has very low value to support bats.

4. Survey Results

4.1 Designated Sites and Ancient Woodland

No statutory designated sites or ancient woodland occur within a 1 km radius of the site.

Five non-statutory designated sites lie within a 1 km radius of the site, all of which are Sites of Importance for Nature Conservation (SINC's). These five SINC's are described below, starting with the closest to the site:

- St James' Garden; a SINC of local importance, located 150 m to the north-east of the site.
- Regents Park; a SINC of metropolitan importance, located 475 m to the west of the site.
- Park Square Gardens; a SINC of borough grade II importance, located 475 m to the west of the site.
- Gordon Square; a SINC of local importance, located 550 m to the south-east of the site.
- Russell Square; a SINC of local importance, located 950 m to the south-east of the site.

4.2 SPECIES OF CONSERVATION CONCERN

Species records from both Greenspace Information for Greater London (GIGL) and the London Bat Group (LBG) were attained and are described below:

GIGL

No records for any species of conservation concern are held by GIGL for the site itself, however, numerous records are held for the area within a c. 1 km radius of the site, bulleted as follows:

- Bats –
    - Pipistrelle sp. – 1 confidential roost record, in 2010, at least 100 m from the site.
    - Common pipistrelle – 16 records, the closest 295 m from the site in 1993 and the most recent in 2011, 490 m from the site.
    - Soprano pipistrelle – 4 records, the closest and most recent 965 m from the site in 1998.
    - Nathusius' pipistrelle – 1 record, 490 m from the site in 2011.
    - *Pipistrelle* sp. – 2 records, the closest and most recent 295 m from the site in 1993.
    - Noctule – 3 records, the closest and most recent 940 m from the site in 2005.
    - *Nyctalus* sp. – 2 records, the closest and most recent 220m from the site in 2010.
    - Daubenton's – 9 records, the closest 940 m from the site in 2007 and the most recent in 2008, 940 m from the site.
    - Unidentified bat sp. – 2 records, the closest and most recent 360 m from the site in 1993.
- Other mammals –
    - West European hedgehog – 125 records, the closest 495 m from the site in 2014 and the most recent in 2015, 985 m from the site.
    - Eurasian common shrew – 1 record, 960 m from the site in 2012.
- Notable birds –
    - Peregrine - 2 confidential records, the most recent in 2006, at least 100 m from the site.
    - Black redstart – 39 confidential records, the most recent in 2010, at least 100 m from the site
    - Skylark – 1 record, 705 m from the site in 1976.
    - Pintail – 1 record, 990 m from the site in 1999.
    - Shoveler – 3 records, the closest and most recent 990m from the site in 1999.

- Wigeon – 3 records, the closest 915 m from the site in 1995 and the most recent in 1999, 990 m from the site.
- Swift – 9 records, the closest and most recent 370 m from the site in 2009.
- Stock dove – 4 record, the closest 890 m from the site in 2007 and the most recent in 2009, 890 m from the site.
- Mute swan – 7 records, the closest and most recent 990 m from the site in 1999.
- House martin – 8 records, the closest and most recent, 890 m from the site in 2009.
- Reed bunting – 1 record, 940 m from the site in 2014.
- Kestrel – 107 records, the closest 325 m from the site in 2011 and the most recent in 2015, 450 m from the site.
- Herring gull – 6 records, the closest 370 m from the site in 1998 and the most recent in 2009, 835 m from the site.
- Lesser black-backed gull – 5 records, the closest 370 m from the site in 2000 and the most recent in 2001, 450 m from the site.
- Grey wagtail – 8 records, the closest 310 m from the site in 1994 and the most recent in 2009, 890 m from the site.
- House sparrow – 89 records, the closest and most recent 170 m from the site in 2014.
- Willow warbler – 1 record, 800 m from the site in 1995.
- Dunnock – 510 records, the closest and most recent 485 m from the site in 2014.
- Firecrest – 1 record, 370 m from the site in 2007.
- Goldcrest – 352 records, the closest and most recent 485 m from the site in 2014.
- Woodcock – 3 records, the closest and most recent 310 m from the site in 2007.
- Tawny owl – 1 record, 940 from the site in 2015.
- Starling – 210 records, the closest 470 m from the site in 2003 and the most recent in 2014, 485 m from the site.
- Ruddy shelduck – 6 records, the closest 915 m from the site in 1995 and the most recent in 1999, 990 m from the site.
- Shelduck – 1 record, 915 m from the site in 1995.
- Redwing – 2 records, the closest 370 m from the site in 1999 and the most recent in 2009, 890 m from the site.
- Song thrush – 441 records, the closest and most recent 485 m from the site in 2014.

- Mistle thrush – 165 records, the closest 250 m from the site in 2003 and the most recent in 2014, 485 m from the site.
- Lapwing – 2 records, the closest 705 m from the site in 1986, and the most recent in 2005, 1065 m from the site.

- Amphibians –
  - Common toad – 1 record, 640 m from the site in 1999.
  - Common frog – 2 records, the closest 640 m from the site in 1999 and the most recent in 2000, 850 m from the site.
- Invertebrates –
  - Stag beetle – 2 records, the closest and most recent 760 m in 2002.
  - Marbled white – 1 record, 845 m from the site in 2003.
  - White-letter hairstreak – 1 record, 550 m from the site in 2007.
  - Jersey tiger – 1 record, 860 m from the site in 2015.
  - Shoulder-striped wainscot- 1 record, 945 m from the site in 2005.
  - White ermine – 1 record, 945 m from the site in 2005.
- Higher plants –
  - Box – 3 records, the closest 420 m from the site in 2003 and the most recent in 2012, 525 m from the site.
  - Cornflower – 1 record, 470 m from the site in 2011.
  - Nettle-leaved goosefoot – 3 records, the closest and most recent 500m from the site in 2009.
  - Meadow crane's-bill – 2 records, the closest and most recent 980 m from the site in 2008.
  - Corn marigold – 1 record, 470 m from the site in 2011.
  - Bluebell – 1 record, 625 m from the site in 1995.
  - Henbane – 1 record, 460 m from the site in 2009.
  - Cat-mint – 1 record, 195 m from the site in 2005.
  - Fringed water-lily – 1 record, 930 m from the site in 2008.
  - Wild clary – 1 record, 945 m from the site in 2003.
  - London-rocket – 3 records, the closest and most recent 380 m from the site in 2009.
  - Water-soldier – 1 record, 585 m from the site in 1992.

- Large-leaved lime – 3 records, the closest and most recent 780 m from the site in 2007.
- Navelwort – 5 records, the closest 140 m from the site in 2001 and the most recent in 2009, 335 m from the site.

London Bat Group

No records for bats are held by The London Bat Group for the Stephenson House site itself, and the closest roost site is a pipistrelle sp. roost 650 m to the north of the site, recorded in 2010. Several other bat species records are also held within the 2 km search area, summarised as follows:

- Bats –
  - Common pipistrelle – 110 records, the closest 435 m from the site in 2011 and the most recent in 2014, 1 km from the site.
  - Soprano pipistrelle – 85 records, the closest 390 m from the site in 2011 and the most recent in 2013, 1 km from the site.
  - Nathusius' pipistrelle – 6 records, the closest 435 m from the site in 2011 and the most recent in 2013, 1.35 km from the site.
  - Kuhl's pipistrelle – 1 record, 1.1 km from the site in 2006.
  - *Pipistrelle* sp. – 50 records, the closest 165 m from the site in 1993 and the most recent in 2013, 1.55 km from the site.
  - Noctule – 44 records, the closest 915 m from the site in 2005 and the most recent in 2012, 1.55 km from the site.
  - Leisler's – 1 record, 1.6 km from the site in 2008.
  - Serotine – 1 record, 1.2 km from the site in 2004.
  - *Nyctalus* sp. – 12 records, the closest and most recent 100 m from the site in 2010.
  - Daubenton's – 9 records, the closest 915 m from the site in 2008 and the most recent in 2009, 1.45 km from the site.
  - Natterer's – 6 records, the closest and most recent 1.75 km in 2007.
  - *Myotis* sp. – 15 records, the closest and most recent 1.1 km from the site in 2009.
  - Unidentified bat sp. – 18 records, the closest 1 km from the site in 2013 and the most recent in 2016, 1.4 km from the site.

4.3 Site - Habitats and Flora

The site currently encompasses a large 2 – 7 storey building surrounded by hard standing.

The site's semi-natural habitats can be categorised into the following Phase 1 habitat types:

- Scattered ephemeral, short perennial vegetation
- Building

- Hard standing

These habitats are described below and their distribution is shown in the Phase 1 habitat survey plan provided in Appendix 1. Selected photographs of the site are provided in Appendix 2. Higher plant species lists by habitat type are provided in Appendix 3.

Scattered ephemeral, short perennial vegetation

A very modest amount of scattered ephemeral, short perennial vegetation is present on some of the rooftops of building B1.

Building

One building is present at the site, described below:

- Building B1 – A 7-storey, metal and glass constructed building with flat roof sections and multiple elevations and a car park basement.

Hard standing

Hard standing occurs in the form of paving surrounding the building and underneath the canopied retail units on the eastern side of building B1.

Fauna

Species which were observed incidentally during the site survey comprise:

- Feral pigeon
- Gull species

4.4 BUILDING INSPECTION

No direct evidence of roosting bats was identified for the on-site building B1.

That said, very modest potentially suitable bat roost / access features were identified during the external inspections of this building.

Buildings

The bat roost / access features for the surveyed building are described in Appendix 4, whilst the resultant bat potential rating of the building are given under the Bats section 5.6.

5. ACTUAL AND POTENTIAL ECOLOGICAL CONSTRAINTS

5.1 CAMDEN COUNCIL PLANNING POLICY

Relevant nature conservation local policies from the Camden Council's Planning Policy Documents (including Core Strategy, adopted 2010 and Development Policies, adopted 2010) as well as relevant emerging planning policies from the proposed new Local Plan (to be adopted June 2017) are provided in Appendix 5.

5.2 Designated Sites and Ancient Woodland

Given the significant spatial separation, the intervening urban land use and the nature (relatively small-scale, i.e. restricted to the site itself and its immediate boundaries) of the proposed works at the site, the works are not expected to have any impact on the identified designated sites.

No ancient woodland occurs within a 1 km radius of the site.

5.3 National priority and Local BAP Habitats and Species

The site does not contain any National priority habitats.

However, one local priority habitat in the Camden Biodiversity Action Plan (2013) is relevant to the site, namely the 'Built Environment' HAP (in the form of the on-site building).

No national priority species were noted on-site during the survey, however, potentially relevant National BAP priority species include certain mammal and bat species (e.g. soprano pipistrelle) as well as certain notable bird species (e.g. starling and house sparrow).

No local Camden priority species were noted on-site during the survey, however, potentially relevant Camden BAP priority species include certain mammal species (e.g. bats) as well as certain notable bird species (e.g. sparrows and swifts) and notable invertebrates (e.g. butterflies and bees).

5.4 Plants

All of the plant species recorded at the site are common and widespread native or naturalised species or else ornamental, non-native species.

It should be noted that additional plant species may be present at the site at other times of the year including potentially notable plant species. That said, given the nature of the identified habitats (i.e. themselves common and widespread) within and immediately adjacent to the proposed works areas, no notable plant species are expected within the affected areas. The site's proposed re-development is therefore expected to be unconstrained by notable flora.

5.5 Invasive Plant Species

No invasive plant species subject to control under the Wildlife and Countryside Act 1981 (as amended) were noted on-site.

Under the Wildlife and Countryside Act 1981 (as amended), it is an offence to plant or cause to grow, including through movement of contaminated soil, Schedule 9 species.

5.6 Bats

Buildings

As described in the building inspection findings, no direct evidence of roosting bats was identified for the on-site building B1.

That said, very modest potentially suitable bat roost / access features were identified during the external inspections of the buildings.

Taking the identified potential bat access / roost features noted for building B1, together with the context in the wider landscape, building B1 has been afforded 'Negligible' bat roost potential.

Based upon the scheme proposals, some sections of the building will be demolished, whilst some other sections will be extended upwards, in order to accommodate the new scheme.

In the event that a bat roost or roosts does / do occur within the building, the proposed works would result in an offence being committed, i.e. in the event that a current bat roost or roosts occurring in the building in question, is disturbed, obstructed, damaged and / or destroyed and / or individual roosting bats are killed or injured.

However, given the only trivial (Negligible) bat roost potential no further bat survey work is required, however, some precautionary mitigation measures are nonetheless recommended and a suite of enhancement options proposed.

Foraging / Commuting Bats

As the site has a very limited amount of vegetated habitat, it is not considered to provide a material source of invertebrate prey for foraging bats. However, the site's linear features (i.e. the building's facades themselves) may be used by commuting bats to navigate around the site's vicinity.

Based upon the proposed scheme's layout plan, it is evident that the trivial amount of scattered ephemeral, short perennial 'weedy-type' vegetation will necessarily be lost in order to make way for the new, proposed scheme. Currently, no post-construction planting has been proposed.

This loss of this trivial amount of vegetated habitat is not anticipated to have any impact on any bat populations that may be present locally, not least on account of the presence of relatively more extensive and higher quality habitat in the environs, e.g. Regents Park.

Legislation

All bat species are fully protected under the Wildlife & Countryside Act 1981, as amended, Countryside and Rights of Way Act 2000 and 2000 and the Conservation of Habitats and Species Regulations 2010, as amended. Taken together, this makes it an offence to intentionally or deliberately capture, kill or injure or disturb bats (whether in a roost or not), and intentionally or recklessly damage, destroy or obstruct access to their roosts.

It is noteworthy that Natural England has recently provided clarification of the absolute protection afforded to bat roosts on its web-site. Specifically, NE re-iterates that it is a *myth* that '*Bat survey licences permit consultants to remove small numbers of bats and damage or destroy minor roosts without the need for a mitigation licence'*.

Further, bats are listed a local priority species in both the Camden (Local) and London (Regional) BAP's and several species of bat are also National priority species and species of principal importance for the conservation of biodiversity in England, including soprano pipistrelle (a species which is known to roost in buildings in urban areas).

The Countryside & Rights of Way (CRoW) Act 2000 affirms that Biodiversity Action Plan (BAP) species (as well as habitats) are material considerations within the planning system.

5.7 Wild Mammals

No direct sightings of wild mammals were made during the site survey, it is expected that the ground level and / or basement of the site may be frequented at least on occasion by fox. However, as the site is comprised of a 2-7 storey building for the most part, it does not provide any suitable habitat for foraging or shelter.

Legislation

Fox along with all other wild mammals including hedgehog, are currently given limited protection under the Wild Mammals (Protection) Act 1996. This makes it an offence to intentionally cause this species unnecessary suffering by certain methods, including crushing and asphyxiation.

5.8 Birds

Two bird species were encountered on site during the survey, including feral pigeon and a species of gull.

The site includes suitable bird nesting habitat for a variety of bird species in the form of the site building itself, specifically, sheltered areas on the rooftops and alcoves within the basement.

An old, disused nest was encountered in one of the basement car parks alcoves. In addition, on the roof of the 6th floor to the north-east of the site, a sheltered area with a high density of pigeon droppings and moulted pigeon feathers was encountered. Two feral pigeons were also seen to be associated with this area. Although it did not seem to currently be in use as a nesting site, the potential exists for this site to be used for nesting at other times of the year.

As feral pigeons are known to nest throughout the year (as opposed to nesting being restricted to the nesting period of March – August inclusive) further survey work may be required if it is deemed that this area will be disturbed by the proposed works.

Black redstart, a Schedule 1 species, National & London (Regional) BAP and Red List species, is present in the local area, and it is a species often associated with an urban environment with much of the United Kingdom's population of black redstart being concentrated in London. The building is considered to be of modest (negligible) suitability to nesting black redstart, the rooftops are quite exposed with a large amount of noisy plant. Many of the areas providing the little shelter present on the rooftops have bird netting in place, preventing access. Additionally, the site provides no suitable forage habitat and non can be found in the immediate locality.

However, the buildings suitability to support black redstart could be markedly increased through the creation of a specially designed living roof and appropriate nesting boxes.

Additional notable bird species that could potentially use the site's habitats (for foraging, shelter, perching and / or nesting) include starling (BoCC Red List and National priority), swift (BoCC Amber List and Camden priority species) house sparrow (BoCC Red List and National and Camden priority species), peregrine falcon (London [Regional] priority species) and potentially (following enhancements) black redstart (BoCC Red List and National and London [Regional] priority species).

Legislation

All birds, their eggs and active nests are protected under the Wildlife and Countryside Act 1981, as amended. This protection includes the birds themselves. Their nests are also protected from damage or destruction whilst the birds are both constructing and using them.

It should also be noted that although the main nesting bird season extends from March to August inclusive for most species, though some species (e.g. feral pigeons) can nest later into the autumn and potentially year-round.

5.9 Reptiles and Amphibians

In terms of reptiles and amphibians, the site overall is considered to be of negligible to no suitability. No suitable breeding, foraging or sheltering habitat occurs on the site, and the site it isolated by large barriers to movement in the form of main roads and other buildings and hard standing.

Legislation

The great crested newt is fully protected under the Wildlife & Countryside Act 1981, as amended, Countryside and Rights of Way Act 2000 and 2000 and the Conservation of Habitats and Species Regulations 2010, as amended.

Not only is it illegal to kill or injure individual great crested newts (which is a fully protected species) but it also unlawful to deliberately or recklessly destroy their places of shelter, which include not only ponds but their terrestrial refuges (i.e. resting places in log piles, bark chippings, leaf litter etc.).

Great crested newt is a National priority species whilst common toad is also a National priority species.

All British reptiles are protected under the Wildlife and Countryside Act 1981, as amended from killing and injury. Following the revision of the UK BAP priority species list in 2007, all native reptiles are now listed as National priority species. In addition, slow worm is a local priority species in the Camden BAP.

5.10 Invertebrates (including Stag Beetle)

The site's habitats are unlikely to support any notable invertebrate species and / or communities and the site lacks suitable habitat for stag beetle; stag beetle requires decaying / dead hardwood since adult stag beetles lay their eggs in these dead wood habitats.

Legislation

The stag beetle is listed on Annex II of the Habitats Directive and since 1998 has been listed on Schedule 5 of the Wildlife & Countryside Act 1981, as amended, though its protection under the WCA extends to the prohibition of sale or other forms of trade only.

The stag beetle is a priority species under the National BAP and is a local Camden priority species, along with butterflies and bees.

6. Recommendations for Further Survey & Mitigation

6.1 Retention and Protection of Existing On-site Habitats

There is no significant area of natural habitat at the site. In addition, there are no off-site trees that lie within 3 m of the site boundary. Therefore, there are no habitats which require protection.

6.2 Bats

Building B1

Building B1 was afforded 'Negligible' bat roost potential. According to current published guidance from BCT (Collins, J., 2016), a building inspection alone (as has been conducted) is sufficient to confirm the likely absence of roosting bats (for structures with less than low potential) and therefore no bat detector survey work is required for this building. Instead, pre-demolition precautionary mitigation measures are proposed.

Generic Precautionary Mitigation

Demolition & Building Works / Building Contractor Awareness

Recommended precautionary measures for the works affecting buildings B1 comprise:

- Contractor awareness of roosting bats and formalisation of a protocol as to the steps to be taken in the event that a bat or bats is / are found during the demolition works, i.e. works to cease and the associated works would likely need to be carried out under a European Protected Species bat licence from Natural England.

Replacement planting and external lighting

Mitigation measures to safeguard the future use of the site and its environs by foraging and / or commuting bats are proposed.

Specifically, at least some new planting should be proposed and should include native species or non-native species wildlife-friendly species, including bat-friendly plant species.

In addition, external lighting of the site during the construction phase and also post-development should be minimised, particularly in the vicinity of any proposed bat and / or bird boxes and proposed soft landscaped areas. The justification for minimisation of the external lighting is that these features may be used by roosting, foraging and / or commuting bats, some species of which are believed to be dissuaded from using lit areas. In addition, many other nocturnal species of wildlife benefit from dark corridors.

Several means by which external lighting can be minimised are suggested by the Bat Conservation Trust and other sources bulleted as follows:

- Do not provide excessive lighting. Use only the minimum amount of light needed for safety.
- Use narrow spectrum bulbs to lower the range of species affected by lighting, use light sources that emit minimal UV light and avoid the white and blue wavelengths of light to avoid attracting lots of insects (which results in reduction of insects in other areas that bats may be using for foraging).
- Lights should peak higher than 550 nm or use glass lantern covers to filter UV light. White LED lights do not emit UV but have been shown to disturb slow flying bat species.
- The use of low or high-pressure sodium lamps instead of mercury or metal halide lamps.
- Mercury lamps used should be fitted with UV filters.
- The brightness should be as low as legally possible.
- The times during which the lighting can be used should be limited to provide some dark periods.
- The lighting should be directed to where it is needed to avoid light spillage.
- Any upward lighting should be minimal or avoided to avoid light pollution. Also eliminate any bare bulbs.
- The spread of light should be kept near to, or below the horizontal – flat cut off hoods are best. Also, light can be restricted to selected areas by fitting hoods which direct the light below the horizontal plane, at preferably an angle less than 70 degrees.
- Limiting the height of lighting columns and directing light at a low level, which reduces the ecological impact of the light. However, higher mounting heights allow lower main beam angles, which can assist in reducing glare.
- For pedestrian lighting, use low-level lighting that is as directional as possible.
- Increase the spacing of lanterns.

- Use embedded road lights to illuminate the roadway and light only high-risk stretches of roads, such as crossings and junctions, allowing head lights to provide illumination at other times.
- Use lighting design software and professional lighting designers to predict where light spill will occur.
- Avoid using reflective surfaces under lights.
- Use temporary, close-boarded fencing until vegetation is mature enough to shield sensitive areas from lighting.
- Road or track ways along areas important for foraging bats should contain stretches left unlit to avoid isolation of bat colonies.
- No bat roost (including access points) should be directly illuminated.

6.3 Wild Mammals

Given the limited legal protection afforded to wild mammals, precautionary mitigation measures in the form of the adoption of good construction/building/material storage practices are recommended for the ground level works e.g. covering of all deep holes and trenches overnight and/or the provision of planked escape routes for any trapped wildlife. In addition, any liquids held on-site should be stored in a secure lock-up.

6.4 Breeding Birds

Clearance of suitable nesting bird habitat (i.e. dismantling / demolition / extension of the building sections etc.) should ideally be undertaken outside the breeding bird season, i.e. should be undertaken in the period September to February inclusive. Should it prove necessary to clear bird nesting habitat during the bird nesting season, then a pre-works check for nesting birds should be undertaken, ideally by an ecologist. If any active nests are found, activities (e.g. building dismantling / demolition / extension) should cease and an appropriate buffer zone should be established. This buffer zone should be left intact until it has been confirmed that the young have fledged and the nest is no longer in use.

Further, as a significant amount of feral pigeon were identified as using an area on the 6th floor roof (to the north-east of the building) as a roost site, if this particular area is deemed likely to be subject to disturbance during the proposed works a pre-works check for nesting pigeon should be undertaken in this area, ideally by an ecologist, regardless of the time of year. This is due to the fact that feral pigeon are known to nest throughout the year (as opposed to nesting being restricted to the nesting period of March – August inclusive)

In addition, to mitigate for loss of potential bird nesting sites as a result of the proposed re-development, it is recommended that bird boxes should also be installed within the fabric of, or mounted upon, suitable retained and new sections of the building.

6.5 Reptiles and Amphibians

The proposed scheme is not expected to be constrained by reptiles and / or amphibians.

As best practice, however, the contractor(s) carrying out the building demolition / construction works should be made aware of the potential (albeit highly unlikely) of encountering reptiles and / or amphibians and also of the protocol that should be followed in the highly unlikely event that reptiles and / or amphibians, are found during the works, i.e. the works will halt, the project ecologist should be contacted and the reptile/amphibian(s) should be carefully picked up and re-located to suitable habitat.

6.6 INVERTEBRATES

The site's habitats are unlikely to support any notable invertebrate species and / or communities and the site lacks suitable habitat for stag beetle. Therefore, no constraints in relation to invertebrate species are expected, however, enhancement measures for this species group are proposed.

6.7 HOUSE-KEEPING AND MATERIALS STORAGE

'Best practice' materials storage should be implemented and should include, for example, use of bunded containers, provision of 'spill kits' etc. and appropriate mitigation to control dust should be adopted.

6.8 GOOD HORTICULTURAL PRACTICE

Good horticultural practice would be adopted whereby there would be minimal use of non-residual pesticides, such as glyphosate and use of peat-free mulch, growing media and soil conditioners.

Use of slug pellets will be dissuaded and also use of environmentally safe wood preservatives (for wooden fencing etc.) will be promoted.

7. OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

The planting proposed as part of the scheme (i.e. shrubs and small trees on selected balcony areas) provides opportunities to maximise the ecological value. Suggested ecological opportunities are discussed as follows:

7.1 PROPOSED PLANTING

It is recommended that the planting schedule of the detailed replacement planting / soft landscaping scheme is designed to be at least bias towards (and preferably exclusively) wildlife-friendly species.

7.2 NEW TREE PLANTING

Young native trees or else wildlife-friendly non-native species could be planted in planters at appropriate positions within the new balcony areas.

For native species, species of local provenance should be obtained, if practicable.

7.3 SHRUB, CLIMBERS, HERBACEOUS AND GROUND COVER PLANTING

A list of wildlife-friendly though ornamental species is provided in Appendix 6, but by way of examples, shrub species within the proposed shrubbery areas on selected balconies could include some of the following:

- Californian lilac, Beech, Hornbeam, Yew, Box, Christmas box, Escallonia, Forsythia, Hebe, Juneberry, Lavender, Lilac, Mexican orange blossom, Mock orange, Oleaster, Oregon grape, Rock rose, Shrubby cinquefoil, Skimmia, Viburnum, Weigelia, Barberry, Firethorn and Dogwood cultivars

7.4 CREATION OF LIVING ROOF HABITATS

There is significant scope for the creation of living (biodiverse / green / brown) roofs on some sections of the new, proposed building.

It is noteworthy that Development Policy DP22 of the Camden Planning Guidance: Sustainability supplementary document states that*: 'schemes must incorporate green or brown roofs and green walls wherever suitable. Due to the number of environmental benefits provided by green and brown roofs and*

green walls, where they have not be designed into a development the Council will require developers to justify why the provision of a green or brown roof or green wall is not possible or suitable.'

In addition, the emerging planning policy A as part of the new Camden Council Local Plan (to be adopted in June 2017) states '*the Council will negotiate the provision of biodiverse living roofs in all suitable developments'.*

Further, as part of the Camden Biodiversity Action Plan, Action Plan 2: Built Environment, the use of living roofs and walls are recommended in order to achieve the broad outcome of: '*Camden's built environment making a positive contribution to the green infrastructure and biodiversity of the borough.'*

In terms of the nature of the living roof, the following generic guidance is given in this document [prepared by Camden Council regarding Substrate, Planting and Biodiversity Features, re-produced, for information, as follows:

Substrate:

- *Substrate depth should be between 80 and 150mm and vary across the roof.*
- *For brown biodiverse roofs, reclaimed building material can be used but should be screened to ensure that it is not contaminated.*
- *Areas of bare ground can provide habitat for warmth-loving invertebrates and recreate an open mosaic habitat structure.*
- *Mounds and ridges can provide varying microclimates suitable for different species and create structurally diverse vegetation.*

Planting:

- *Planting should consider the climate, microclimate, plant attributes and objectives.*
- *Vegetation can establish either through natural colonisation or planting*
- *Colonisation can produce habitat of high value but can also create problems with undesirable species.*
- *The sowing of annuals or plug planting combined with seeding can be beneficial as it provides a resource for species for the first few years during establishment*
- *Sedum has less biodiversity value but can still deliver drainage benefits etc. and can be combined with other plantings and substrates (on biodiverse roofs should be less than 30%).*
- *Wildflowers provide a habitat for beetles, bees, butterflies and moths. Planting density should be 15-20 species/m2. In addition to constituting the main planting for biodiverse green roofs, they can be incorporated into extensive brown roofs and sedum roofs. Mosses, succulents and grasses can provide additional variation.*
- *Shrubs and cover can be provided depending on structural considerations and substrate depth and can provide cover for wildlife, perches and winter food for birds, and windbreaks.*

Other Biodiversity Features:

- *Over-wintering vegetation allows many invertebrates to complete their lifecycle;*
- *Log piles and deadwood can provide habitat and perches for invertebrates and birds;*
- *Bee banks are mounds of sand and provide valuable nesting sites;*
- *Stones and mounds of cleaned bricks can provide insect and spider habitat;*
- *Ponds and wet areas can provide a valuable resource for many species;*
- *Bug hotels and habitat walls for nesting and overwintering invertebrates.*

7.5 ARTIFICIAL HABITATS

A variety of artificial habitats could also be provided to enhance the value of the site to wildlife. By way of example, these may include (but not be limited to):

- Provision of nesting opportunities for birds in the form of bird boxes within/upon the retained and new building sections, specifically aimed at species targeted in the Camden and London BAPs e.g. starling, swift, house sparrow and black redstart;
- Provision of roosting opportunities for bats in the form of boxes within/upon the retained and new building sections;
- Provision of insect house(s) which could be positioned in the new proposed shrub planting on selected balconies if appropriate (preferably in sheltered, warm locations) to provide over-wintering sites for insects; and,
- Minimal use of non-residual pesticides, such as glyphosate and use of peat-free mulch, growing media and soil conditioners.

Various styles/models of bird and bat boxes, insect houses alongside their respective manufacturers/suppliers are given in Appendix 6 at end of this report.

8. REFERENCES

Hubbard, C.E., 1984, Grasses, 3rd Edition, Penguin, London

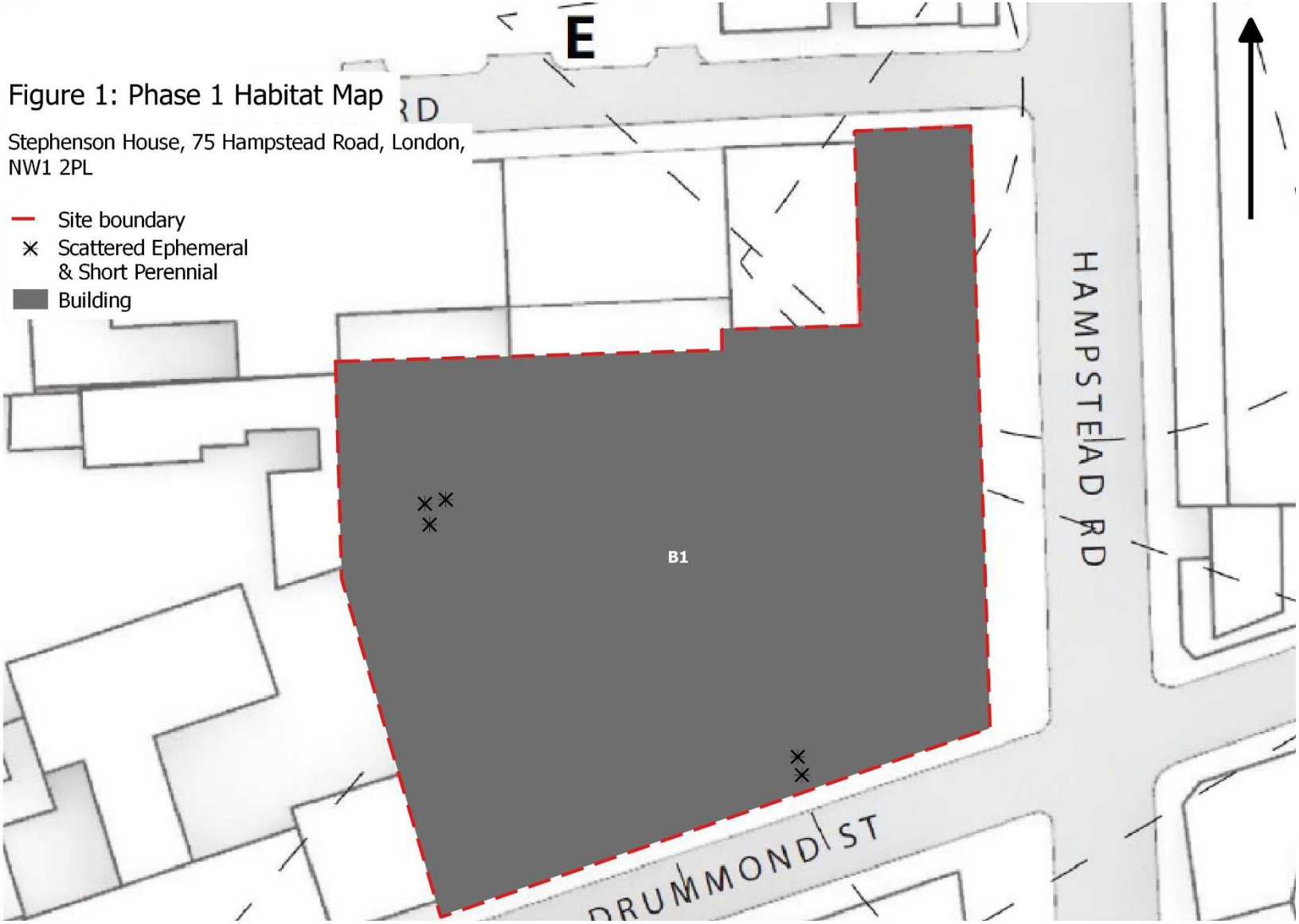
London Borough of Camden, 2013 – 2018, Camden Biodiversity Action Plan

Johnson, O, & More, D, 2004, Tree Guide, Harper Collins, London

Rose, F, 2006, The Wild Flower Key, Warne, London

Stace, C., 1997, New Flora of the British Isles, 2nd Edition, Cambridge University Press

9. APPENDIX 1 - PHASE 1 HABITAT SURVEY PLAN



10. APPENDIX 2 - SELECTED PHOTOGRAPHS

A context view of part of the eastern face of building B1

A context view of the southern face of building B1

A context view of the 7th floor rooftop

A context view of the 6th floor rooftop

A context view of the 2nd and 1st floor rooftops

A view of the 2nd floor front roof top

A context view of part of the basement car park

A view of the interior of the lift motor room

The gaps underneath the corrugated metal roof of an extractor unit

The gaps in metal hoarding encountered across most of the roof tops of B1

One of the air vent units

One of the missing hoarding panels found on the 6th floor roof top

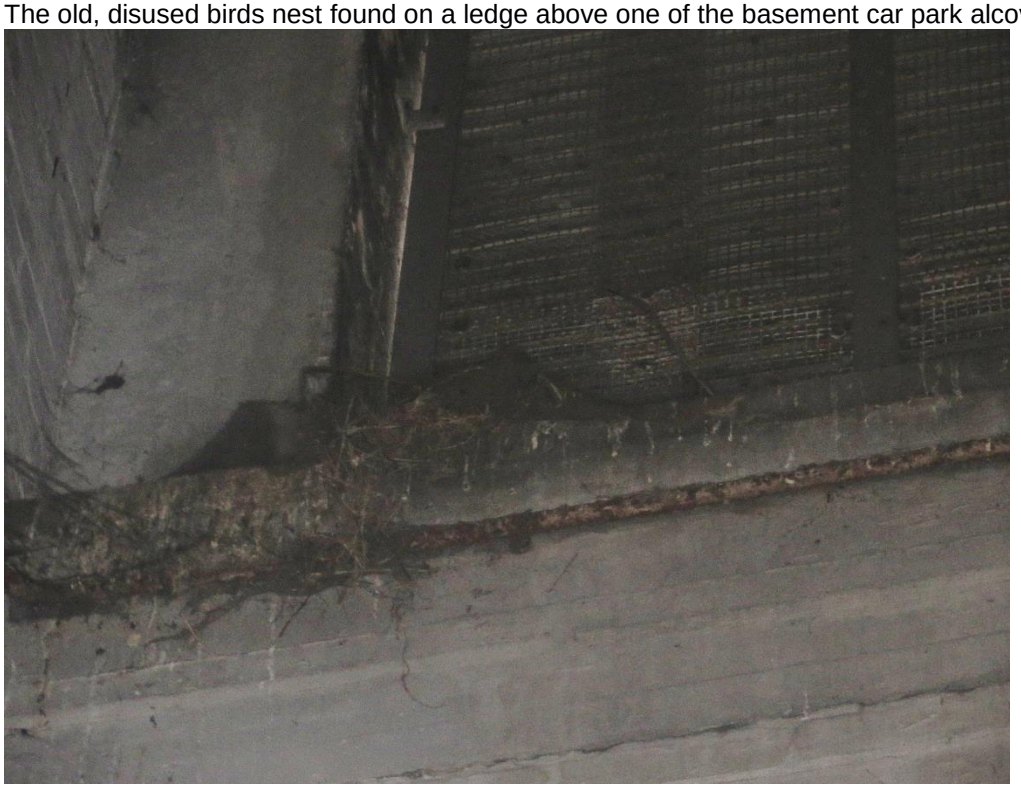
The degraded plant roof on the 2nd floor roof top

An example view of the small gaps underneath the metal lip of the canopy on the ground floor

Minor lifted flashing viewed from the 2nd floor front roof top

The underground tunnel extending out from the basement car park

The old, disused birds nest found on a ledge above one of the basement car park alcoves



The sheltered area on the 6th floor roof top with a high density of pigeon droppings and feathers

An example view of one of the chicken bones encountered, thought to have been dropped or left by a scavenging bird

APPENDIX 3 - PLANT SPECIES LIST

Common Name	Scientific Name	SESP
Sow-thistle sp.	*Sonchus sp.*	✓
Shaggy Soldier	*Galinsoga parviflora*	✓
Stonecrop sp.	*Sedum SP.*	✓
Meadow-grass sp.	*Poa sp.*	✓
Ground Ivy	*Glechoma hederacea*	✓
Willowherb sp.	*Epilobium sp.*	✓

11. APPENDIX 4 – BUILDING INSPECTION RESULTS

Building B1

Externally, the following features of modest suitability as bat roost / access points were identified for B1:

- Small gaps under the corrugated metal roof of an extraction unit on the 7th floor roof.
- Gaps between the metal hoarding around the perimeters of most of the roof elevations.
- 2 missing metal hoarding plates on the 5th floor roof.
- Extractor fan grills with possible access.
- Degraded roof to one of the plant on the 2nd floor roof.
- Small gaps underneath the metal rim of the canopy over the retail units to the east.

Internally, the following features of note were identified for B1:

- An old, disused birds nest on a ledge in one of the basement car park alcoves; and
- An underground tunnel leading out of the basement car park at its south-eastern corner and under the adjacent street, leading to a water supply. It was noted as being damp and with smooth sided walls and limited crevices. It is considered high unlikely to be used by roosting bats during the winter season, not least since the basement car park entrance is secured by closed shutters at all times, the tunnel is some 40 m from the car park shutters, the car park interior is brightly lit and also subject to high levels of disturbance from vehicular movements.

Selected photographs for the building inspection are given in Appendix 2.

12. APPENDIX 5 – PLANNING POLICY

12.1 RELEVANT CAMDEN COUNCIL PLANNING POLICY DOCUMENT POLICIES:

Relevant Camden Council Core Strategy (2010) policies comprise:

CS15 – Protecting and improving our parks and open spaces and encouraging biodiversity

The Council will protect and improve sites of nature conservation and biodiversity, in particular habitats and biodiversity identified in the Camden and London Biodiversity Plans in the borough by:

d) designating existing nature conservation sites;
e) protecting other green areas with nature conservation value, including gardens, where possible;
f) seeking to improve opportunities to experience nature, in particular in South and West Hampstead, Kentish Town and central London, where such opportunities are lacking;
g) expecting the provision of new or enhanced habitat, where possible, including through biodiverse green or brown roofs and green walls;
h) identifying habitat corridors and securing biodiversity improvements along gaps in habitat corridors;
i) working with The Royal Parks, the London Wildlife Trust, friends of parks groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden;
j) protecting trees and promoting the provision of new trees and vegetation, including additional street trees. The Council will preserve and enhance the historic, open space and nature conservation importance of Hampstead Heath and its surrounding area by:
k) working with the City of London, English Heritage and Natural England to manage and improve the Heath and its surrounding areas;
l) protecting the Metropolitan Open Land, public and private open space and the nature conservation designations of sites;
m) seeking to extend the public open space when possible and appropriate;
n) taking into account the impact on the Heath when considering relevant planning applications;
o) protecting views from Hampstead Heath and views across the Heath and its surrounding area;
p) improving the biodiversity of, and habitats in, Hampstead Heath and its surrounding area, where opportunities arise.

Relevant Camden Council Draft Local Plan (to be adopted June 2017) policies comprise:

Policy A3 Protection, enhancement and management of biodiversity:

The Council will protect and improve sites of nature conservation and biodiversity.
We will:
a. designate and protect nature conservation sites and safeguard protected and priority habitats and species;
b. resist development which would directly or indirectly result in the loss, reduction in area or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species;
c. protect other green areas with nature conservation value, including gardens, where possible;
d. assess developments against their ability to enhance biodiversity through incorporating measures to support wildlife, proportionate to the scale of development proposed;
e. on larger sites, we will seek satisfactory levels of natural greenspace, including the creation and restoration of BAP habitat;
f. ensure that benefits for biodiversity and ecology are realised in the layout, design and materials used in the built structure and landscaping elements of a proposed development;

g. secure biodiversity improvements to habitat corridors, particularly where a development scheme is adjacent to an existing habitat;
h. improve opportunities to experience nature, in particular where such opportunities are lacking;
i. require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to species and ecologically sensitive areas;
j. secure management plans to ensure that nature conservation objectives are met; and
k. work with The Royal Parks, the London Wildlife Trust, friends of park groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden.

Trees
We will:
l. protect trees, including street trees, and prevent the loss of trees of amenity value;
m. expect replacement trees or mitigation measures to be provided where the loss of, or impact on, trees in a development proposal is considered acceptable; and n. expect developments to incorporate additional trees wherever possible.

Relevant Camden Council Development Policies (2010) comprise:

Development Policy DP22

Schemes must incorporate green or brown roofs and green walls wherever suitable. Due to the number of environmental benefits provided by green and brown roofs and green walls, where they have not be designed into a development the Council will require developers to justify why the provision of a green or brown roof or green wall is not possible or suitable.

The Council will expect all developments to incorporate brown roofs, green roofs and green walls unless it is demonstrated this is not possible or appropriate. This includes new and existing buildings. Special consideration will be given to historic buildings to ensure historic and architectural features are preserved.

Camden Planning Guidance: Sustainability – Biodiversity

Proposals should 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

13. APPENDIX 6 - ARTIFICIAL HABITATS

BAT BOX DESIGNS

Habibat – Plain (For Rendering) or brick-faced

Stockist – NHBS

This box is made to order and faced in brick to match your building. If you do not know your brick code you can send 6 of your own bricks to be used on the face of the box. It is supplied unpointed so it can be matched as closely as possible to the building.

With the increase in development of new building sites and redevelopment of older buildings, especially in rural areas, availability of roost sites for bat species is becoming more limited. However, bats can be encouraged to remain at old sites or colonise new sites by incorporating artificial roost spaces into the building during the build or renovation process.

The Habibat Bat Box is a large, solid box made of insulating concrete with an internal roost space, which can be incorporated into the fabric of a building as it is built or renovated. A variety of facings can be fitted to suit any existing brick, wood, stonework or rendered finish, rendering the box unobtrusive and aesthetically pleasing. The Habibat box is suitable for species which are most commonly found roosting in buildings.

Specifications and information provided by stockist:

This box is made to order with a plain face suitable for rendering over to match the rest of the building, leaving just a small entrance hole exposed. It is available with a choice of three plinth finishes: smooth blue, smooth red, or buff.

Dimensions: 215 mm wide x 440 mm high x 102 mm deep

Material: Concrete plus plain facing (for rendering over

Weight: approximately 13.8 kg

Correct placement of Habibat is fundamental to the successful uptake by bats.

Orientation
Temperature is known to be the major factor influencing successful uptake of artificial roost by bats. In general, bats seek warm spaces to help them with rearing young. For this reason, Habibat should be located where it will receive the maximum amount of sunlight. In the northern hemisphere this will be the southerly aspects/orientation (south, south-west and south-east).

Height
Position Habibat a minimum of 2 metres but preferably 5 to 7 metres above ground. Avoid placement above windows, doors and wall climbing plants, thereby reducing the likelihood of predation by cats. A position near the eaves or gable apex of the property would be preferable.

Schwegler 1WI Summer and Winter In-Wall Bat Box

This bat box has been designed by Schwegler to provide a haven in the walls of buildings for the safe hibernation of bats in winter, as well as for roosting, forming of colonies and raising their young during summer.

The integrated insulation in combination with the well-known advantages of the Schwegler WoodcretePLUS material - breathable, long-lasting and natural - is ideal for the needs of building-inhabiting bat species all year round. The patented double wall system has been tested and proven for decades in the 1FW Bat Hibernation Box, as used in many professional and scientific projects in forests all over Europe.

The 1WI is a very good example of how easy it is to assist bats in urban areas. With this brick-type bat box, it is possible to offer new quarters or to provide replacement for destroyed or closed spaces where bats used to live. The combination of several materials in a layer structure ensures outstanding insulating properties but still guaranties sufficient air-convection and permeability.

The extremely durable material will last for many decades providing shelter for the bats.

Material: WoodcretePLUS™

External Dimensions: 545H x 345W x 95D mm, Weight: approx. 15kg

Wienerberger / EcoSurv Bat Box

The Bat Box has been specifically designed to be incorporated into the fabric of the building and to encourage the use by species such as Pipistrelle, Natterer's, Whiskered and Brandt's which are most commonly found roosting in buildings. It can also be open at the rear allowing access into existing cavities or roof spaces of older buildings for species such as Brown Long Eared bats. If required, they can also be joined side by side to increase the bats roosting space.

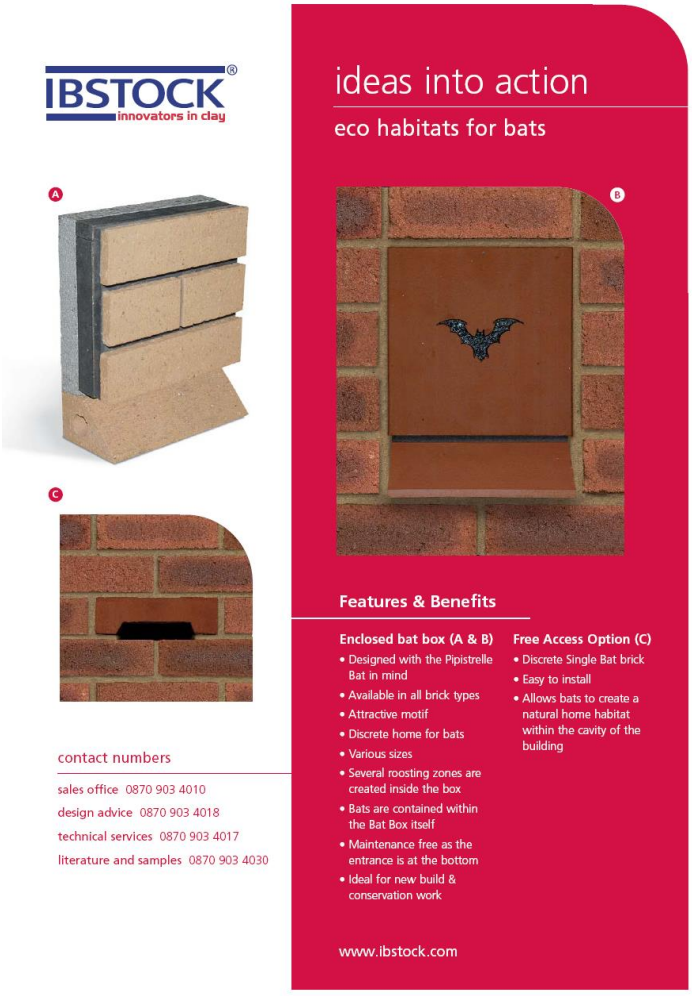
The facing of the Bat Box can be manufactured to match any existing brick in the Wienerberger range or complement stonework and uses partly recycled materials.

With an increase in development of new sites and redevelopment of older buildings particularly those in more rural areas, availability of roost sites for our bat species is becoming more limited. With thoughtful planning bats can be encouraged to remain at old sites or even colonise new sites by the introduction of species specific eco-friendly building products such as the Terca/EcoSurv Bat Box, as featured on the Bat Conservation Trust web site, which creates a new habitat or enhances existing habitats enabling bats to roost, breed and hibernate.

The Terca/EcoSurv Bat Box can also help towards gaining the credits on offer to meet the requirements of the Ecology Category of the Code for Sustainable Homes.

Ibstock Bat box

Stockist – Ibstock



Bat tube (Schwegler 1FR and 2FR)

Stockist - Alana Ecology, Pearce Environmental

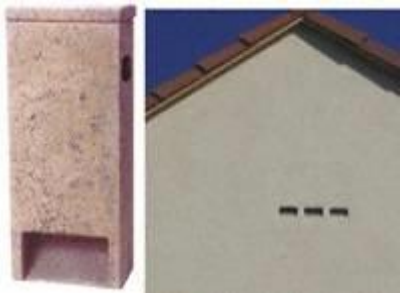
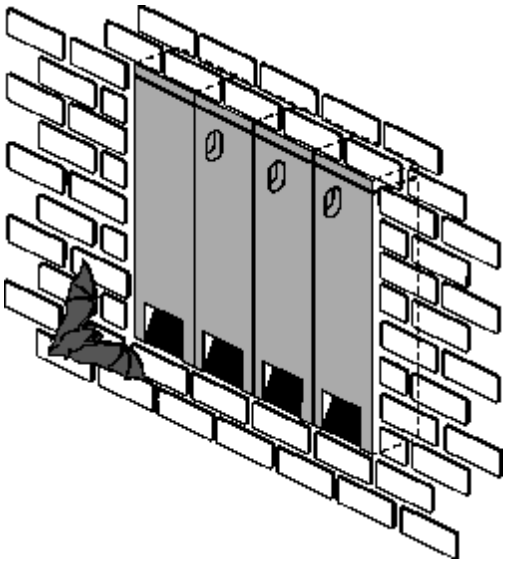


PHOTO: Alana Ecology web-site



The tubes have holes in the sides. This allows multiple tubes to be placed next to each other to form a much larger bat roost. Brick boxes are designed for buildings, or underneath bridges, arches or tunnels, where conditions are relatively humid. They are particularly useful for new buildings or bridges to attract bats, or to provide new roost sites where existing buildings with bats are being renovated. This long box can be installed within brick masonry, beneath plasterwork or wood panelling, or incorporated into concrete structures such as factory buildings or bridges. Inside it contains a woodcrete surface, a roughened wood board, and a metal mesh, providing a choice of roosting areas depending on the weather conditions and the bats' habits. This box is maintenance-free as the entrance slit is at the bottom.

No painting required, but if painting is necessary a natural breathable paint should be used. Woodcrete (75% wood sawdust, concrete and clay mixture). Width: 20cm, Height: 47cm, Depth: 12.5cm. Entrance Width

Bat box (Schwegler 1FQ)

Stockist - Alana Ecology, Wildlife & Countryside Services

PHOTO: Alana Ecology web-site

This is the latest model from Schwegler and is designed specifically to be fitted on the external wall of a building, including any house or barn. It is designed to be used both as a non-hibernation roost and as a nursery roost and encompasses a special porous coating to help maintain the ideal temperature inside alongside a roughened front panel to allow bats to land securely. Access into the box is via a step-like recess.

Inside the box, rough pieces of wood incorporated into the back are good insulators and are used by the bats as perches. The internal layout offers three different areas with varying degrees of brightness and temperature.

This durable box is easy to attach to most walls, requires no maintenance or cleaning and will last for decades.

Dimensions 56.5cm h x 35cm w x 8.5cm d. It should be noted that this box is designed to be fitted to a wall and would be unsuitable for fences or sheds on account of its weight (15kg).

BIRD BOX DESIGNS

Sparrow Terraces

Stockist – Jacobi Jayne, Pearce Environmental Ltd

PHOTO: Pearce Environmental Ltd web-site

This terrace is made from woodcrete and weighs 13kgs and so is not suitable for fences and sheds. Its dimensions are 245 x 430 x 200mm.

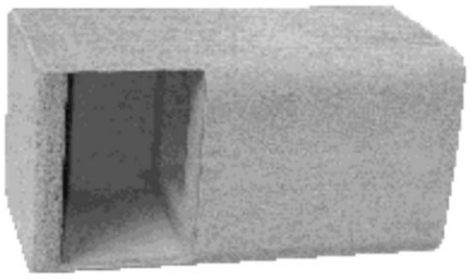
Schwegler Avianex

PHOTO: Alana Ecology web-site

A nest box designed specially to attach the walls of buildings. Avianex is the perfect choice for fixing to the outer wall of houses, garages and other buildings. It's constructed from ultra-tough WoodcretePLUS, a uniquely long-lasting blend of wood, concrete and clay that won't ever leak, warp or rot. Avianex fixes easily to most walls. Site the box at a height of between 1.5 and 5 metres. Choice of green, brown or soft red.

32mm entrance hole ideal for tits, house and tree sparrows, redstart, nuthatch and pied flycatcher. Constructed from 100% natural, zero-maintenance WoodcretePLUS. Removable front panel for cleaning and inspection. Supplied with galvanised screw hook, wall plug and instructions.

Open fronted Brick Box 1HE

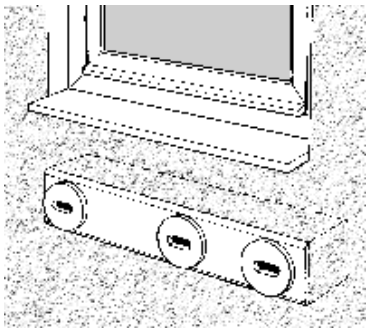


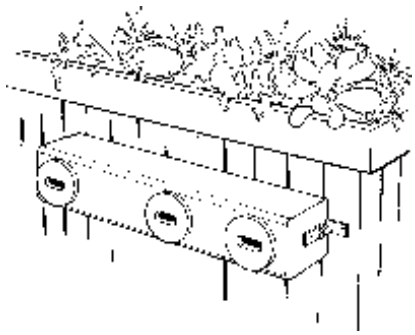
A nest box designed for installation in or on external walls.

This latest desing is a lightweight nesting box made of plant fibre and SCHWEGLER wood-concrete. Because of its special narrowing entrance it is safe against magpies, jays, cats and martens.

It attracts black redstart, pied wagtail, spotted flycatcher and occasionally house and tree sparrow.

Schwegler Triple Cavity Swift Box





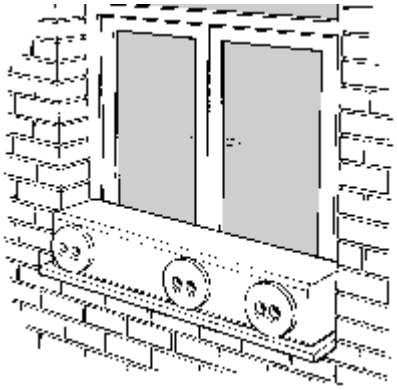


PHOTO / DIAGRAMS: Schwegler web-site

This box is constructed from plant-fibre based material. It can accommodate 3 pairs of swifts assisting the rapid formation of colonies. It should be sited 6-7m above the ground, near the roof of a building or on a steep rock face (i.e. c. 6 m height on NE facing ventilation stack).

Positioning: Under or close to roofs, at least 5m from the ground, ensure unobstructed access for birds.

Suitable for: Common swifts, Material: Vegetable fibre material (asbestos-free)

Height:150mm, Width: 900mm, Depth:150mm,Weight:7Kg

Schwegler 2GR Nest Box – 3 holes

PHOTO: Alana Ecology web-site

This box is especially well protected against predators such as cats, magpies, jays and martens, because of the special design of the large nesting area and front panel. 3 x 27mm Entrance Holes. Nesting area 14 x 19cm. Supplied with wire loop hanger.

Three 27mm holes for extra light encourage small tits to build their nests safely in the large nesting area at the back of the box. Also available with single oval hole, attractive to a wide range of smaller bird species from nuthatches to great tits.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.

Open Fronted Nest Box (for black redstarts) – Schwegler 2H

Stockist – Alana Ecology

This box is attractive to robins, pied wagtails, spotted flycatcher, wrens and black redstarts. Best sited on the walls of buildings with the entrance on one side.

Schwegler boxes have the highest occupation rates of all box types. They are carefully designed to mimic natural nest sites and provide a stable environment for chick rearing and winter roosting. They can be expected to last 25 years or more without maintenance.

Starling Box

Stockist – Jacobi Jayne, Pearce Environmental Ltd

PHOTO: Jacobi Jayne web-site

This Woodcrete model is ideal for starlings, given its larger size. It can be erected against walls, fences or larger trees.

Guidance on Bird Box Positioning

The building or wall-mounted bird boxes should similarly be positioned at height (i.e. out of the reach of predators such as cats), out of direct sunlight. Bird boxes should be positioned on north-facing walls.

INSECT HOUSE DESIGNS

Ladybird House

Stockist – Green Gardener

PHOTO: Green Gardener web-site

The ladybird house has a central chamber filled with natural material. There are many holes drilled in an upwards angle for the insects to reach the insulated and safe inner chamber. If necessary the roof panel may be removed for inspection or cleaning. Simply site in a sheltered, warm spot away from prevailing wind in flower beds, wooded glades or even in a planter.

Hand-crafted wooden construction. Should be positioned next to aphid infected plants with ladybirds introduced from May onwards. Dimensions 30 cm high x 15 cm x 15 cm.

Ladybird Mansion

Stockist – Green Gardener

PHOTO: Green Gardener web-site

A wall mounted ladybird mansion provides year round shelter for ladybirds and other beneficial insects and can be positioned under the eaves of a house or shed. It is constructed from FSC timber. Dimensions 30 cm high x 14 cm x 17 cm.

LIST OF NATIVE AND / OR NON-NATIVE WILDLIFE-FRIENDLY PLANT SPECIES

Alder, Alder buckthorn, Apple, Ash, Aspen, Barberry, Bay willow, Beech, Betony, Bird cherry, Black currant, Black poplar, Blackberry, Blackthorn, Blue spiraea, Box, Bridal wreath, Broom, Butterfly-bush, Californian lilac, Cat-mint, Clematis, Common valerian, Cotoneaster (non-invasive), Crab apple, Crack willow, Daisy bush, Dame's-violet, Daphne, Darwin's barberry, Dog rose, Dogwood, Downy birch, Dutch elm, Elderberry, English elm, Escallonia, European larch, Everlasting pea, Field maple, Firethorn, Flowering currant, Fuchsia, Goat willow, Golden rays, Goldenrod, Gorse, Grey willow, Guelder rose, Hawthorn, Hazel, Heath bell, Heath cross-leaved, Heather, Hebe, Hedge barberry, Holly, Honeysuckle, Hooker's barberry, Hop, Hornbeam, Hydrangea, Hyssop, Ice plant, Ivy, Japanese quince, Japanese wisteria, Juneberry, Juniper, Laurustinus, Lavender, Lilac, Lime, Loganberry, Magnolia, Mezereon, Michaelmas daisy, Mock orange, Musk mallow, Nasturtium, Norway spruce, Oaks – native, Oleaster, Orange ball tree, Oregon grape, Ornamental currant, Peach, Pear, Perennial wallflower, Privet - wild and garden (for nesting), Purple crab, Purple loosestrife, Quince variety, Raspberry, Rockery alyssum, Rosemary, Rowan, Russian sage, Scots pine, Shrubby cinquefoil, Shrubby helichysum, Shrubby Ragwort, Silver birch, Skimmia, Smoke bush, Snowberry, Spindle, Spotted laurel, Spurge laurel, St John's wort, Sweet briar, Sweet chestnut, Teasel, Thunberg's barberry, Tormentil, Tutsan, Viburnum, Wayfaring tree, Weigela, White poplar, Whitebeam, Wild cherry, Wild marjoram, Wild pear, Wild plum, Wild service tree, Willows, Wych elm