



## **Brent Cross Regeneration Scheme**

### **Bat Survey Report for Phase 1A North**

November 2014

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# Brent Cross Regeneration Scheme

## Bat Survey Report for Phase 1A North

**Client Name:** Brent Cross Cricklewood Development Partners  
**Document Reference:** EED13492-101\_R\_5\_1\_6\_JF  
**Project Number:** EED13492

### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with Waterman Group's IMS ( BS EN ISO 9001: 2008, BS EN ISO 14001: 2004 and BS OHSAS 18001:2007)

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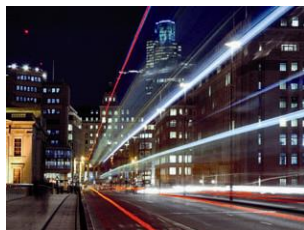
### Comments

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## 1. Introduction

- 1.1. Waterman Energy, Environment & Design Ltd (Waterman EED) was commissioned by Brent Cross Cricklewood Development Partners (hereafter referred to as 'the Applicants') to undertake bat surveys on trees and buildings at land in the vicinity of Brent Cross shopping centre to facilitate the Brent Cross Cricklewood Regeneration scheme. The scheme which is situated in Brent Cross in the London Borough of Barnet (LBB) comprises of 151 hectares (ha) of land (hereinafter referred to as the 'Site').
- 1.2. This is a major urban regeneration scheme of mixed use development, critical infrastructure (roads, bridges and river realignment) and open spaces. The project has been subject to multiple planning applications and currently has planning consent ('2014 Permission') for the Section 73 ('s.73') scheme (the 'Scheme') submitted in October 2013 (Application Ref: F/04687/13).
- 1.3. This report has been produced to support Reserved Matters Applications (RMA) for the first phase (Phase 1A (North)) of the Scheme, which includes refurbishment of buildings on the Site and the removal of a number of trees. The Phase 1A (North) detailed design features in combination with the 2014 Permission. There the 'Development' is seeking approval through this RMA.
- 1.4. An updated Ecological Appraisal undertaken in 2014 (Waterman 2014 ref: EED13492\_101\_R\_4\_2\_6) recorded that buildings at Clitterhouse Farm to the south-west of the Site and a number of trees offer features / opportunities that are suitable to support roosting bats.
- 1.5. Previous bat surveys have also recorded the presence of roosting bats on the Site in 2006 and 2011, comprising a single roost of eight common pipistrelle and one common pipistrelle bat/s respectively.
- 1.6. Current good practice guidelines (Hundt, 2012)<sup>1</sup> states that '*Following preliminary roost assessment'... 'further survey work in the form of dusk emergence, pre-dawn re-entry' ... 'surveys may be undertaken to provide additional information on an identified roost or to provide a reasonable level of confidence that bats are not present'*', this ensures Scheme will comply with legislative and planning policy requirements.
- 1.7. Therefore, to detail the requirements for further survey within Phase 1A (North) of the Scheme, tree climbing surveys were undertaken and a number of dusk emergence and dawn re-entry surveys were undertaken at the Clitterhouse Farm buildings. This was to establish the presence / likely absence of bats roosting within structures to be impacted upon within Phase 1A (North) and also to obtain details of any roosts recorded to be present, such as type, species and size, which would inform the refurbishment impact and any mitigation, as required.
- 1.8. The bat surveys detailed within this report will be used to inform the refurbishment and landscaping proposals in relation to foraging and commuting routes within the Scheme, lighting proposals and informing a Natural England licence, where required.

<sup>1</sup> Hundt (2012). Bat Surveys – Good Practice Guidelines. Bat Conservation Trust, London.

## 2. Legislation and Planning Policy

### Legislation

- 2.1. In summary, all UK bat species are protected by The Conservation of Habitats and Species Regulations 2010 (as amended)<sup>2</sup> and The Wildlife and Countryside Act 1981 (as amended)<sup>3</sup>.
- 2.2. Taken together it is an offence to:
  - deliberately kill, injure or capture a bat;
  - deliberately disturb bats in such a way as to be likely significantly to affect (i) the ability of any significant group of bats to survive, breed, or rear/nurture their young; or (ii) the local distribution of that species;
  - damage or destroy any breeding or resting place used by bats; and
  - intentionally, or recklessly, obstruct access to any place used by bats for shelter or protection.

### National Planning Policy

#### National Planning Policy Framework, 2012

- 2.3. The National Planning Policy Framework<sup>4</sup> (NPPF) was adopted in March 2012. Section 11 (outlined below) of the NPPF, Conserving and Enhancing the Natural Environment, effectively replaces Planning Policy Statement 9: Biodiversity and Geological Conservation. However, government Circular 06/05, Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System<sup>5</sup>, remains valid and is referenced within the NPPF.
- 2.4. The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:
  - *“Protecting and enhancing valued landscapes, geological conservation interests and soils;*
  - *Recognising the wider benefits of ecosystem services;*
  - *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the government’s commitment to halt the overall decline in biodiversity, including by establishing ecological networks that are more resilient to current and future pressures;*
  - *Preventing both new and existing development from contributing to or being put at an unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*
  - *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate”.*
- 2.5. The NPPF also looks for Local Planning Authorities, when determining planning applications, to conserve and enhance biodiversity, by applying the following principles:

<sup>2</sup> OPSI, 2010: ‘The Conservation of Habitats and Species Regulations, 2010 (as amended)’, HMSO

<sup>3</sup> OPSI, 1981: ‘The Wildlife and Countryside Act (WCA), 1981 (as amended)’, HMSO, London

<sup>4</sup> Department of Communities and Local Government (March 2012) ‘National Planning Policy Framework, 2012’.

<sup>5</sup> ODPM (2005) Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, (ODPM 06/2005, Defra 01/2005)

- “development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; and
- opportunities to incorporate biodiversity in and around developments should be encouraged”.
- If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful effects) adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

## Regional Planning Policy

### Spatial Development Strategy for Greater London (The London Plan), 2011

2.6. The London Plan<sup>6</sup> sets out the Mayor’s aims for development within the Metropolitan area. The relevant policies regarding conservation and biodiversity are detailed below.

2.7. Policy 7.19 of the London Plan sets out the Mayor’s policy in relation to biodiversity and access to nature. In outline, it includes the following key policies:

*“The Mayor will work with all relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayor’s Biodiversity Strategy. This means planning for nature from the beginning of the development process and taking opportunities for positive gains for nature through the layout, design and materials of development proposals and appropriate Biodiversity Action Plans. Development proposals should:*

*a) Wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity;*

*b) Prioritise assisting in achieving targets in Biodiversity Action Plans (BAPs) and/or improving access to nature in areas deficient in accessible wildlife sites; and*

*c) Not adversely affect the integrity of European sites, and be resisted where they have significant adverse impact on European or nationally designated sites or on the population or conservation status of a protected species or a priority species identified in a UK, London or borough BAP.”*

2.8. Policy 5.3 of the London Plan states that:

*“Sustainable design and construction, suggests that London Boroughs should ensure future development meets the highest standards of sustainable design, including measures to conserve and enhance the natural environment, particularly in relation to biodiversity and green infrastructure”.*

### Revised Early Minor Alterations to the London Plan, October 2013

2.9. The Revised Early Minor Alterations to the London Plan<sup>7</sup> makes reference to the NPPF within the revised supporting text to Policy 7.19 of the adopted London Plan.

### Draft Further Alterations to the London Plan, 2014

2.10. On 15 January 2014, the Mayor published Draft Further Alterations to the London Plan (FALP) for consultation, it had been prepared primarily to address key housing and employment issues

<sup>6</sup> Mayor of London (2011) *London Plan, Spatial Development Strategy for Greater London*. July 2011.

Available from <http://www.london.gov.uk/priorities/planning/londonplan>

<sup>7</sup> Greater London Authority (October 2013): ‘*The London Plan Spatial Development Strategy for Greater London Revised Early Minor Alterations Consistency with the National Planning Policy Framework*’



emerging since the publication of the London Plan in July 2011. The FALP also set out to develop the London Plan as the 'London expression of the National Planning Policy Framework.

2.13. Relevant policies include Policy 7.19 'Biodiversity and Access to Nature':

- *'Planning Decisions C: Development Proposals should:*
  - a) *wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity;*
  - b) *prioritise assisting in achieving targets in biodiversity action plans (BAPs), set out in Table 7.3' (see above) 'and/or improving access to nature in areas deficient in accessible wildlife sites;*
  - c) *not adversely affect the integrity of European sites and be resisted where they have significant adverse impact on European or nationally designated sites or on the population or conservation status of a protected species or a priority species or habitat identified in a UK, London or appropriate regional BAP or borough BAP'.*

**The Mayor's Biodiversity Strategy: Connecting with London's Nature, 2002**

2.11. The Mayor's Biodiversity Strategy<sup>8</sup> complements the London Plan. It aims to protect and enhance the natural habitats of London. The strategy identifies the key issues, and outlines how biodiversity in London can be maintained and enhanced. Relevant policies within the Biodiversity Strategy on protecting London's biodiversity include:

- Policy 1 - "*The Mayor will work with partners to protect, manage and enhance London's biodiversity*";
- Policy 5 - "*The Mayor will seek to ensure that opportunities are taken to green the built environment within development proposals and to use open spaces in ecologically sensitive ways. This is particularly important in areas deficient in open spaces and in areas of regeneration*"; and
- Policy 11 - "*The Mayor is committed to increasing the funding for biodiversity projects in London, and wishes to ensure that major new development projects include provision for biodiversity*".

## **Local Planning Policy**

2.12. The London Borough of Barnet's (LBB) Local Plan comprises the Core Strategy and Development Management Policies documents, which were adopted by the Council on 11<sup>th</sup> September 2012.

**Adopted Local Plan - Core Strategy DPD (2012)**

2.13. The Local Plan has replaced policies in the Unitary Development Plan (2006) with the exception of 13 'saved' policies for Brent Cross Cricklewood: relevant saved policies are detailed below.

2.14. The Core Strategy<sup>9</sup> discusses LBB's aims in reference to biodiversity and green infrastructure under Policy CS7: Enhancing and protecting Barnet's open spaces, which states that the Council will be "*protecting existing Sites of Importance for Nature Conservation and working with our partners including the London Wildlife Trust to improve protection and enhancement of biodiversity in Barnet*" and "*ensuring that development protects existing site ecology and*

<sup>8</sup> Mayor of London, *The Mayor's Biodiversity Strategy, 2002*

<sup>9</sup> London Borough of Barnet (2012) Adopted Local Plan – Core Strategy DPD. Available at:

[http://www.barnet.gov.uk/info/940354/adopted\\_local\\_plan-core\\_strategy\\_dpd/1004/adopted\\_local\\_plan-core\\_strategy\\_dpd](http://www.barnet.gov.uk/info/940354/adopted_local_plan-core_strategy_dpd/1004/adopted_local_plan-core_strategy_dpd)

*makes the fullest contributions to enhancing biodiversity, both through on-site measures and by contribution to local biodiversity improvements.”*

#### Adopted Local Plan - Development Management Policies DPD

- 2.15. The LBB Development Management Policies<sup>10</sup> (DPD) Policy DM01 f) states that *“Development proposals for lighting schemes should not have a demonstrably harmful impact on residential amenity or biodiversity”* and j) details *“development proposals will be required to include hard and soft landscaping”* that *“ vi. contributes to biodiversity including the retention of existing wildlife habitat and trees”* and *“vii. adequately protects existing trees and their root systems”*.

#### London Borough of Barnet Unitary Development Plan (2006)

- 2.16. The London Borough of Barnet Unitary Development Plan<sup>11</sup> (UDP) was adopted on 18 May 2006 and sets out a framework of policies relating to environmental considerations during the planning process. In May 2009, the Government Office for London, under the direction of the Secretary of State directed the council to save certain policies within its adopted May 2006 UDP and delete others, to be replaced by policies within Barnet’s Local Plan. The Local Plan has replaced policies in the Unitary Development Plan (2006) with the exception of a number of "saved" policies for Brent Cross Cricklewood.
- 2.17. Saved policies within sections particularly relevant to ecology and biodiversity are detailed below and are taken from Chapter 3: Environmental Resources and Chapter 5: Open Environment.
- 2.18. Policy ENV6 of the Barnet UDP (related to light pollution) states that: *“proposals for lighting schemes will be permitted provided that they do not have a demonstrably harmful impact on residential amenity, on wildlife interests and on the environment generally. Where necessary the council will require developers to take measures to control the level of illumination and spillage of light and may restrict hours of usage”*.
- 2.19. Saved Policy O13 of the UDP details *“council will oppose development proposals which would cause demonstrable harm to the character or nature conservation value of a Green Corridor. The council may also seek enhancements of the nature conservation value of a corridor through planning obligations attached to relevant planning permissions.”*
- 2.20. Policy O17 of the UDP states that: *“where proposed development could have an adverse impact on areas of nature conservation value, including habitats, statutory protected species of wildlife and biodiversity action plan species, an ecological impact statement will normally be required to be submitted with planning applications.”*

## Biodiversity Action Plans

### UK Post-2010 Biodiversity Framework

- 2.21. The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'<sup>12</sup> covers the period from 2011 to

<sup>10</sup> London Borough of Barnet (2012) Development Management Policies. Available at: [http://www.barnet.gov.uk/downloads/download/1003/adopted\\_local\\_plan-development\\_management\\_policies\\_dpd](http://www.barnet.gov.uk/downloads/download/1003/adopted_local_plan-development_management_policies_dpd)

<sup>11</sup> London Borough of Barnet (2006) Unitary Development Plan. Available at: [http://www.barnet.gov.uk/info/930058/unitary\\_development\\_plan/701/unitary\\_development\\_plan](http://www.barnet.gov.uk/info/930058/unitary_development_plan/701/unitary_development_plan)

<sup>12</sup> JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). 2012. UK Post-2010 Biodiversity Framework. July 2012. Available from: <http://jncc.defra.gov.uk/page-6189>

2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)<sup>13</sup>. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

- 2.22. Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats and Species of Principal Importance in England (listed under Section 41 of the NERC Act 2006 and updated in 2010<sup>14</sup>). For the purpose of this updated Ecological Appraisal, habitats and species listed under Section 41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under Section 41.
- 2.23. From the findings of the updated Ecological Appraisal undertaken in 2014 and further surveys, the following species listed under Section 41 as a Species of Principal Importance (SoPI) is considered to be of potential value on and immediately adjacent to the Site:
- Soprano pipistrelle bat *Pipistrellus pygmaeus*

### Local Biodiversity Action Plans (BAPs)

- 2.24. As part of the action plan process, local BAPs have been produced by most local councils across the UK. The Site is covered by the London BAP<sup>15</sup> whose targets are adopted by the London Borough of Barnet. The London BAP sets out the framework for the protection, conservation and enhancement of wildlife within London. We understand that this is currently no BAP for London Borough of Barnet itself.
- 2.25. From the findings of the updated Ecological Appraisal undertaken in 2014 and further survey work, the following London Species Action Plans (SAP) are considered relevant:
- Bats Species Action Plan (SAP) London BAP<sup>16</sup>.
- 2.26. In addition, '*Built Structures*' are considered to be '*Other Important Habitats*' under the London BAP, due to their importance as a habitat type to bat species within the urban environment.

<sup>13</sup> HMSO (1994) Biodiversity The UK Action Plan

<sup>14</sup> NERC Section 41 'Habitats and Species of Principal Importance' (2010):

<http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

<sup>15</sup> The London Biodiversity Partnership BAP: [http://ukbars.defra.gov.uk/archive/plans/London\\_BAP/London\\_BAP\\_plans.asp?London\\_BAPLondon\\_BAP=%7B5215DDB3%2DA164%2D46E3%2DA8E3%2DC8858A6F54AC%7D&CO=](http://ukbars.defra.gov.uk/archive/plans/London_BAP/London_BAP_plans.asp?London_BAPLondon_BAP=%7B5215DDB3%2DA164%2D46E3%2DA8E3%2DC8858A6F54AC%7D&CO=)

<sup>16</sup> London Biodiversity Partnership: <http://www.lbp.org.uk/londonpriority.html#bats>

### 3. Methodology

- 3.1. Planning Condition 27.14 of the 2014 Permission indicates the requirement for bat roost surveys to be undertaken *“no more than six months before demolition of any building or felling of any tree identified in the Revised Environmental Statement as having the potential to be used as a bat roost, a check survey involving detailed inspection of the building or tree concerned shall be undertaken. Should bats be identified, this shall be reported to the LPA, together with proposed mitigation measures. The demolition or removal shall not be undertaken until any necessary bat handling licence has been obtained and the LPA has approved the mitigation measures. The mitigation measures shall be undertaken in accordance with the bat licence.”*
- 3.2. In order to discharge this planning condition it is necessary to first establish where bat roost potential exists within the Site, to determine the impact upon bats from the removal of trees and buildings within each phase of the works.

#### Built Structure and Tree Inspections

- 3.3. As part of the updated Ecological Appraisal undertaken in May 2014, the potential of all built structures and trees on the Site to support roosting bats was assessed by an external ground based inspection (to the limit that full visual access allowed) based on current Bat Conservation Trust best practice guidelines (2012), under conditions considered appropriate for survey.
- 3.4. The inspections involved looking for evidence of roosting bats, such as:
- Bat droppings;
  - Insect wings under feeding roosts;
  - Staining from urine or from the oil on bats’ fur around well-used roosting places or access points; and
  - Actual bat presence.
- 3.5. The potential for a structure or tree to support a bat roost was based on Bat Conservation Trust guideline criteria and on the features described above, or evidence that was visible during the inspection. Other factors that may influence roost establishment such as aspect, shading, disturbance, lighting and the presence of features that could be used by bats for commuting and foraging were also considered.

#### Tree Climbing Surveys

- 3.6. Trees recorded to have bat roost potential features (**Figure 1**) from the ground-based inspections to be impacted upon by Phase 1A (North) were then subject to climbing surveys for close-up inspection of the recorded features. The inspection involved systematically climbing and inspecting features known to provide tree roosting opportunities for bats, such as: snapped limbs; rot / woodpecker holes; hollows / cavities; loose bark; cracks / splits and fissures; and dense ivy.
- 3.7. A detailed inspection of those features with the potential to provide bat roosting opportunities was undertaken to search for evidence of roosting bats, using an endoscope and torch where appropriate. The inspection involved looking for evidence of roosting bats, such as:

- bat droppings;
- staining from urine or from the oil on bats' fur around well-used roosting places or access points;
- scratch marks; and
- actual bat presence.

### Building Bat Emergence / Re-entry Surveys

- 3.8. Those buildings with bat roost potential indicated in the updated Ecological Appraisal (**Figure 1**) and to be impacted by Phase 1A (North) then underwent emergence and re-entry bat surveys, based on the current good practice guidelines (Hundt, 2012); these buildings were within the Clitterhouse Farm building complex only (B4 on Figure 1).
- 3.9. The dusk emergence surveys commenced 30 minutes prior to sunset and extended 1.5 hours thereafter. The dawn re-entry surveys commenced 1.5 hours before sunrise and was completed at sunrise. A record of any bats emerging and re-entering the buildings at Clitterhouse Farm (see **Figure 2**) and all bat activity (i.e. commuting, foraging, social calls) during the surveys was noted and mapped (see **Figures 3 & 4**).
- 3.10. Time expansion (Pettersson D240X) bat detectors were used by all surveyors and data was recorded onto solid state MP3 recorders. Recorded bat calls were later analysed using BatSound 4.2 software, where required.
- 3.11. Any bats observed or heard were recorded. Information included:
- time;
  - emergence or re-entry points;
  - direction of flight;
  - use of landscape;
  - flight characteristics;
  - size;
  - height; and
  - behaviour.
- 3.12. Between two and four surveyors undertook each survey (see **Figure 1**), depending on the building to be surveyed and whether the building required a dusk or a dawn survey, ensuring that all low / medium buildings had two surveys and all high / known roost sites had three surveys (including both a dusk survey and a dawn survey not in 24 hours, in accordance with best practice guidelines).
- 3.13. All surveys were undertaken in appropriate weather conditions<sup>17</sup> and within the recognised bat active season (May to September inclusive). **Table 1** below provides a summary of the bat surveys undertaken.

<sup>17</sup> Hundt (2012). Bat Surveys – Good Practice Guidelines. Bat Conservation Trust, London

Table 1: Dates and weather conditions of emergence/re-entry and activity bat surveys

Survey	Date	Dusk/Dawn Time	Time start/end (GMT+1)	Weather conditions	Temp at start	Temp at End
Dusk Emergence	26.06.14	21.21	20.51/22.21	Rain showers, 100% cloud	21.5°C	19.6 °C
Dawn Re-entry	27.06.14	4.45	3.15/4.45	Light rain clearing to dry and still	18°C	17.2 °C
Dusk Emergence	02.07.14	21.20	20.50/22.20	Light breeze, humid, 100% cloud	22 °C	19.5 °C
Dawn Re-entry	03.07.14	4.49	2.52/4.49	Dry, still 40% cloud	20.7 °C	14.8 °C
Dusk Emergence	30.07.14	20:53	20.23/22.23	Warm, dry and clear 10% cloud	22°C	18 °C
Dawn Re-entry	31.07.14	05.21	03.51/05.21	Cool, dry and clear 10% cloud	14°C	11 °C
Dusk Emergence	13.08.14	20.27	19.57/21.57	Warm, slight breeze 80% cloud	18.9°C	17.3 °C
Dusk Emergence	20.08.14	20.13	19.43/21.43	Dry, warm but rapidly cooling, 50% cloud	18°C	13 °C

## Limitations

- 3.14. Bats are highly mobile and invariably move between roost sites, therefore any bat surveys will only provide a snapshot of how bats are using a particular area at that time. However, the emergence and re-entry surveys, although carried out on particular buildings, were all carried out within a small survey area and therefore activity peaks around other buildings during dusk and dawn would have been observed and noted, alongside activity around the buildings due for survey.
- 3.15. Where pipistrelle bats were recorded echolocating at approximately 50khz, given that both common and soprano pipistrelle bats can echolocate at this frequency, an unidentified pipistrelle sp. classification was assigned.

## 4. Results

### Bat Survey

#### Desk study

- 4.1. A data search was undertaken during the updated Ecological Appraisal (Waterman 2014 ref: EED13492\_1021\_R\_4\_2\_5), whereby information on bat records within 2km of the centre of the Site was requested from Greenspace information for Greater London (GiGL)<sup>18</sup>. All bat species are listed as priority species under the London BAP and soprano pipistrelle is listed as a SoPI under Section 41 of the NERC Act. These records are summarised in **Table 2** below.

Table 2: Summary of bat records within 2km of the Site

Species	Number of records within 2km of the centre of the Site	Closest record to site (m) & year recorded
Common pipistrelle	29	1074 North (2006)
Noctule <i>Nyctalus noctula</i>	13	1357 West (2008)
Leisler's <i>Nyctalus leisleri</i>	8	1357 West 04/06/2008
Soprano pipistrelle	24	1357 West 04/06/2008
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	8	1357 West 04/06/2008
Pipistrelle species bat	10	1864 West (2008)
Myotis sp	2	1978 West (2008)

#### Built Structure and Tree Inspections

- 4.2. The updated Ecological Appraisal classified a number of trees and buildings on the Site as having between low and high bat roost potential, see Figure 1. In addition to this, there is a known roost in the adjoined building B2 / B3<sup>19</sup>.

#### Tree climbing surveys

- 4.3. The tree climbing surveys recorded low bat roost potential in three trees highlighted in the Ecological Appraisal of the Site as having potential and to be removed in Phase 1 A North. These trees are the western-most poplar in G2, T1 and T9 (see **Appendix A** for full results).
- 4.4. In addition a tree on the Site boundary was confirmed to be removed (T299 which is adjacent to T5), that was outside the original survey scope was recorded as having low bat roost potential.
- 4.5. There was also limited visual access to the entire of G2 due to safety / access issues and proximity to the River Brent and its sloping banks, so while no features were recorded during the climbing surveys, suitable access was not available to rule them out.

<sup>18</sup> Greenspace information for Greater London (30<sup>th</sup> June 2014); 'An Ecological Data Search for Brent Cross'

<sup>19</sup> The Ecology Consultancy (2011) Bat Survey Report

- 4.6. None of the trees recorded evidence of bats having been present (lack of signs or bats themselves). However, the features did still provide limited opportunities for roosting bats, so their presence in the future could not be ruled out.
- 4.7. Subsequently T1 was confirmed as a tree to be retained and will need to be considered no further in this report. This leaves the group of trees G2, T9 and T299 as the trees to be removed in Phase 1A (North) with low bat roost potential.
- 4.8. The three trees / tree groups to be removed with low bat roost potential do not require further survey in the form of emergence and re-entry surveys.

### Bat emergence and re-entry surveys

- 4.9. The emergence and re-entry survey effort and schedule subsequent to the updated Ecological Appraisal and tree climbing surveys is detailed in Table 2 below. Buildings B2 – B8 comprise the Clitterhouse Farm building complex to the south-west of the Site (the ‘Survey Area’) and are due to be refurbished within Phase 1A (North).

Table 3: Bat emergence and re-entry survey effort and schedule

Building	Bat roost potential	Survey 1	Survey 2	Survey 3 (if required)
<b>B2 / B3</b>	Known roost	Dusk – 26/06/14	Dawn – 31/07/14	Dusk – 13/08/14
<b>B4</b>	Medium	Dusk – 02/07/14	Dawn – 31/07/14	N/A
<b>B5</b>	High	Dusk – 02/07/14	Dawn – 31/07/14	Dusk – 20/08/14
<b>B6</b>	High	Dawn – 03/07/14	Dusk – 30/07/14	Dusk – 20/08/14
<b>B7</b>	Medium	Dawn – 03/07/14	Dusk – 30/07/14	N/A
<b>B8</b>	High	Dawn – 27/06/14	Dusk – 30/07/14	Dusk – 20/08/14

- 4.10. The following summary of the bat survey results should be read in conjunction with **Figure 1 (E13492-102\_GR\_EC\_4A)**, **Figure 2 (E13492-102\_GR\_EC\_5A)** and **Figure 3 (E13492-102\_GR\_EC\_4A)**.

### Dusk Emergence Survey – 26/06/2014

- 4.11. The first bat recorded during the dusk emergence survey of **B2/B3** (known common pipistrelle roost) was a faint common pipistrelle call (the bat wasn't seen) at 21.37, 16 minutes after sunset. It was followed two minutes later by the emergence of four common pipistrelle bats from B2/B3 itself, in the vicinity of where the buildings are joined, at roof level, on the northern aspect.
- 4.12. In total, 13 recordings of common pipistrelle were made between 21.37 and 22.05, with a concentration of foraging activity around the northern and eastern sides of B2/B3 around the buildings and scattered broadleaved trees.



#### Dawn Re-entry Survey – 27/06/2014

- 4.13. Common pipistrelle bats were recorded foraging around **B8** between 4.02 and 4.15, up to half an hour before sunrise and seven bats being recorded in total. No bats were recorded re-entering B8 during this survey.

#### Dusk Emergence Survey – 02/07/2014

- 4.14. The first bat recorded during the dusk emergence survey of **B4** and **B5** was a common pipistrelle at 21:44 (dusk was 21:20, therefore this bat is likely to be roosting close by) which was recorded commuting over the Survey Area from south (residential area) to north (towards scattered trees in Clitterhouse Park).
- 4.15. In total ten bats were recorded, either common pipistrelle or unknown due to the brevity of their call/s. There was a low level of foraging during this survey and most bats appeared to be commuting over the Survey Area. No bats were recorded emerging during this survey from any of the buildings in the Survey Areas.

#### Dawn Re-entry Survey – 03/07/2014

- 4.16. Five bats were recorded during the dawn survey of **B6 and B7**, the first bat was recorded at 2.52 when the survey began and like the other calls recorded that night, emitted a very brief call and was not seen.
- 4.17. Bat activity during the survey finished at 4:12am with a common pipistrelle recorded foraging over the trees to the north of the Survey Area, 37 minutes before daylight. No bats were recorded re-entering any of the buildings in the Survey Area.

#### Dusk Emergence Survey – 30/07/2014

- 4.18. This dusk emergence survey covered buildings **B6, B7 and B8**. The first bat was recorded at 21:25, 28 minutes after sunset, which was a common pipistrelle foraging over B8.
- 4.19. In total 27 bats were recorded making multiple passes as they foraged around the buildings in the Survey Area, however no bats were recorded emerging from the buildings during the survey.

#### Dawn Re-entry Survey – 31/07/2014

- 4.20. During the dawn survey of **B2/B3, B4 and B5** there were records of 15 bats, predominantly common pipistrelle, foraging around the buildings until the last bat passed commuting at 4:48 from north to south (the residential area), 24 minutes before dawn. No bats were recorded re-entering the buildings in the Survey Area.

#### Dusk Emergence Survey – 13/08/2014

- 4.21. The first bats recorded during the dusk emergence survey of **B2/B3** were two common pipistrelle bats at 20:46, 19 minutes after sunset, which were recorded commuting over the Survey Area. No bats were recorded emerging from the buildings in the Survey Area during this survey.

- 4.22. In total 17 common pipistrelle bats were recorded during this dusk emergence survey, foraging almost continuously from 20:54 to 21:25 around the buildings and scattered broadleaved trees on and adjacent to the Survey Area.

#### Dusk Emergence Survey – 20/08/2014

- 4.23. During the dusk emergence survey of **B5, B6 and B8**, one common pipistrelle bat was recorded emerging from B2/B3 at 20:41, 28 minutes after sunset, from the area where the buildings joined and there are missing roof tiles.
- 4.24. There were also records of 22 common pipistrelle bats foraging in and around the buildings from 20.39 to 21:15. The bat passes then become less frequent and sightings dropped off, indicating the bats were moving off to forage elsewhere.

## 5. Conclusions & Recommendations

- 5.1. Bat surveys undertaken at the Site, to discharge Planning Condition 27.14 under the 2014 Permission in relation to the impacts of the Development upon bat species within Phase 1A (North), recorded a roost to be present. One species of bat, the common pipistrelle, was confirmed roosting in building B2 / B3 at roof level, where the buildings joined, on two of the bat surveys; the emergence surveys on 26<sup>th</sup> June 2014 and 20<sup>th</sup> August 2014. A total of four bats were observed leaving on the 26<sup>th</sup> June and one bat was observed leaving 20<sup>th</sup> August 2014.
- 5.2. No trees were recorded as having bat roost potential of moderate potential or above. The three trees / tree groups to be removed in Phase 1A (North) with low bat roost potential (group G2, T299 and T9) do not require further survey in the form of emergence and re-entry surveys, but will need to undergo sensitive felling under the supervision of a Natural England bat licensed ecologist.
- 5.3. As B2/B3 is a confirmed common pipistrelle roost, a Natural England development licence in relation to bat species should be sought before any works are undertaken to any of the buildings in the Survey Area. This applies to all buildings, not just B2/B3, as the disturbance to bats from demolition or significant renovation of adjacent buildings, not only roost buildings, is highly likely.
- 5.4. The licence would comprise working methods to ensure no bats are disturbed or harmed during work to buildings in the Survey Area and also set out mitigation measures to ensure the conservation status of the bats is not impacted upon:
  - Working methods are likely to include timing works outside of the period bats are most likely to be using the roost, watching brief supervision of the removal of suitable bat roost features from B2/B3 and tool box talks to contractors working within the Survey Area in case bats are discovered.
  - Mitigation measures are likely to include the provision of alternative roosting opportunities in retained trees and buildings in the vicinity before/during works, a controlled lighting scheme for the Site (especially where the exit and entrance of roosting bats are located) and the provision of roosting opportunities in B2/B3 once works have been completed.
- 5.5. A low number of common pipistrelle passes were also recorded within / in the vicinity of the Survey Area, on each of the surveys, both foraging around the scattered broadleaved trees and buildings and commuting across the Site. The timing of a number of commuting bats and the similar directions they were travelling in both at dusk and dawn indicate a roost of common pipistrelles in the residential estate to the south of the Survey Area that likely utilise the buildings on Site for additional roosting opportunities and the wider area for foraging and to commute across to other foraging / roosting sites.
- 5.6. To minimise impacts to foraging and commuting bats within the adjacent Clitterhouse Playing Fields and any bats passing through the Survey Area during the refurbishment works, it is recommended that night time working should be avoided to prevent disturbance from light spill. In the event that night time work is necessary, with due regard for health and safety, lighting should be kept to a minimum and light spill to the adjacent habitats avoided.
- 5.7. The design and location of permanent lighting for the refurbishment of the Survey Area and adjacent habitat in Clitterhouse Playing Fields should be considerate to foraging and

commuting bat species and not exceed that at present. It is recommended that lighting levels should be designed so that they meet, but do not exceed, relevant design guidelines, with an appropriate allowance for maintenance factors. Such a specification would ensure that light spill is suitably controlled, minimising any lighting to the adjacent Site of Importance to Nature Conservation (SINC) used by foraging bats, whilst providing a safe night time environment.

- 5.8. In line with local planning policy, it is recommended that any landscaping proposals for the Site should include the use of native species to provide foraging opportunities and green links to be used as commuting corridors for bats utilising the surrounding area.
- 5.9. It is also recommended that the provision of suitable bat boxes are included as part of the Site to enhance roosting opportunities for bats. These could be erected on any retained mature trees within landscape proposals or on new/retained buildings.
- 5.10. Should a period of 18 months or more pass from the dates on which the surveys detailed within this report were undertaken, prior to the commencement of the Scheme, these surveys may require updating.

## **FIGURES**

Figure 1: Bat Roost Potential Survey of Structures Results EED13492-101\_GR\_EC\_8A

Figure 2: Building Emergence and Re-entry Bat Survey Results (EED13492-101\_GR\_EC\_4A)

Figure 3: Bat Activity Recorded During Emergence Surveys on Buildings (EED13492-101\_GR\_EC\_5A)

Figure 4: Bat Activity Recorded During Re-entry Surveys on Buildings (EED13492-101\_GR\_EC\_6A)





## APPENDIX



## **A. Tree climbing results tables**

## UK and Ireland Office Locations

