

**LEVITT BERNSTEIN**

# **GARAGE BLOCK AND CAR PARK ON IVY ROAD, N14 4LN**

Ecological Assessment

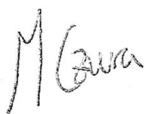
JANUARY 2022



# Garage Block and Car Park on Ivy Road, Enfield, N14 4LN


## Ecological Assessment

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## VERSION CONTROL

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# 1 INTRODUCTION

## 1.1 Background

Arcadis Consulting (UK) Limited (Arcadis) was commissioned by Levitt Bernstein on behalf of Enfield Council (the Client) to undertake an ecological assessment to support the feasibility for potential development at two sites adjacent to Ivy Road, around N14 4LN. The Northern Site mainly comprising hardstanding and a garage block, hereafter referred to as the “Northern Site” and the Southern Site comprising of a garage block, car park and managed grassland, hereafter referred to as the “Southern Site”. Together, both sites are referred to as the ‘Sites’.

The objective of this report is to identify potential ecological development constraints due to current ecological conditions on site as based on the findings of a desk study and ecological constraints survey. The report outlines the ecological constraints associated with the Sites with regard to biodiversity legislation and policy and provides advice on mitigation and enhancement opportunities, including requirement for any further assessment or licensing, if necessary.

## 1.2 Site Location & Setting

Both sites are located at the eastern end of Ivy Road in Enfield London Borough Council (Enfield Council) around the postcode N14 4LN.

The Northern Site is centred at grid reference of TQ 29638 94726. The Northern Site measures approximately 0.035ha in area and comprised mainly hardstanding with a brick-built garage building. There are trees on the Northern Site border with branches overhanging the site with a small patch of grassland located on the western boundary.

The Southern Site is centred around grid reference TQ 29575 94676. The Southern Site measures approximately 0.080ha in area and comprised mainly hardstanding car park with a small patch of managed grassland and a block of garages is also present along the eastern border along with a line of scrub behind.

For both Sites, the immediate surrounding residential area is characterised by terraced housing with detached and semi-detached housing. To the south of the Southern Site outside of the boundary is an area of allotment gardens, with trees overhanging into the Southern Site.

Both site boundaries for assessment are presented in Figure 2.

## 2 METHODOLOGY

### 2.1 Desk Study

Desk-based ecological information was collated from multiple sources.

The Multi-Agency Geographic Information for the Countryside (MAGIC) website<sup>1</sup> was used to search for any statutory or non-statutory designated sites of nature conservation importance within a specific radius of the Sites boundaries, as follows:

- Special Protection Areas (SPA) or Ramsar sites (5km radius);
- Special Areas of Conservation (SACs) (5km radius);
- Sites of Special Scientific Interest (SSSI) (2km radius);
- National Nature Reserves (NNR) (2km radius);
- Local Nature Reserves (LNR) (2km radius); and
- Woodlands registered on the Ancient Woodland Inventory (AWI) (2km radius).

Records of protected or otherwise notable species of conservation concern (that the Sites have the potential to support) located within 1km of the Sites boundaries were obtained from the following sources:

- National Biodiversity Network Atlas<sup>2</sup>; and
- London Biodiversity Action Plan (BAP) Priority Species List<sup>3</sup>.

The locations of trees with Tree Preservation Orders (TPOs) were obtained from the search tool on the Enfield Council website<sup>4</sup>.

In addition, the locations of Sites of Importance for Nature Conservation (SINCs) were obtained from Greenspace Information for Greater London (GiGL)<sup>5</sup> free source data. No citations for these sites were obtained other than where information was publicly accessible.

SINCs fall into three sub designations:

- Sites of Metropolitan Importance for Nature Conservation (SMINCs);
- Sites of Borough Importance for Nature Conservation (SBINCs) Grades I and II; and
- Sites of Local Importance for Nature Conservation (SLINCs).

Waterbodies located within 250m of the Sites identified from Ordnance Survey mapping were assessed with regard to their connectivity to the Sites and their potential suitability for supporting a population of breeding great crested newt (*Triturus cristatus*).

### 2.2 Field Survey

This survey was conducted by Ewan Gibson (Arcadis Consultant Ecologist) and Madeleine Czura (Arcadis Graduate Ecologist) on 18 January 2022. Habitats were classified according to their JNCC Phase 1 habitat categories (JNCC 2010)<sup>6</sup> and are presented on Figure 2. Plants names follow Stace (2019)<sup>7</sup>.

### 2.3 Limitations

This report has been prepared for Levitt Bernstein in accordance with the terms and conditions of appointment. Arcadis cannot accept any responsibility for any use of or reliance on the contents of

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<sup>1</sup> MAGIC (2002). MAGIC Map Search. [online] Available at <http://magic.defra.gov.uk> [Accessed January 2022]

<sup>2</sup> National Biodiversity Network <https://nbn.org.uk/> [Accessed January 2022]

<sup>3</sup> Greater London Authority (2019), London Priority Species, [Available online] [London Priority Species | London City Hall](#) [Accessed January 2022]

<sup>4</sup> Enfield Council (2022). Find my Nearest. <https://new.enfield.gov.uk/find-my-nearest/#7> [Accessed January 2022]

<sup>5</sup> Greenspace Information for Greater London [http://discover-london.gigl.org.uk/?theme=SITES\\_TO\\_VISIT](http://discover-london.gigl.org.uk/?theme=SITES_TO_VISIT) [Accessed January 2022]

<sup>6</sup> Joint Nature Conservation Committee (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit*

<sup>7</sup> Stace, C. (2019). *New Flora of the British Isles, Fourth Edition*. C&M Floristics, Stowmarket.

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This report has been compiled from a number of sources, which Arcadis believes to be trustworthy. However, Arcadis is unable to guarantee the accuracy of information provided by others. The report is based on information available at the time. Consequently, there is a potential for further information to become available, which may change this report's conclusion and for which Arcadis cannot be responsible.

The Site surveys were completed in January 2022 and thus is limited by only reflecting species seen during the winter season. It is recommended that an update survey is carried out at a more optimal time of year to confirm the findings of the January 2022 survey.

## 3 SURVEY RESULTS

### 3.1 Reporting Outline

The results of the desk study and ecological constraints survey are described below, with Sites or features of particular nature conservation interest detailed as appropriate.

Supporting information to be read in conjunction with the results and subsequent discussion are as follows:

- Table 1: Ecological Constraints and Mitigation Summary Table;
- Table 2: Site photographs (at the end of the report); and
- Figure 1: Statutory Designated Sites within 2km/5km of the Sites centre (at the end of the report);
- Figure 2: Phase 1 Habitat Map (with target notes) (at the end of the report);
- Figure 3: SINCS in Enfield Council (at the end of the report).

Only information potentially relevant to the development of the Sites is included within the report other information is appended as follows:

- Appendix A: Desk Study Results;
- Appendix B: Bat Habitat Suitability Assessment and London Bat Population Status;
- Appendix C: Selected Legislation, Nature Conservation Status and Policy.

### 3.2 Desk Study Results

Only desk study results that are potentially relevant to the Sites are presented within the report. Detailed status and protections conferred by the relevant designations below are presented in Appendix A and Figure 1. The relevant information is summarised below.

- No statutory designated sites identified within the vicinity of the Sites, had the potential to be significantly impacted by development on the Sites (See Appendix A). The closest statutory designated site was Oak Hill Wood LNR including Oakhill Park Woods Ancient woodland located approximately 1.6km north west.
- A number of non-statutory designated sites were present, the closest being Oakwood Park, Site of Borough Importance for Nature Conservation (SBINC), approximately 0.4km north east of the Sites, see Figure 3 for the location of SINCS.
- Recreational pressures on designated sites have been considered, however due to the size of both the Sites and the limited number of units that the developable area could accommodate, additional recreational pressures are considered to be negligible;
- No trees subject to TPOs were present within any of the study areas; however, trees within the wider vicinity of both sites (140m north-west) were protected by TPOs, this included along Chelmsford Road (LBE order no. 28), a potential route to access the Sites.
- There were records of Himalayan Balsam (*Impatiens glandulifera*) and Japanese Knotweed (*Fallopia japonica*) within 1km of the Sites, both species are non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)<sup>8</sup>. In addition, records of Cherry Laurel (*Prunus laurocerasus*), False-acacia (*Robinia pseudoacacia*) and Evergreen Oak (*Quercus ilex*) were also present within 1km of the Sites, all of which are listed on the London Invasive Species Initiative (LISI)<sup>9</sup>: managed by the London Biodiversity Partnership;
- There were records of hedgehog (*Erinaceus europaeus*) located within 1km of both Sites, which is a priority species in the London BAP and a Species of Principle Importance under Section 41 (S41 species) of the Natural Environment and Rural Communities Act 2006;
- There were many records of London BAP and S41 bird species within 1km of the Sites, notable species included the house sparrow (*Passer domesticus*) and wood pigeon (*Columba palumbus*),

<sup>8</sup> Anon (1981) Wildlife and Countryside Act. HMSO, London.

<sup>9</sup> London Invasive Species Initiative, available at: <http://www.londonisi.org.uk/what-and-where/species-of-concern/> [Accessed January 2022]

along with a number of other species, including grey heron (*Ardea cinerea*) and blackbird (*Turdus merula*);

- There were records of fox (*Vulpes vulpes*) within 1km of the Sites and, although not protected for conservation value, foxes are protected from inhumane killing or injury by the Wild Mammal Act (1996)<sup>10</sup>;
- There were records of stag beetle (*Lucanus cervus*) within 500m of Sites, these are priority species in the London BAP and an S41 species under the Natural Environment and Rural Communities Act 2006;
- There were no relevant records of other protected or notable bats, reptiles, amphibians or of badger (*Meles meles*).
- No waterbodies or ponds were identified within 250m of either Site with connectivity to the Sites, but it is possible that nearby residential gardens and allotments contain small ponds with suitable habitat for amphibians.

### 3.3 Site Overview

The Northern Site measures approximately 0.035ha in area and comprised mainly car park with a single-story garage block adjacent to the northern boundary. A line of dense continuous scrub (providing bird nesting potential) and Common Ivy (*Hedera helix*) ground cover was present. A single mature Ash tree (*Fraxinus excelsior*) was present immediately adjacent to the Northern Site with branches overhanging. Immediately adjacent to the Site was a small area of amenity grassland containing other mature trees and introduced (non-native) shrubs. Surrounding the Northern Site were residential buildings including flats and terraced housing.

The Southern Site measures approximately 0.080ha in area and comprised hardstanding concrete with some emergent vegetation, a patch of species poor semi-improved grassland and a block of garages. The garage block (B1) supported Common Ivy growth on the side and behind with bird nesting potential. The semi-improved grassland provided reptile and amphibian potential, particularly considering the good habitat present in the adjacent allotments. A brick outbuilding adjacent to the site, bordering to the north of the semi-improved grassland, contained large Common Ivy growth on the roof with bird nesting potential, as well as crevices with potential entry points for bats.

The immediate surrounding residential area of both Sites was characterised by terraced housing with detached and semi-detached housing. The Southern Site was adjacent to allotment gardens with reptile and amphibian potential, while a number of broadleaved trees overhanging the Site boundary contained bird nesting potential.

No trees subject to TPOs were present within the Sites, however a number of trees within the wider vicinity of the Sites are protected by TPOs. This included along Chelmsford Road (LBE order no. 28) 140m to the north-west, a potential route to access the Sites.

### 3.4 Habitats

Phase 1 habitat categories and descriptions of these habitats are presented below, while the locations of these habitats are presented in Figure 2. Photographs are presented in Table 2.

#### 3.4.1 Northern Site

- **Hardstanding:** The majority of the Northern Site was formed of hardstanding, in the form of concrete, used as car parking in front of the garage block.
- **Buildings (garage block):** One single story, brick garage block (B3) consisting of twelve individual garages along the northern edge of the Site. The roof was constructed of corrugated fibreboard material and the wall of single-skin brick construction. Access for bats was present through multiple gaps where the roofing met the front wall. A large cover of Common Ivy on the roof provided bird nesting potential. There was no access to the north side of the building for survey.
- **Dense continuous scrub:** A line of dense continuous scrub was present in the north-east corner and on the northern boundary behind the garage block. Species present included Holly (*Ilex*

<sup>10</sup> Anon The Wild Mammal Act (1996). HMSO

*aquifolium*), Elder (*Sambucus nigra*), Common Ivy and other shrub species. This provided potential for nesting birds and foraging or hibernating areas for small mammals such as hedgehog.

- **Broadleaved scattered trees:** Four mature Ash trees (one with tree-tag 003169) and one mature Horse-chestnut tree (*Aesculus hippocastanum*) with nesting bird potential were located immediately adjacent to the Northern Site with branches overhanging the Site boundary. A further three trees (two Ash and one *Acer* sp.) were located on the amenity grassland in close proximity to the Site and also had nesting bird potential.
- **Adjacent amenity grassland:** A small area of heavily managed amenity grassland was present adjacent to the west of the Northern Site. This included an area of planted introduced shrubs including a Cotoneaster species, listed as a species of concern on the LISI and on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

### 3.4.2 Southern Site

- **Hardstanding:** Part of the Site was covered by hardstanding in the form of concrete. Low-growing vegetation grew through cracks. This area was a car park.
- **Buildings (garage block):** One single storey, brick garage block (B2) was present on the eastern edge of the Site. The roof was constructed of corrugated fibreboard material and the wall of single-skin brick construction. Access for bats was present through multiple gaps where the roofing met the front wall. A small amount of Common Ivy growth on the east wall provided some nesting bird potential.
- **Semi-improved grassland:** An area of species poor semi-improved grassland was present within the west of the Southern Site, bordered by allotment gardens and residential gardens outside the Site. The habitat was dominated by Perennial Rye-grass (*Lolium perenne*). Other species present included Dandelion (*Taraxacum officinale* agg.), Wild Teasel (*Dipsacus fullonum*) and Geranium (*Geranium* sp.). This provided habitat with reptile and amphibian potential.
- **Dense continuous scrub:** A line of dense scrub bordered the fence to the east and south of the Southern Site, this provided nesting bird potential. Species present included Bramble (*Rubus fruticosus* agg.), Mock-orange species (*Philadelphus* sp.), Forsythia (*Forsythia* sp.) and young Ash trees.
- **Broadleaved scattered trees:** Seven Ash trees were present adjacent to the southern boundary of the Southern Site. Furthermore, two Ash trees and two Maple (*Acer* sp.) trees were present along the eastern boundary. These trees had bird nesting potential and had branches overhanging the Site.

## 3.5 Protected and Notable Species

The following protected or notable species have the potential to be present on the Sites:

- **Nesting Birds:** There is the potential for nesting birds to utilise the trees and the buildings across both Northern and Southern Sites, including species listed on the London BAP and S41 species, such as house sparrow and wood pigeon;
- **Roosting Bats:** Features potentially suitable for roosting bats were recorded in garage blocks on both Northern and Southern Sites (B2 and B3). This is due to the dense Common Ivy located on the roof of Northern Site garage and gaps above the garage doors providing entry points in both garage blocks. The outbuilding (B1) adjacent to the semi-improved grassland in the Southern Site contained a potential entry point for bats and a growth of ivy overhanging into the site (TN4). The potential of these feature to support roosting bats was categorised as 'low' based on Bat Conservation Trust (BCT) guidance<sup>11</sup>. Bats are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), protected under the Conservation of Habitats and Species Regulations (2017) (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019)<sup>12</sup>, S41 species and London BAP species;

<sup>11</sup> Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

<sup>12</sup> Anon (2017). The Conservation of Habitats and Species Regulations (2017) (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019). HMSO, London.

- **Small Mammals:** Features including the dense scrub on both Northern and Southern Sites and semi-improved grassland on Southern Site are potentially suitable habitat for small mammals such as hedgehog. Hedgehog is a London BAP priority and S41 species;
- **Reptiles:** the allotments adjacent to the Southern Site may support common reptile species and the small area of grassland on the Southern Site has a low potential to support reptiles due to its apparent lack of active management and the presence of a brash pile at TN3; and
- **Amphibians:** no ponds were recorded present within 500m of the Northern or Southern Site with connectivity to the Sites and no records were returned by the desk study. The presence of great crested newt is unlikely; however, it is possible that the allotments adjacent to the Southern Site contain small ponds providing suitable habitat for amphibians. Other features on Southern Site including coppiced Ash TN1 and brash pile TN3 could provide refuge for amphibians.

### 3.6 Invasive Species

A strand of Wall Cotoneaster (*Cotoneaster horizontalis*) was found within the Southern Site (TN5) and adjacent to the Northern Site (TN6) during the surveys. This is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and is a LISI Species of Concern.

As this survey was completed in January 2022 during the winter season, some species of plant may not have been visible (e.g. if the dead stalks had been previously removed). A further survey during an optimal time of year (June-September) would confirm the presence or absence of other invasive species.

## 4 POTENTIAL ECOLOGICAL CONSTRAINTS

The potential ecological constraints and associated further works including mitigation is briefly presented below, further detail is presented in Table 1.

### 4.1 Habitats / Invasive Species

The habitats on Site were assessed as providing limited green infrastructure and consisted of no protected or notable floral species. As highlighted above, a small number of the trees immediately adjacent to both Northern and Southern Site had branches overhanging into the red line boundary, these would potentially be impacted by any building work on the Sites. No trees subject to a TPO were present within the Sites. Trees within the wider vicinity i.e. along the potential access route to the Site are protected by TPOs.

If any trees protected by TPO are affected by future development plans, consent will need to be sought from the local planning authority and any third-party property owner for any tree management or removal.

There will be some ecological benefit from the removal of non-native and invasive species listed on LISI and Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), in this case Cotoneaster found on the Southern Site (TN5) and adjacent to the Northern Site (TN6). Removal of this species is recommended to be undertaken by a specialist contractor as it is illegal to cause this plant to grow in the wild and, therefore any waste containing live plants or viable seeds must be treated as controlled waste.

An ecologist and arboriculturist should contribute to the evolution of any development and landscaping design for the Sites to minimise biodiversity loss and to advise upon the provision of appropriate green infrastructure.

### 4.2 Protected and Notable Species

The following notable or protected species have the potential to be impacted by the works:

- **Roosting Bats:** The garage blocks (B2 and B3) within the Sites and outbuilding (B1) adjacent to Southern Site were categorised with a low potential to support roosting bats. Should these structures be removed to facilitate new development it is recommended that a pair of suitably qualified ecologists undertake a single emergence survey to confirm the presence or absence of roosting bats.
- **Nesting Birds:** It is likely that nesting birds may utilise the Sites and, as such, clearance of vegetation should be avoided during the nesting bird season (March to August inclusive) or be undertaken following a pre-clearance nest check carried out by an ecologist no more than 48 hours before the commencement of works. Replacement nesting opportunities should be provided within any development.

## 5 LEGISLATION AND KEY POLICY REQUIREMENTS

Potentially relevant Legislation and Policy are presented in Appendix C and further detail with regard to surveys and mitigation required are presented in Table 1.

### 5.1 Relevant Legislation

Development of the Sites would require surveys and/or mitigation to fulfil legislative requirements for the following protected species:

- All bat species are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended)<sup>13</sup>, the Countryside and Rights of Way Act (2000)<sup>14</sup> and the Conservation of Habitats and Species Regulations (2017) (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019) and further survey with regard to bats is recommended;
- Wildlife and Countryside Act 1981 (as amended), for nesting birds: works should be timed to avoid the nesting bird season (March to August inclusive) or pre-clearance nest checks carried out by an ecologist would be required; and
- The Mammal Act (1996) for any mammal species e.g. grey squirrel, fox or hedgehog: works would need to ensure that there is no inhumane killing or injury of these species if present during any works, such as vegetation removal.

Full details of subsequent works required are included within section 6, Table 1 below.

### 5.2 Relevant Policy

Elements of national and London policies and plans have the potential to be applicable to any development of the Sites, these relate to:

- The safeguarding and replacement of trees to be lost to development;
- Creation and enhancement of biodiversity where possible;
- The material consideration of S41 species in design and planning such as, house sparrow and hedgehog;
- A plant listed on LISI and Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), Cotoneaster, was present on the Southern Site. While there is no legal requirement to remove this species it would be appropriate and beneficial to remove the stand as part of any future development. This should be carried out by a specialist contractor as the material would need to be treated as controlled waste.

An ecology report addressing the required design and construction mitigation for any proposed development would be required in support of planning.

### 5.3 Biodiversity Net Gain

In line with the 25 Year Plan for the Environment<sup>15</sup> and the National Planning Policy Framework 2021<sup>16</sup>, new development should identify and pursue opportunities for securing measurable net gains for biodiversity and for the wider environment.

The Environment Act 2021<sup>17</sup> introduces a mandatory requirement for biodiversity net gain for new developments, set at 10%, to ensure that new developments enhance biodiversity and create new green spaces for local communities to enjoy. Integrating biodiversity net gain into the planning system will provide a step change in how planning and development is delivered. There is also a strong focus on delivering environmental net gain. This would preferably be achieved on the Sites, however there

<sup>13</sup> Anon (1981) Wildlife and Countryside Act. HMSO, London.

<sup>14</sup> Anon (2000) Countryside and Rights of Way Act. HMSO, London.

<sup>15</sup> HM Government (2018) 'A Green Future: Our 25 Year Plan to Improve the Environment', HM Government, London.

<sup>16</sup> MHCLG (2021) National Planning Policy Framework

<sup>17</sup> Department for Environment, Food & Rural Affairs (2021): *Environment Act 2021*. [online] Available at: [World-leading Environment Act becomes law - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/legislation/environment-act-2021) [Accessed December 2021].

are options to deliver these gains offsite and this would be demonstrated via the Biodiversity Metric 3.0 calculator tool<sup>18</sup>.

Many local planning authorities are also strengthening their policies around biodiversity and green infrastructure in response to the biodiversity and climate emergency. As part of the London Plan – 2021<sup>19</sup>. Policy G5, Urban Greening, requires new developments to incorporate green infrastructure including trees, green roofs, green walls and nature-based sustainable drainage. The Mayor has developed an Urban Greening Factor (UGF) model to assist boroughs and developers in determining the appropriate provision of green infrastructure, currently a target score of 0.4 UGF is recommended for developments that are predominately residential. This can provide a range of benefits in addition to biodiversity such as urban heat island effect reduction, water quality and quantity attenuation, air quality improvements, and amenity which confers health and wellbeing. The latter being particularly important in the most densely developed parts of the city where traditional green space is limited.

The area has biodiversity and ecosystem service value including, noise and air quality attenuation, water volume and quality attenuation, and carbon sequestration. Maximising the biodiversity and ecosystem service potential of the landscape to remain or be included within the soft estate of any development is recommended.

Building integrated vegetation would also be recommended such as the consideration of a biodiversity roof, incorporation of integral bird and bat boxes, micro sustainable drainage systems, the implementation of permeable fencing to benefit small mammals such as hedgehog which is a Species of Principal Importance (S41) in the Natural Environment and Rural Communities Act 2006, currently in decline, sensitive lighting strategy, tree replacement and new tree planting where feasible. Off-site compensation should also be considered if required with the objective to achieve net gain.

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<sup>18</sup> Natural England (2021): The Biodiversity Metric 3.0. [online] Available at: <http://publications.naturalengland.org.uk/publication/5850908674228224> [Accessed December 2021].

<sup>19</sup> Greater London Authority (2021) London Plan - 2021. Available at: [https://www.london.gov.uk/sites/default/files/the\\_london\\_plan\\_2021.pdf](https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf)

## 6 SUMMARY OF ECOLOGICAL CONSTRAINTS AND MITIGATION REQUIRED

Table 1 Ecological Constraints and Mitigation Summary Table

Key Issues	Legislation/Policy	Assumption	Further Survey / input?	Seasonal Timing	Mitigation Required	Seasonal Timing	Programme Delay Risk	Survey/ Mitigation Cost Estimate*	Risk Rating
<b>Biodiversity General</b>									
<b>Ecology Report in Support of Planning</b>	Wildlife and Countryside Act 1981 (as amended) London BAP Natural Environment and Rural Communities Act 2006 NPPF 2021	To inform and mitigate any potential design	See below	See below	See below	See below	Early commissioning of Ecologist recommended to input into design	Report for planning £2000- 3000	Low
<b>Roosting Bats (Buildings)</b>									
Buildings B1, B2 and B3 within the Northern and Southern Sites exhibited features potential suitable for roosting bats, and were accordingly categorised as having a low potential to support roosting/hibernating bats	Schedule 5 of the of the Wildlife and Countryside Act 1981 (as amended) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019	Assumption is that the garage blocks (B1 and B2) are to be removed for development	It is recommended that emergence surveys are carried out by two suitably qualified ecologists to confirm the presence or absence of roosting bats. This would be two surveys – one for B1 and B2 combined and another for B3.	N/A	A bat emergence survey undertaken on each Site to identify presence or absence of roosting bats in garages.  Should the surveys confirm the presence of roosting bats in a feature to be removed, it is likely that an EPS mitigation licence would be required for the works to proceed.  This would require the provision of a method statement for the works and suitable mitigation measures to be put in place.	May - September	N/A	Mitigation £1500 - £2000 emergence survey and a short report	Low
<b>Nesting Birds</b>									
All green infrastructure listed below is suitable for nesting birds. These are likely to be removed for development. <ul style="list-style-type: none"> <li>Trees;</li> <li>Dense scrub;</li> <li>Semi-improved grassland; and</li> <li>Dense Common Ivy.</li> </ul>	Wildlife and Countryside Act 1981 (as amended)	Removed for development / Site investigation.	No (but see mitigation recommendations)	N/A	Remove vegetation outside the core nesting bird season (March to August inclusive) or vegetation removal would need to be supervised by an ecological watching brief and a pre-works check no more than 48 hours before the commencement of works	September to February remove and/or trim scrub and trees if required	If vegetation removal is required during the nesting bird season and nest are found by the ecological watching brief, a delay of 6 weeks is likely to be required until chicks have fledged.	Mitigation £500 - £1000 per day for ecological supervision / nesting bird check. Design and replacement of green infrastructure not costed	Low

## Ecological Assessment

Key Issues	Legislation/Policy	Assumption	Further Survey / input?	Seasonal Timing	Mitigation Required	Seasonal Timing	Programme Delay Risk	Survey/ Mitigation Cost Estimate*	Risk Rating
<b>Green Infrastructure/ Trees</b>									
Trees were present immediately adjacent to both Sites and may be impacted by development	No TPOs are present on the Sites.	Trees are likely to be removed or damaged due to development	Yes: BS 3857 2012 Tree survey	Removal of trees affected by bird nesting season (see above)	An Arboricultural Impact Assessment would be required for any design to ensure that there is protection of adjacent trees. The replacement of trees and green infrastructure implemented via an Arboricultural Method Statement and Landscape Strategy. Regarding the trees present near to the Site which are protected by TPO, should any trees protected by TPO be affected, consent will need to be sought from the council and third-party property for any tree management or removal	N/A	None	Survey: Already undertaken Mitigation: Arboricultural Impact Assessment £2500- 4000 Bespoke Arboricultural Method Statement £1,500 £500- 1000 per day for Site supervision Design and replacement of green infrastructure not costed.	Low
<b>Non-native Invasive species</b>									
Cotoneaster (TN5 and TN6)	London Invasive Species Index (LISI) Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)	Development could cause this species to spread	No	N/A	It would be good practice to remove this species during subsequent development and to implement mitigation to ensure it is not spread	N/A	N/A	N/A Can be undertaken with vegetation clearance for development.	Low

**\* Cost estimates only, actual costs would depend on the procurement, design and programme of any subsequent development and do not include costs any actual green infrastructure replacement or associated protected species licencing**

## 7 CONCLUSIONS

There are some minor ecological constraints with regard to the development of these Sites.

No statutory or non-statutory designated sites (including ancient woodlands or woodlands listed on the Ancient Woodland Inventory (AWI)) identified within the vicinity of the Sites have the potential to be significantly impacted by development on the Sites. No trees subject to TPOs are present within the Sites. Trees within the wider area are protected by TPOs, the closest being 140m away on a potential access road to the Sites. The closest statutory designated site is Hill Wood LNR including Oakhill Park Woods Ancient woodland, located approximately 1.6km north west. Recreational pressures on designated sites have been considered, however due to the size of both the Sites and the limited number of units that the developable area could accommodate, additional recreational pressures are considered to be negligible.

Ecological constraints and recommendations are listed below:

- The Northern Site was dominated by hardstanding and a garage block, along with patches of dense scrub behind the garage block. Immediately adjacent were scattered trees, a small area of amenity grassland and introduced shrubs, including the invasive species Wall Cotoneaster.
- The Southern Site consisted of hardstanding with low growing vegetation, a garage block, line of dense scrub and patch of semi-improved grassland. Immediately adjacent were allotment gardens containing Ash trees overhanging into the Southern Site boundary.
- The habitats on the Northern and Southern Site were generally species-poor with limited structural diversity due to the lack of positive management. However, the semi-improved grassland, scrub and adjacent tree habitats have value in terms of green infrastructure, likely performing important ecosystem services (such as water quality and volume attenuation and air quality attenuation etc.).
- There is potential for nesting birds to be utilising the trees and dense Common Ivy within and immediately adjacent to both Sites, including species listed on S41 and the London BAP such as house sparrow. Removal of suitable vegetation on the Sites will need to be conducted outside of the bird nesting season (March – August inclusive) or under an ecological watching brief.
- The buildings on both Sites were inaccessible at the time of the survey and thus a precautionary approach was taken to assess these as having 'low' bat roosting potential. Features present included gaps in the roofs which provide potential entry points for bats. A single emergence survey at each site by two suitably qualified ecologists to confirm the presence or absence of roosting bats is recommended.
- No trees subject to a TPO were present within the Sites, but trees along a potential access route to the Sites are protected by TPO.
- There would be some ecological benefit from the removal of Cotoneaster, a non-native and invasive species listed on LSI and Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), which is likely to occur when the Southern Site is cleared for any construction. It is illegal to cause this plant to spread or grow in the wild and therefore should be treated as controlled waste to prevent the spread of this species.
- Trees and other vegetation should be replaced within any proposed soft landscaping and these designs should be evolved in liaison with an ecologist and arboriculturist. In addition, rain gardens, biodiversity roofs and other green infrastructure should be considered within any development.
- Biodiversity net gain is a mandatory requirement for new developments, set at 10%, under The Environment Act 2021. There are opportunities for the incorporation of integral bird and bat boxes, micro sustainable drainage, the implementation of permeable fencing to benefit small mammals such as hedgehog which is an S41 species currently in decline, sensitive lighting strategy, tree replacement and new tree planting where feasible.

SITE PHOTOGRAPHS

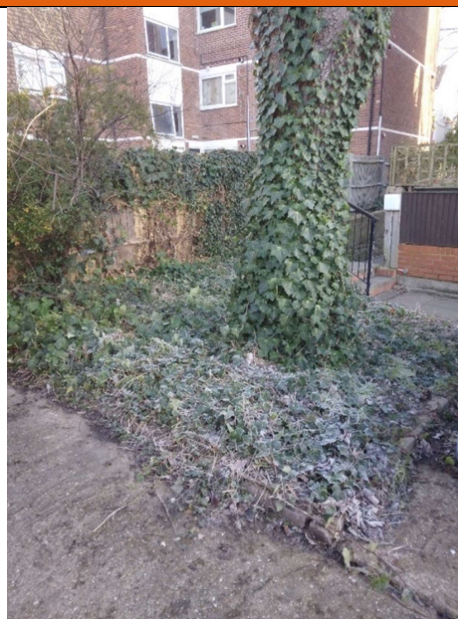
Table 2: Northern Site Photographs

Site Photographs	
	
Photograph 1: Northern Site hardstanding	Photograph 2: Northern Site garages
	
Photograph 3: Dense Common Ivy growth on garage roofs, Northern Site	Photograph 4: Amenity grassland, adjacent to Northern Site

Site Photographs



Photograph 5: Mature Ash tree, adjacent to Northern Site, bird nesting potential.



Photograph 6: Common Ivy Ground cover, adjacent to Northern Site TN7







Photograph 7: Cotoneaster adjacent to Northern Site, TN6, invasive species



Photograph 8: Ash tree adjacent to Northern Site, Tree tag 003169. Nesting bird potential.

Site Photographs	
	
<p>Photograph 9: Ash tree adjacent to Northern Site, bird nesting potential.</p>	<p>Photograph 10: Tree (<i>Acer sp.</i>) adjacent to Northern Site, bird nesting potential.</p>
	
<p>Photograph 11: Dense continuous scrub along northern border of Northern Site. Bird nesting potential.</p>	

Table 3: Southern Site photographs

Site Photographs	
	
Photograph 1: Southern Site hardstanding and garage block	Photograph 2: Semi-improved grassland, Southern Site
	
Photograph 3: Row of Ash trees overhanging into site boundary of Southern Site.	Photograph 4: Hardstanding and line of dense scrub behind with bird nesting potential Southern Site.

## Site Photographs



Photograph 5: Example of garage with gap between door and frame as potential entry point for bats. Southern Site



Photograph 6: Hardstanding with southern boundary fence showing allotments bordering site, Southern Site, potential for reptile and amphibian habitat in allotments.



Photograph 7: Cotoneaster within Southern Site, TN5, invasive species.

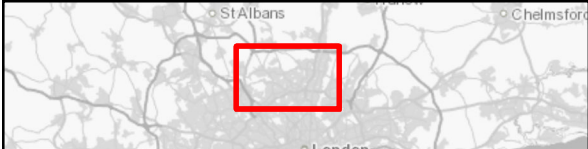
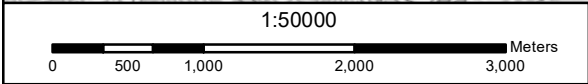


Photograph 8: Dense scrub within Southern Site, bird nesting potential.



Photograph 9: Brick outbuildings bordering semi-improved grassland Southern Site. Gaps in roof show bat potential.

**FIGURE 1: STATUTORY DESIGNATED SITES WITHIN 2KM OF THE SITE CENTRE**



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01	28/01/22	Initial Issue	MS	EG	BM
REV	Date	Description	Drawn	Check	Approv

Legend					
X	Site Centre				
	Buffer 2km				
	Buffer 5km				
	Local Nature Reserve (LNR)				
	Site of Special Scientific Interest (SSSI)				
	Special Protection Areas (SPA)				
	Special Areas of Conservation (SAC)				

Client	
Levitt Bernstein	
Client	
Levitt Bernstein, United Kingdom	
Site	
Ivy Road, United Kingdom	

Suitability Description:			
PRELIMINARY/CONFIDENTIAL			
Designed	E. Gibson	Date 28JAN22	Signed
Drawn	M. Shekaraiah	Date 28JAN22	Signed
Checked	E. Gibson	Date 28JAN22	Signed
Approved	B. Murray	Date 28JAN22	Signed
Scale:	1:50000	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	10053498

PROJECT:	
ENFIELD COUNCIL	
TITLE:	
International and National Designated Sites Map Ivy Road - North and South	

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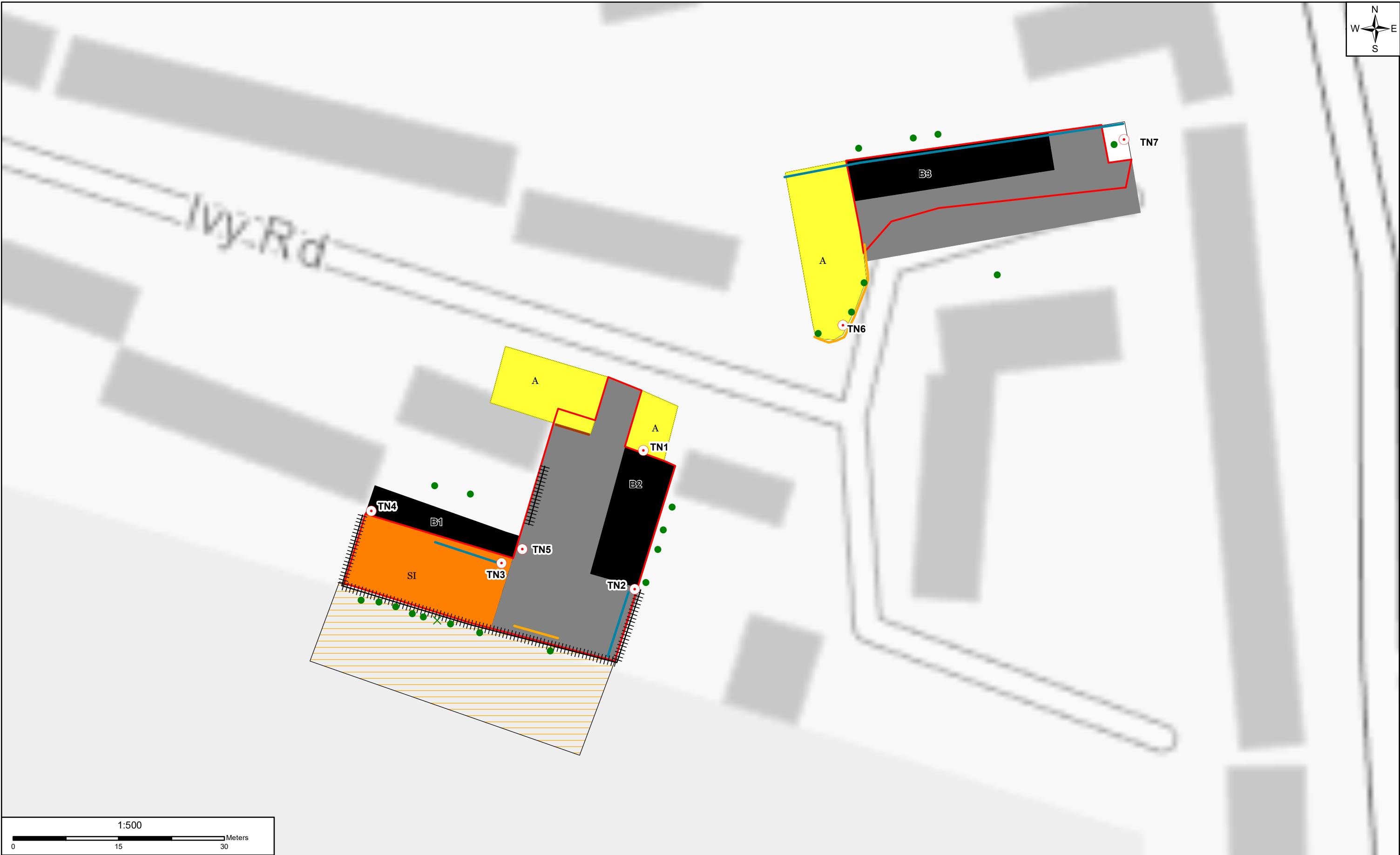
Drawing Number:

10053498-ARC-XX-XX-DR-EC-0011-01

Issue

01

**FIGURE 2: PHASE 1 HABITAT MAP (WITH TARGET NOTES)**



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Meters

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REV	Date	Description	Drawn	Check	Approv
01	28/01/22	Initial Issue	MS	EG	BM

Legend

Target note (TN)

Red line boundary

Scattered broadleaved tree

Scattered scrub

Wall

Dense scrub

Fence

Introduced shrub

A

SI

Amenity grassland

Building

Grassland semi-improved

Hardstanding

Allotments present

Other habitat

Client

Levitt Bernstein

Levitt Bernstein  
People.Design

Client

Levitt Bernstein,  
United Kingdom

Site

Ivy Road ( North and South), United Kingdom

Suitability Description:			
PRELIMINARY/CONFIDENTIAL			
Designed	E. Gibson	Date 28JAN22	Signed
Drawn	M. Shekaraiah	Date 28JAN22	Signed
Checked	E. Gibson	Date 28JAN22	Signed
Approved	B. Murray	Date 28JAN22	Signed
Scale:	1:500	Datum:	AOD
Original Size:	A3	Grid:	OS
Suitability Code:	S2	Project Number:	10053498

PROJECT:

ENFIELD COUNCIL

TITLE:

Ecological Assessment  
Phase 1 Map  
Ivy Road

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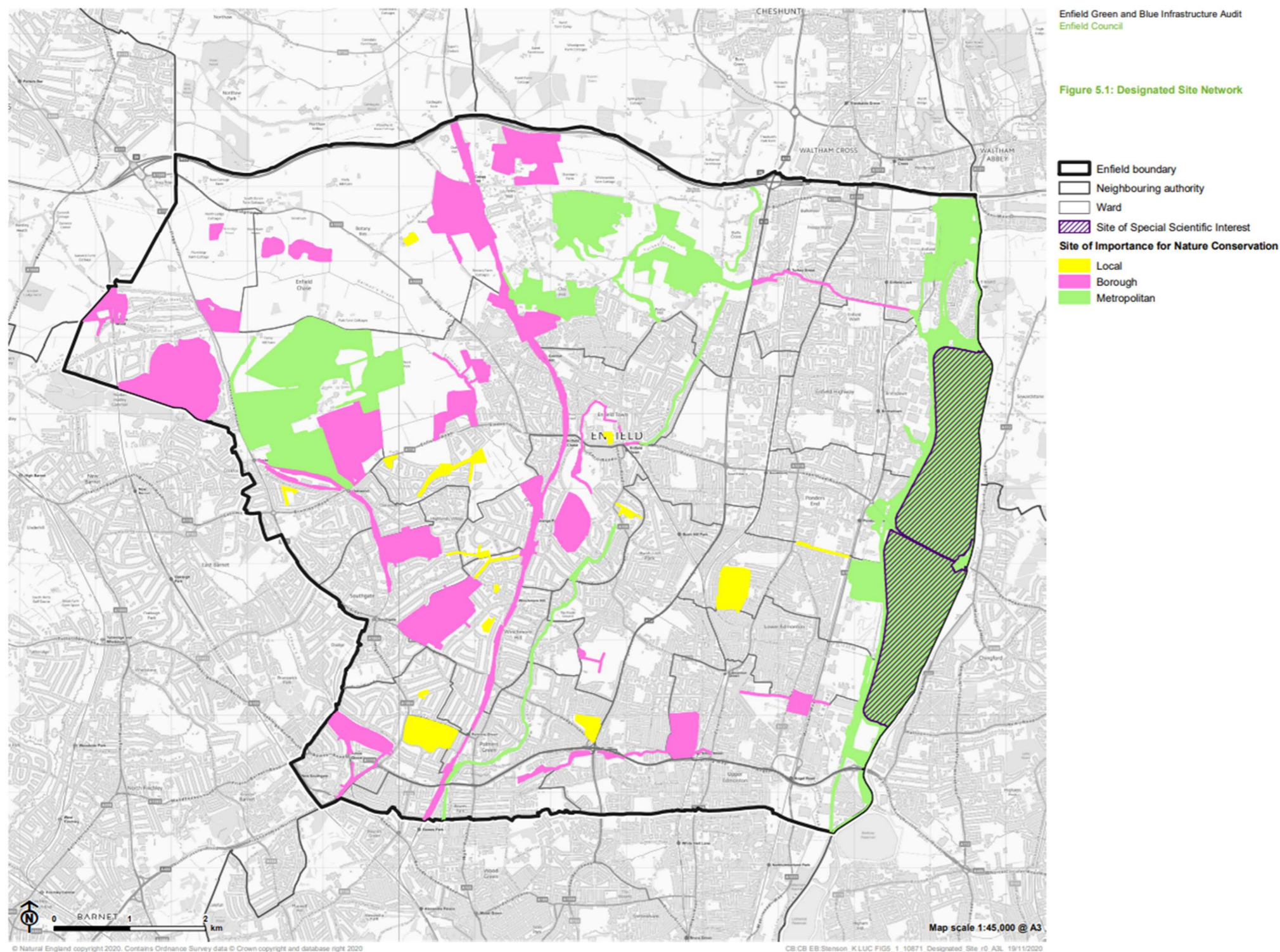
Drawing Number:

10053498-ARC-XX-XX-DR-EC-0012-01

Issue

01

**FIGURE 3: SINC'S IN ENFIELD COUNCIL<sup>20</sup>**



<sup>20</sup> LUC (2021). Review of Enfield Biodiversity Action Plan. Available at: <https://new.enfield.gov.uk/services/planning/review-of-enfield-biodiversity-action-plan-2021-planning.pdf>. [Accessed January 2022]

## Appendix A: Desk Study Review

### Statutory Designated Sites

The desk study found no Natura 2000 sites (SPAs, SACs, Ramsar) within 5km of the site.

Within 2km of the Site are the following Statutory Designated Sites:

- Oak Hill Wood LNR

Further detail is presented in Table A1. It was assessed that there was negligible potential for significant impacts to these Sites from any development on the Site.

### Woodlands registered on the Ancient Woodland Inventory (AWI)

The desk study found Oakhill Park Woods Ancient woodland located approximately 1.6km North west of the site.

### Statutory Designated Sites

Table A:1: Statutory Designated Sites

Site Name	Designation	Size (ha)	Distance (km)	Direction	Description
Local Nature Reserve (LNR)					
Oak Hill Wood	LNR	10	1.6	north west	Oak Hill Wood consists of ancient woodland, dominated by pedunculate oak ( <i>Quercus robur</i> ), hornbeam ( <i>Carpinus sp.</i> ) and ash. Among the ground flora are bluebells ( <i>Hyacinthoides Non-scripta</i> ) and wood anemones ( <i>Anemone nemorosa</i> ). Breeding birds include tawny owls ( <i>Strix aluco</i> ), nuthatches ( <i>Sitta Europaea</i> ) and stock doves ( <i>Columba oenas</i> ).

## Overview of Protected, Notable and Invasive Species in London

This section of this report outlines the status of protected and notable species in London. The status of these species on the Site is fully discussed in section 3. Relevant conservation status and legislation is presented in Appendix C.

### Non-native invasive species in Greater London

London is an extremely urbanised area and is a major international port for both people and goods, this in addition to its climate and major levels of construction has encouraged the spread of a number of non-native invasive species that are becoming pests. Therefore, in addition to those species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) there is a London Species Initiative (LSI) Error! Bookmark not defined. Managed by the London Biodiversity Partnership, which lists non-native invasive species that should be controlled in London. Species potentially relevant to the Site include those presented in A2.

Table A.2: Potential Schedule 9 Wildlife and Countryside Act 1981 (as amended) or LSI species

Common Name	English Name	Status
Japanese Knotweed	<i>Fallopia japonica</i>	Schedule 9 and LSI
Cotoneaster (numerous)	<i>Cotoneaster</i> spp.	Schedule 9 and LSI
Rhododendron	<i>Rhododendron ponticum</i>	Schedule 9 and LSI
Indian (or Himalayan balsam)	<i>Impatiens glandulifera</i>	Schedule 9 and LSI
Virginia creeper	<i>Parthenocissus quinquefolia</i>	Schedule 9
Montbretia	<i>Crocsmia x crocosmiiflora</i>	LSI
Cherry Laurel	<i>Prunus laurocerasus</i>	LSI
False acacia	<i>Robinia pseudoacacia</i>	LSI
Green alkanet	<i>Pentaglottis sempervirens</i>	LSI
Butterfly-bush	<i>Buddleia davidii</i>	LSI
Snowberry	<i>Symphoricarpos albus</i>	LSI
Tree of heaven	<i>Ailanthus altissima</i>	LSI
Holm oak	<i>Quercus ilex</i>	LSI
Passion flower	<i>Passiflora caerulea</i>	LSI
Spanish bluebell	<i>Hyacinthoides hispanica</i> & <i>H. x massartiana</i>	LSI
Holm oak	<i>Quercus ilex</i>	LSI

## Bats in Greater London

From previous Arcadis work in London and from data from the London Bat Group the most likely bats species to be present are common and soprano pipistrelle (*Pipistrellus pipistrellus* and *P. pygmaeus*) which are by far the more frequent, followed by Daubenton's (*Myotis daubentonii* in the vicinity of open water) noctule (*Nyctalus noctula*) and brown long-eared (*Plecotus auritus*). These are all London BAP species and S41 species with the exception of Daubenton's and common pipistrelle. Full details of the conservation status of these species and the results from the London Bat Group Species Action Plan Audit are presented in Appendix B Table B2.

In general, every borough will have bats present, as even in the inner boroughs there are usually some areas of suitable habitat that can provide feeding habitat for small numbers of common and light tolerant bat species such as soprano and common pipistrelles. In general, the outer boroughs with larger areas of more suitable habitat should be expected to have higher numbers of bats and a greater diversity of species.

## Birds in Greater London

There are a number of bird species that although relatively common are in decline and have been highlighted priority species under S41, London BAP and/or Birds of Conservation Concern 5, 2021<sup>21</sup>, that have the potential to be present (Table A3).

Table A3: Birds of conservation concern associated with London

Common Name	English Name	Status	Typical London habitats
Black redstart	<i>Phoenicurus ochrurus</i>	L:R	Traditionally found on brownfield sites around the built environment in proximity to standing or tidal Thames water
Dunnock	<i>Prunella modularis</i>	S41:L:	Associated with dense scrub and trees in private gardens and pocket parks
Grey heron	<i>Ardea cinerea</i>	L	associated with tidal Thames and standing water
House sparrow	<i>Passer domesticus</i>	S41:L:R	Associated with dense scrub and trees in private gardens and pocket parks traditionally a species associated with nesting in buildings
Peregrine	<i>Falco peregrinus</i>	L	Tidal Thames and the built environment using tall buildings for roosting and nesting and foraging on other birds particularly pigeons
Song thrush	<i>Turdus philomelos</i>	S41:L:R	Associated with dense scrub and trees in private gardens and pocket parks
Starling	<i>Sturnus vulgaris</i>	S41:L:R	Built environment
Tree sparrow	<i>Passer montanus</i>	S41:L:R	Associated with dense scrub and trees in private gardens and pocket parks

Section 41 = S41: London BAP = L: R = Birds of Conservation Concern Red List

<sup>21</sup> BoCC, 2021. Available online at: [https://britishbirds.co.uk/sites/default/files/BB\\_Dec21-BoCC5-IUCN2.pdf](https://britishbirds.co.uk/sites/default/files/BB_Dec21-BoCC5-IUCN2.pdf) [Accessed January 2022]

## Reptiles in Greater London

Records from SARG (Surrey Amphibian and Reptile Group) and the London Biodiversity Action Plan show that the presence of European Protected Species of reptile in the London area is generally very unlikely. Common lizard (*Zootoca vivipara*) and Slow worm (*Anguis fragilis*) are the most likely reptiles to be present followed by Grass snake (*Natrix natrix*) with Adder (*Vipera berus*) being unlikely to be present these are all S41 and London BAP species.

## Badger in Greater London

Badger is a London BAP species and can be found using private gardens, woodlands and parklands across London.

## Amphibians including Great Crested Newts (GCN) in Greater London

GCN are S41 and London BAP species, that while uncommon are found breeding in ponds associated with private gardens, from data available from Froglife (2012), 71 Sites across Greater London were surveyed where historical GCN records were identified, of which three of these sites were located within Enfield Council <sup>22</sup>. Of the other amphibians that are London BAP species Common frog (*Rana temporaria*), palmate newt (*Triturus helveticus*) and Common toad (*Bufo bufo*), common toad is also a S41 species

## Other Potentially Relevant S41 and London BAP species

There are a number of other species that have the potential to be relevant to the Site:

- Hedgehog (*Erinaceus europaeus*); and
- Stag beetle (*Lucanus cervus*), there was an NBN record within 500m of the Site.

Table A:4: Designated sites descriptions

Designation	Description
Special Areas of Conservation (SAC)	Sites designated under European law and are the most important sites for wildlife in the UK, along with Special Protected Areas (SPAs). SACs are designated under the European Habitats Directive (Council Directive 92/43/EEC). Both the Habitats and Birds Directives provide for the creation of a network of protected areas across the EU, to be known as 'Natura 2000'. The designations aim to conserve important or threatened species and habitats and provide them with increased protection and management
Special Protected Areas (SPAs)	
National Nature Reserve (NNR)	Statutory reserves established for the nation under the Wildlife and Countryside Act, 1981. NNRs may be owned by a relevant national body, e.g. Natural England, or by established agreement; a few are owned and managed by non-statutory bodies. NNRs cover a selection of the most important sites for nature conservation in the UK.
Sites of Special Scientific Interest (SSSI)	Are areas notified under the Wildlife and Countryside Act 1981 (as amended) by Natural England as being of special interest for nature conservation. SSSI notification forms the statutory bedrock for site protection. Biological SSSIs form a national network of wildlife sites, with each site being of national significance for its nature conservation value. Consultation and some form of agreement with the national statutory conservation agency is mandatory before any listed, potentially damaging development or change in land use can be carried out
Local nature reserves (LNR)	These are land owned, leased or managed by Local Authorities and designated under the National Parks and Access to the Countryside Act. These are sites of some nature conservation value managed for educational objectives. In some cases it is managed by a non-statutory body (e.g. the London Wildlife Trust). Local Authorities have the power to pass bylaws controlling (e.g.) access, special protection measures.
Sites of Metropolitan	These are sites that contain the best examples of London's habitats. These sites are of strategic significance and are therefore of the highest priority against damage or loss

<sup>22</sup> Capital Great Crested Newts Revisited (2012). Project report – Public Web Edition

Designation	Description
Importance for Nature Conservation (SMINCs)	
Sites of Borough Importance for Nature Conservation (SBINCs) Grades I and II	Sites of Borough Importance for Nature Conservation (SBINCs) Grades I and II are important in the context of the borough. The nature conservation quality of these sites varies and so these sites are graded as I or II in relation to their nature conservation potential.
Sites of Local Importance for Nature Conservation (SINCs)	These are sites of particular importance to people nearby (such as residents and schools). Local sites are particularly important in areas otherwise deficient in nearby wildlife sites.

## Appendix B: Bat Habitat Suitability and London Population Status

Table B: 1 BCT (2016) – Habitat Suitability Criteria

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically.</p> <p>However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions<sup>a</sup> and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p> <p>A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	<p>Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

Table B: 2 Bat species status in London from the London Bat Species Action Plan Audit

Common Name	Latin Name	UK Status	London Status	Notes
Greater horseshoe bat	<i>Rhinolophus ferrumequinum</i>	Endangered BAP Priority	Extinct	Last Greater London record from Oxleas Wood in 1953.
Lesser horseshoe bat	<i>Rhinolophus hipposideros</i>	Endangered BAP Priority	Extinct	Last Greater London record from Abbey Wood (Woolwich) in 1952-3.
Whiskered bat	<i>Myotis mystacinus</i>	Vulnerable	Rare	Due to difficulty in separation, these are considered together. Occur rarely and in low numbers in outer London Boroughs such as Hillingdon, Richmond, Bexley and Bromley. One current known (winter) roost only.
Brandt's bat	<i>Myotis brandtii</i>	Vulnerable	Rare	
Natterer's bat	<i>Myotis nattereri</i>	Vulnerable	Scarce	Still relatively few records in Greater London. Most central locations are Highgate Wood and Hampstead Heath, otherwise Richmond and Hounslow and occasionally other outer London Boroughs. 8 current known roosts (mostly winter).
Daubenton's bat	<i>Myotis daubentoni</i>	Not Threatened	Locally frequent but declining	Relatively widespread and strongly associated with ponds, lakes & rivers. Occasional summer roosts have been found in trees on Wimbledon Common and in Ruislip Woods. Contrary to the national trend, this species is apparently declining in London and its sensitivity to increasing ambient light levels is a possible reason. 4 current known winter roosts.
Serotine	<i>Eptesicus serotinus</i>	Vulnerable	Rare; has declined	Serotines are found in outer London Boroughs, especially Bromley, Havering, Sutton and Richmond. 2 current known summer roosts, in Bromley and Teddington.
Noctule	<i>Nyctalus noctula</i>	Vulnerable; declining BAP Priority	Widespread but declining	The status of this large, wide-ranging bat is difficult to assess, but the past two decades have seen a rapid decline in the species and this mirrors the national trend. An exclusively tree-roosting bat; current known roosts number <10 London-wide.
Leisler's bat	<i>Nyctalus leisleri</i>	Vulnerable	Scarce	Leisler's bat has been recorded infrequently in London area, yet sightings have doubled in the last three years. New foraging sites for the species include the Barnes area, Wandsworth Common and Brent Reservoir. 3 current known roosts (Haringey, Bromley and Bexley).

## Ecological Assessment

Common Name	Latin Name	UK Status	London Status	Notes
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	Not Threatened	Common	A widespread species, the common pipistrelle is believed to occur in all London boroughs. Roosts are still discovered relatively infrequently, however.
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	BAP Priority	Common	Also widespread and probably London's commonest bat. Apparently more associated with wetland habitats than its close relative, <i>P. pipistrellus</i> . Known roosts currently number 15-25?, but many more pass undetected.
Nathusius's pipistrelle	<i>Pipistrellus nathusii</i>	Rare	Rare	Only recently confirmed as a UK breeding species. Detector records from an increasing list of sites include Lesnes Abbey Woods, Chislehurst Ponds and the Wetland Centre at Barnes. 1 known current roost site in bat boxes in Hounslow.
Brown long-eared bat	<i>Plecotus auritus</i>	Declining BAP Priority	Scarce	Brown long-eared bats are fairly secretive and may be under-recorded in Greater London, although reasons for the national decline are also likely to affect London's population. Roosts have been found in Bexley, Bromley, Hillingdon, Wandsworth, Kensington & Chelsea, Barnet, and Richmond.

NB: This audit is based on data from the London Bat Project collected in the mid-1980s, as well as that collected since by the London Bat Group and is therefore not systematic. This audit is the best possible understanding of the status of bats in London that can currently be realised by the London Bat Group.

## Appendix C: Selected Legislation, Nature Conservation Status and Policy

### Legislation

Table C: 1 Legislation Summary

Receptor	Legislation
<b>Nesting Birds</b>	<p>The legislation relevant to the potential ecological constraints on site associated with nesting birds.</p> <p>All wild birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981 (as amended). Section 1 of the Act makes it an offence to:</p> <ul style="list-style-type: none"> <li>intentionally kill, injure or take any wild bird;</li> <li>intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; or</li> <li>intentionally take or destroy an egg of any wild bird.</li> </ul> <p>It is also an offence to:</p> <ul style="list-style-type: none"> <li>intentionally disturb any wild bird included in Schedule 1 of the Act while it is building a nest or is in, on or near a nest containing eggs or young; or</li> <li>disturb dependent young of such a bird.</li> <li>Species listed on Schedule 1 include the black redstart, barn owl (<i>Tyto alba</i>), Cetti's warbler (<i>Cettia cetti</i>) and kingfisher (<i>Alcedo atthis</i>).</li> </ul> <p>There is no potential for Schedule 1 birds to be nesting on Site, the legislation regarding common nesting birds will be complied with due to the precautionary mitigation previously stated.</p>
<b>Badger</b>	<p>Badgers are protected from inhumane killing or injury under Badgers Act (1992)<sup>23</sup>, this also protects their setts from damage and prohibits blocking access to their setts.</p>
<b>Bats</b>	<p>The legislation relevant to the constraint identified associated with bats.</p> <p>Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.</p> <p>Bats are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and are subject to the provisions of Section 9 of the Act, which make it an offence to:</p> <ul style="list-style-type: none"> <li>intentionally or recklessly disturb a wild animal listed on Schedule 5 whilst it is occupying a structure or place which it uses for shelter or protection;</li> <li>intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a wild animal listed on Schedule 5;</li> <li>sell, offer or expose for sale, or to possess or transport for sale alive or dead wild animal listed on Schedule 5 or any part of or anything derived from a wild animal listed on Schedule 5.</li> </ul> <p>Bats are also listed on Schedule 2 (European protected species of animals) of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and are subject to the provisions of Regulation 41 which makes it an offence to:</p> <ul style="list-style-type: none"> <li>deliberately capture, injure or kill any wild animal of a European protected species;</li> <li>deliberately disturb wild animals of any such species (where disturbance is likely to impair their ability to survive, breed or reproduce, rear or nurture their young; or to</li> </ul>

<sup>23</sup> Protection of Badgers Act 1992 (as amended)

Receptor	Legislation
	<p>hibernate or migrate; or to affect significantly the local distribution or abundance of the species);</p> <ul style="list-style-type: none"> <li>• damage or destroy a breeding Site or resting place of such an animal; or</li> <li>• be in possession of, control, transport, sell or exchange, or offer for sale or exchange any live or dead animal of such a species or any part of a wild animal or anything derived from an animal or any part of an animal of such a species.</li> </ul>
<b>Great Crested Newts</b>	<p>Great crested newts are a European Protected Species (EPS), listed on Annex II and IV of the EEC Directive on the Conservation of Natural Habitats and Wild Fauna and Flora, receiving protection under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This species is also afforded full protection under the Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under such legislation it is an offence to:</p> <ul style="list-style-type: none"> <li>• Intentionally or recklessly kill, injure or take a great crested newt;</li> <li>• Possess or control any live or dead specimen or anything derived from a great crested newt;</li> <li>• Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and</li> <li>• Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.</li> </ul>
<b>Reptiles</b>	<p>The relevant legislation relevant to the constraint identified associated with reptiles All native British reptile species are protected under the Wildlife and Countryside Act 1981 (as amended). Reptiles are listed under Schedule 5 of the Act. The four more widespread species including common lizard, slow worm, adder and grass snake are subject to some of the provisions of Section 9 of the Act, which make it an offence to: *</p> <ul style="list-style-type: none"> <li>• intentionally kill or injure a reptile; or * sell, offer or expose for sale, or</li> <li>• to possess or transport for sale alive or dead reptile or any part of, or anything derived from, a reptile.</li> </ul>
<b>Other Mammals</b>	<p>Other mammals not protected by their own legislation are protected by the Mammal Act (1996). The Act makes provision for the protection of wild mammals from certain cruel acts.</p> <p>An offence is committed if any person mutilates, kicks, beats, nails, or otherwise impales, stabs, burns, stones, crushes, drowns, drags, or asphyxiates any wild mammal with intent to inflict unnecessary suffering.</p>
<b>Non Native Invasive Species</b>	<p>Numerous species are listed on Schedule 9 (of the Wildlife and Countryside Act 1981 (as amended), as amended) whereby it is an offence to grow or to cause this species to grow in the wild. A species on Schedule 9 that commonly occurs in London is Japanese Knotweed (<i>Fallopia japonica</i>) which is also covered by the Environmental Protection Act (EPA) 1990 which designates this as a controlled waste.</p>

## Nature Conservation Status

### • Birds of Conservation Concern (BOCC) (2021)

The UK's leading bird conservation organisations worked together to produce The Population Status of Birds in the UK: Birds of Conservation Concern Five (BoCC).

Commonly referred to as the UK Red List for birds, this is the fifth review of the status of birds in the UK, Channel Islands and Isle of Man, and updates the last assessment in 2015. Using standardised criteria, 245 species with breeding, passage or wintering populations in the UK were assessed by experts from a range of bird NGOs and assigned to the Red, Amber or Green lists of conservation concern.

*Table C: 1 Bird Population Status Criteria for Birds of Conservation Concern in the UK*

Criteria	Status
	Globally threatened
<b>Red list criteria</b>	<p>Historical population decline in UK during 1800–1995</p> <p>Rapid (&gt; or =50%) decline in UK breeding population over last 25 years Rapid (&gt; or =50%) contraction of UK breeding range over last 25 years</p>
<b>Amber list criteria</b>	<p>Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years</p> <p>Moderate (25–49%) decline in UK breeding population over last 25 years</p> <p>Moderate (25–49%) contraction of UK breeding range over last 25 years</p> <p>Moderate (25–49%) decline in UK non-breeding population over last 25 years</p> <p>Species with unfavourable conservation status in Europe, termed Species of European Conservation Concern (SPEC)</p> <p>Five-year mean of 1–300 breeding pairs in UK</p> <p>&gt; or =50% of UK breeding population in 10 or fewer sites, but not rare breeders</p> <p>&gt; or =50% of UK non-breeding population in 10 or fewer sites</p> <p>&gt; or =20% of European breeding population in UK</p> <p>&gt; or =20% of northwest European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK</p>
<b>Green list</b>	No identified threat to the population's status

## Relevant Policy

### National

The Site survey, assessment and recommended mitigation ensure compliance with the following policies, any additional enhancement measures would further comply with these policies:

- **The National Planning Policy Framework (NPPF 2021)**<sup>24</sup>: The NPPF, sets out how the planning system should protect and enhance nature conservation interests. Section 15 is concerned with conserving and enhancing the natural environment (paragraphs 174 and 179).

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

To protect and enhance biodiversity and geodiversity, plans should:

- Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation ; and
  - promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.
- **The Natural Environment and Rural Communities Act 2006**<sup>25</sup> places a duty upon public bodies to consider S41 lists flora, fauna and habitats (previously UK BAP habitats and species) as a material consideration in planning and to consider enhancement of biodiversity.
  - **Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services**<sup>26</sup> includes a list of Habitats of Principal Importance in England (HPIEs) and Species of Principal Importance in England (SPIEs). These were previously included as Priority Habitats and Priority Species in the UK BAP.
  - **25 Year Plan for the Environment (2018)**<sup>27</sup>: The underlying case for the valuation of ecosystem services is that it will contribute towards better decision-making, fully taking into account the costs and benefits of development to the natural environment. In its White Paper “The Natural Choice: securing the value of nature (HMG, 2011)<sup>28</sup>”, and repeated in successive manifestos, the UK Government has stated it wishes to be “the first generation to leave the natural environment of England in a better state than it inherited...”. The Natural Capital Committee (NCC, 2016) was set

<sup>24</sup> MHCLG (2021) National Planning Policy Framework .

<sup>25</sup> Anon (2006) The Natural Environment and Rural Communities Act HMSO, London

<sup>26</sup> Department for Environment, Food and Rural Affairs (2011) *Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services*

<sup>27</sup> HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment. January 2018 Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/673203/25-year-environment-plan.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf)

<sup>28</sup> HM Government. (2011). The Natural Choice: securing the value of nature. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/228842/8082.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228842/8082.pdf)

up to advise on how to deliver this objective, and the natural capital approach (which is based on the concept of valuing services delivered by the environment) is the key mechanism proposed to achieve this. The advice of the NCC has been central to the Government's 25-Year Plan to Improve the Environment, published in January 2018 <sup>29</sup>, whereby it has been acknowledged that protecting and growing natural capital is a vital component for economic success. It is also important to note that the application of this approach is not related to the total value of ecosystems but, rather, to valuing changes in ecosystem services.

## London

- **London Invasive Species Initiative:** Managed by the London Biodiversity Partnership, LISI lists non-native invasive species that should be controlled in London.
- **The London Plan (2021)** <sup>30</sup>. The London Plan – 2021 advocates a green infrastructure approach to conservation of the natural environment recognising its social and economic value. It also moves to recognise the practical actual financial value. There is also now the drive for development to incorporate quality green space (i.e. enhancements). This includes an Urban Greening Factor for demonstration of these enhancements (Policy G5). The most relevant chapter in the Plan is Chapter 8 Green Infrastructure and Natural Environment, with other relevant sections in the rest of the Plan, including Chapter 9 Sustainable Infrastructure. Relevant policies include G2 Greenbelt, G3 Metropolitan Open Land, G4 Open space, G5 Urban greening, G6 Biodiversity and access to nature, G7 Trees and woodlands, G8 Food growing and G9 Geodiversity.
- **The London Plan (2016), Housing Supplementary Planning Guidance (March 2016)** <sup>31</sup>: With regards to housing, recently a dedicated supplementary planning guidance has been produced, the relevant elements of which are presented below
  - Standard 40 and Policy 7.19 “Biodiversity and access to nature promotes a proactive approach to the protection, promotion and management of biodiversity across the capital” and that “Proposals for development should give full consideration to their direct and indirect effects on ecology. Ecological improvements can be achieved as part of Sustainable Urban Drainage Systems and incorporated into green or brown roofs, green walls and soft landscaping.”
  - Policies 7.19 and 7.21 “supporting biodiversity, protecting London’s trees, ‘green corridors and networks”.
  - Development proposals should also enhance provision of green infrastructure in the public realm, helping to mitigate and adapt to climate change (Policy 5.10 Urban Greening), extend tree cover (Policy 7.21), improve biodiversity (Policy 7.19).
  - Public, communal and private open spaces should be protected and enhanced, and where possible new open spaces should be created. This is supported by Policy 2.18 Green Infrastructure, Policy 7.18 Protecting open space, Policy 7.19 Biodiversity and Policy 7.21 Trees and Woodlands.
- **The London Plan (2011), Sustainable Design and Construction Supplementary Planning Guidance (April 2014)** <sup>32</sup>:
  - Mayor’s Priority - Developments should contribute to the Mayor’s target to increase tree cover across London by 5% by 2025.
  - Mayor’s Priority - There is no net loss in the quality and quantity of biodiversity.
  - Mayor’s Priority - Developers make a contribution to biodiversity on their development site.
  - Mayor’s Priority - Any loss of a tree/s resulting from development should be replaced with an appropriate tree or group of trees for the location, with the aim of providing the same canopy cover as that provided by the original tree/s.

<sup>29</sup> HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment. January 2018 Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/673203/25-year-environment-plan.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/673203/25-year-environment-plan.pdf)

<sup>30</sup> Greater London Authority (2021) London Plan - 2021. Available at: [https://www.london.gov.uk/sites/default/files/the\\_london\\_plan\\_2021.pdf](https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf)

<sup>31</sup> Greater London Authority (2016) London Plan 2016 Implementation Housing Supplementary Planning Guidance adopted in March 2016

<sup>32</sup> Greater London Authority (2011), The London Plan *Sustainable Design and Construction Supplementary Planning Guidance adopted in April 2014*

- **London Environment Strategy – (2018)**<sup>33</sup> The environment strategy highlights the importance of green infrastructure and Natural Capital designed and managed to:
  - Promote healthier living;
  - Lessen the impacts of climate change;
  - Improve air quality and water quality;
  - Encourage walking and cycling;
  - Store carbon; and
  - Improve biodiversity and ecological resilience.

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<sup>33</sup> Greater London Authority (2018), London Environment Strategy. Available at: [https://www.london.gov.uk/sites/default/files/london\\_environment\\_strategy\\_0.pdf](https://www.london.gov.uk/sites/default/files/london_environment_strategy_0.pdf)

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