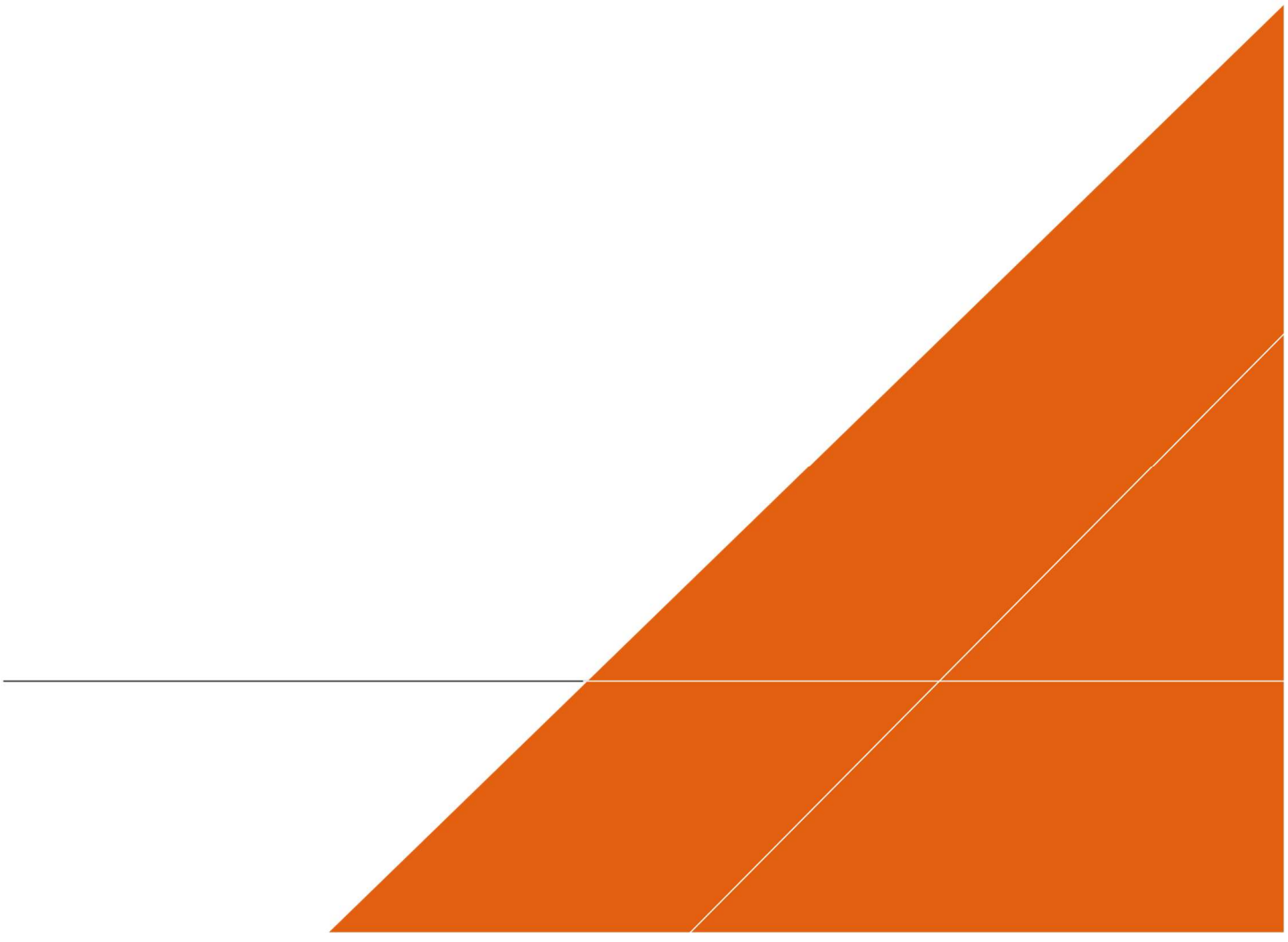
ARCADIS Design & Consultancy for natural and built assets

LEVITT BERNSTEIN

GARAGE BLOCK EAST OF CHILTERN DENE ROAD, EN2 7RG

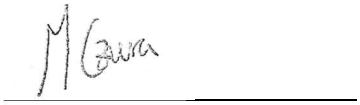
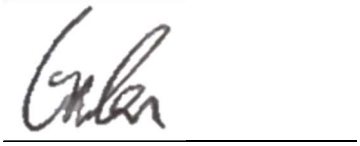
Ecological Assessment

JANUARY 2022



Garage Block adjacent to Chiltern Dene, Enfield, EN2 7RG

Ecological Assessment

Author	Madeleine Czura	
Checker	Ewan Gibson	
Approver	Samantha Walters	
Report No	10053498-ARC-XX-XX-RP-EC-0007-01-Ecological Assessment	
Date	JANUARY 2022	

VERSION CONTROL

Version	Date	Author	Changes
01	January 2022	MC	N/A

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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 a garage block and car park behind Chiltern Dene and adjacent to Worlds End Lane, EN2 7RG hereafter referred to as “the Site”.

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 Site with regards 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

The Site is located to the east of Chiltern Dene and accessible from Worlds End Lane (directly behind number 135), in Enfield London Borough Council (Enfield Council). The Site is centred at grid reference of TQ 30901 96241 and around the postcode of EN2 7RG.

The Site measures approximately 0.05ha in area and comprised mainly of hardstanding with two blocks of brick-built garage buildings. The immediate surrounding residential area was characterised by terraced housing with detached and semi-detached housing including gardens. Across the road to the east of the Site there was a school (Highlands School), golf course (Enfield Golf club) and Grange Park.

No trees subject to Tree Protection Orders (TPO) were present within the study area or wider site vicinity. Boxers Lake Site of Local Importance for Nature Conservation (SLINC) was located approximately 240m west of the Site.

The Site boundary for assessment is 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[1] was used to search for any statutory or non-statutory designated sites of nature conservation importance within a specific radius of the Site boundary, as follows:

- SPA or Ramsar sites (5km radius);
- Special Areas of Conservation (SACs) (5km radius);
- SSSI (2km radius);
- National Nature Reserves (NNR) (2km radius);
- 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 Site has the potential to support) located within 1km of the Site boundary were obtained from the following sources:

- National Biodiversity Network Atlas[2]; and
- London Biodiversity Action Plan (BAP) Priority Species List[3].

The locations of trees with Tree Protection Orders (TPOs) were obtained from the search tool on the Enfield Council website[4].

In addition, the locations of Sites of Importance for Nature Conservation (SINCs) were obtained from Enfield Council Review of the Enfield Biodiversity Action Plan 2021[5] and Greenspace Information for Greater London (GiGL)[6] 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 Site identified from Ordnance Survey mapping were assessed with regards to their connectivity to the Site 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)[7] and are presented on Figure 2. Plants names follow Stace (2019)[8].

[1] MAGIC (2002). MAGIC Map Search. [online] Available at http://magic.defra.gov.uk [Accessed January 2022]
[2] National Biodiversity Network https://nbn.org.uk/ [Accessed January 2022]
[3] Greater London Authority (2019), London Priority Species, [Available online] London Priority Species | London City Hall [Accessed January 2022]
[4] Enfield Council (2022). Find my Nearest. https://new.enfield.gov.uk/find-my-nearest/#7 [Accessed January 2022]
[5] Land Use Consultants (2021). Review of the 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]
[6] Greenspace Information for Greater London http://discover-london.gigl.org.uk/?theme=SITES_TO_VISIT [Accessed January 2022]
[7] Joint Nature Conservation Committee (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit*
[8] Stace, C. (2019). *New Flora of the British Isles, Fourth Edition*. C&M Floristics, Stowmarket.

2.3 Limitations

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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 survey was completed in January 2022 and thus is limited by only reflecting species seen during the winter season. Given the built nature of the site this is not considered to have adversely affected the findings.

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 Site 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 Site 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 were identified within the vicinity of the Site that had the potential to be significantly impacted by development on the Site (See Appendix A).
- Moat Wood, an area of ancient and natural replanted woodland, was located approximately 1.9km north-west of the Site.
- A number of non-statutory designated sites including local areas of conservation were present near the Site, the closest being Boxers Lake and Lonsdale Drive Woods (SLINC) located approximately 240m west of the Site. See Figure 3 for the location of SINCs.
- There were records of Japanese Knotweed (*Fallopia japonica*) and Giant Hogweed (*Heracleum mantegazzianum)* within 1km of the Site, both of which are non-native invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended)[9]. In addition, records of Cherry Laurel (*Prunus laurocerasus*) and False-acacia (*Robinia pseudoacacia*) were also present within 1km of the Site, which along with all of the above species, are also listed on the London Invasive Species Initiative (LISI)[10:] managed by the London Biodiversity Partnership.
- There were records of hedgehog (*Erinaceus europaeus*) located within 500m of the Site, which are priority species in the London BAP and as Section 41 (S41) species under the Natural Environment and Rural Communities (NERC) Act 2006[11].
- There were many records of London BAP and S41 priority bird species within 1km of the Site, notable species included the house sparrow (*Passer domesticus*) and wood pigeon (*Columba palumbus*), along with a number of other species, including grey heron (*Ardea cinerea*) and blackbird (*Turdus merula*).

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

[11] The Natural Environment and Rural Communities Act (2006) HMSO, London. Available at: Natural Environment and Rural Communities Act 2006 (legislation.gov.uk) [Accessed January 2022]

- There were records of fox (*Vulpes vulpes*) within 500m of the Site and, although not protected for conservation value, foxes are protected from inhumane killing or injury by the Wild Mammal Act (1996)[12].
- There were no relevant records of protected or notable bats, reptiles, amphibians or of badger within 500m of the Site.
- Boxers Lake waterbody was found within 250m of the Site, approximately 240m west of the Site. This was deemed to have no connectivity to the site and had no found records of great crested newt. It is, however, possible that nearby residential gardens may contain small ponds supporting amphibian populations.

3.3 Site Overview

The Site measures approximately 0.05ha in area and comprised mainly hardstanding with two blocks of brick-built garage buildings and small patches of scrub. A Hornbeam tree (*Carpinus betulus*) was also present adjacent to the Site boundary and overhanging into the Site. Both garage block buildings supported corrugated fibreboard roofs that supported a large growth of Common Ivy (*Hedera helix*), which could offer roosting and nesting potential to bats and birds respectively. Both garage blocks were assessed as having low potential to support roosting bats.

The immediate surrounding residential area was characterised by terraced housing with detached and semi-detached housing. To the east of the Site was Enfield Golf Club and Highlands School. Boxers Lake and Lonsdale Drive Woods (SLINC) was located approximately 300m north of the Site.

No trees subject to TPOs were present within the Site, or within close proximity to the Site.

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 the Site Photographs in Table 2.

- **Hardstanding**: The majority of the Site was covered by hardstanding, in the form of concrete blocks and loose rubble. Some limited ephemeral vegetation was recorded within the small cracks and crevices in the hardstanding, due to the time of year this vegetation was at limited growth stages.
- **Buildings**: Two garage blocks on site (B1 and B2) appeared partially disused, each with a large growth of Common Ivy over a corner of the roof and walls. The roof was constructed of corrugated fibreboard material and the wall of single-skin brick construction. Access for bats was present through one partially open door and gaps in edge of the roof. Where a garage door was partially open there was potential refuge for small mammals inside.
- **Dense/continuous scrub**: Two lines of scrub were present along the north-east fence line and in front of the northern garage block (figure 2). Species present included Bramble (*Rubus fruticosus agg.*), Honeysuckle (*Lonicera sp.*), Rose (*Rosa sp.*), Ash saplings (*Fraxinus excelsior*) and a Bamboo species (TN1). This scrub provided bird nesting potential and a potential refuge for small mammals such as hedgehog.
- **Scattered broadleaved tree:** A single Hornbeam tree was present outside of the southern site boundary, but with branches overhanging into the Site. This tree provided potential for nesting birds.

3.5 Protected and Notable Species

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

- **Nesting Birds:** There is the potential for nesting birds to utilise the trees and the buildings (particularly garage blocks B1 and B2 (Figure 2), given the dense stand of Common Ivy present atop these buildings), including species listed on the London BAP and S41 species, such as house sparrow. There is also potential for nesting birds to use the scrub and dead tree stump (TN2);

[12] Anon The Wild Mammal Act (1996). HMSO

- **Roosting Bats:** Features potentially suitable for roosting bats were recorded in garage blocks B1 and B2, due to the dense Common Ivy located on the roofs, gaps above the garage doors providing entry points and an outbuilding bordering the Site (B3) showing an entry point to an unknown cavity. The potential of these features to support roosting bats was categorised as 'low' based on BCT guidance[13]. Bats are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), Section 41 and London BAP species;
- **Small mammals:** Features including discarded cut vegetation (TN3) and a dead tree stump (TN2) are potentially suitable habitat for small mammals such as hedgehog. Hedgehogs are a London BAP and S41 priority species; and
- **Invertebrates:** the dead wood at TN2 may support dead-wood invertebrates.

Waterbodies within 250m of the Site were deemed to have no significant connectivity to the Site and no records were returned by the desk study, so the presence of great crested newt is extremely unlikely. Overall, within the Site, there was very limited potential for protected or notable species.

3.6 Invasive Species

During the site survey, no invasive species were found to be present, however as this survey was completed in January 2022 during the winter season, some species of plant may not have been visible (e.g. if dead stalks had been previously removed). A further survey during an optimal time of year (June-September) would confirm the presence or absence of invasive species.

[13] Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

4 POTENTIAL ECOLOGICAL CONSTRAINTS

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

4.1 Habitats / Invasive Species

The habitats on the Site were assessed as having limited green infrastructure and no protected or notable floral species. As highlighted above, only one tree was present. No trees subject to a TPO were present within the Site or within the adjacent habitats.

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 within the 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 Site 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 regards to surveys and mitigation required are presented in Table 1.

5.1 Relevant Legislation

Development of the Site 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)[14], the Countryside and Rights of Way Act (2000)[15] and the Conservation of Habitats and Species Regulations (2017) (as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019)[16] and further survey with regards to bats is recommended; and
- 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;
- The Mammal Act (1996) for any mammal species e.g. fox or hedgehog: works would need to ensure that there is no inhumane killing or injury of these species if present during 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 Site, these relate to:

- The safeguarding and replacement of trees to be lost to development;
- Creation and enhancement of biodiversity where possible; and
- Material consideration of S41 priority species in design and planning such as, house sparrow and hedgehog; and

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[17] and the National Planning Policy Framework 2021[18], new development should identify and pursue opportunities for securing measurable net gains for biodiversity and for the wider environment.

The Environment Act 2021[19] 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 onsite, however there are options to deliver these gains offsite and this would be demonstrated via the Biodiversity Metric 3.0 calculator tool[20].

[14] Anon (1981) Wildlife and Countryside Act. HMSO, London.
[15] Anon (2000) Countryside and Rights of Way Act. HMSO, London.
[16] Anon (2017). The Conservation of Habitats and Species Regulations 2017. HMSO, London.
[17] HM Government (2018) 'A Green Future: Our 25 Year Plan to Improve the Environment', HM Government, London.
[18] MHCLG (2021) National Planning Policy Framework
[19] Department for Environment, Food & Rural Affairs (2021): *Environment Act 202*1. [online] Available at: World-leading Environment Act becomes law - GOV.UK (www.gov.uk) [Accessed December 2021].
[20] Natural England (2021): The Biodiversity Metric 3.0. [online] Available at: http://publications.naturalengland.org.uk/publication/5850908674228224 [Accessed December 2021].

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[21]. 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 an S41 Priority Species 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.

[21] Greater London Authority (2021) London Plan - 2021. Available at: 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
Biodiversity General									
Ecology Report in Support of Planning	Wildlife and Countryside Act 1981 (as amended) London BAP Natural Environment and Rural Communities (NERC) 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 £3000- 5000	Low
Roosting Bats (Buildings)									
Buildings (B1, B2 and B3) within the Site exhibited features potentially 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 both garage blocks are to be removed for development	It is recommended that the garage blocks are inspected through a single emergence survey by two suitably qualified ecologists to confirm the presence or absence of roosting bats.	N/A	A bat emergence / survey undertaken on the 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 £1000 - £2000 emergence survey and a short report	Low
Nesting Birds									
All green infrastructure listed below is suitable for nesting birds. These are likely to be removed for development. • Trees; • Scrub; • Dead tree stump; and • Dense Common Ivy.	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 tree 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

Key Issues	Legislation/Policy	Assumption	Further Survey / input?	Seasonal Timing	Mitigation Required	Seasonal Timing	Programme Delay Risk	Survey/ Mitigation Cost Estimate*	Risk Rating
Green Infrastructure/ Trees									
Trees were present immediately adjacent and overhanging into Site and may be impacted by development	No Tree Preservation Orders are present on Site.	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 trees to be retained on site and adjacent trees. The replacement of trees and green infrastructure implemented via an Arboricultural Method Statement and Landscape Strategy.	N/A	None	Survey: Already undertaken Mitigation: Arboricultural Impact Assessment £1500- 2500 Bespoke Arboricultural Method Statement £1,500 £500- 1000 per day for Site supervision Design and replacement of green infrastructure not costed.	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 likely minor ecological constraints with regards to the development of this Site.

No statutory designated sites including ancient woodlands or woodlands listed on the Ancient Woodland Inventory were identified within the vicinity of the Site have the potential to be significantly impacted by development on the Site, the closest being Moat Wood, an area of ancient and natural replanted woodland, located approximately 1.9km north-west of the Site. No trees subject to TPOs were present within the Site. The closest non-statutory designated site was Boxers Lake and Lonsdale Drive Woods SLINC located approximately 300m north of the Site. Recreational pressures on designated sites have been considered, however due to the size of the Site and the limited number of units that the developable area could accommodate, additional recreational pressures are considered to be negligible.

Ecological constraints are listed below:

- The Site was dominated by hardstanding (including some limited ephemeral/ short perennial vegetation), along with two garage blocks with dense Common Ivy partially covering the roofs. Also present were small patches of dense scrub, an adjacent Hornbeam tree with branches overhanging the Site and a dead tree stump.
- There was potential for nesting birds to be utilising the scrub, dense Common Ivy and dead tree stump within the Site, and the Hornbeam tree adjacent to the Site, including priority species listed on S41 of the NERC Act 2006 and the London BAP such as house sparrow. Removal of suitable vegetation on Site would need to be conducted outside of the bird nesting season (March – August inclusive) or under an ecological watching brief (including a pre-works check no more than 48 hours before the commencement of works).
- The buildings on the Site 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 and dense growth of Common Ivy on the roof. A single emergence survey by two suitably qualified ecologists to confirm the presence or absence of roosting bats is recommended. If bats are present in buildings to be impacted by development of the Site, then a mitigation licence would likely be required for any works to proceed.
- 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 a priority species currently in decline, sensitive lighting strategy, tree replacement and new tree planting where feasible.

SITE PHOTOGRAPHS

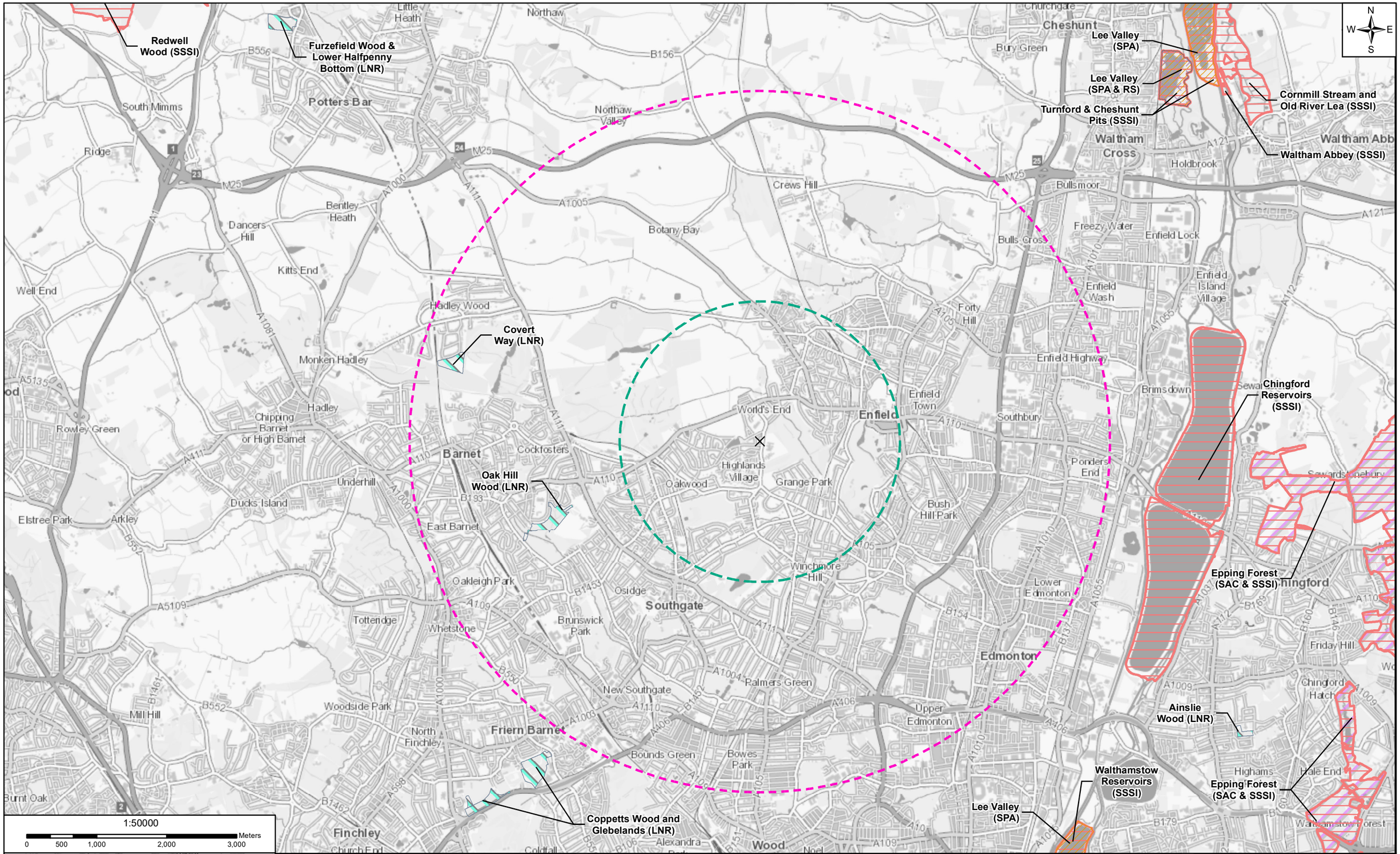
Table 2: Chiltern Dene Site Photographs

Site Photographs	
	
Photograph1: Hardstanding	Photograph 2: Garage Block (B2), showing dense Common Ivy on north-west corner of roof, a partially open door and scrub growth in front of some garages
	
Photograph 3: Garages (B1), showing Common Ivy covering north side of roof	Photograph 4: Hornbeam tree with branches overhanging into site boundary.

Site Photographs	
	
Photograph 5: Dead tree stump (TN2), small mammal, nesting bird and invertebrate potential	Photograph 6: Dense continuous scrub, small mammal and nesting bird potential
	
Photograph 7: Dense / continuous scrub, small mammal potential	Photograph 8: Vegetation pile (TN3), small mammal potential

Site Photographs	
	
Photograph 9: Bamboo species (TN1)	

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



Legend

- Site Centre
- Buffer 2km
- Buffer 5km
- Local Nature Reserve (LNR)
- Ramsar Sites (RS)
- Site of Special Scientific Interest (SSSI)
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)

THIS MAP IS BASED UPON THE ORDNANCE SURVEY MATERIAL WITH THE PERMISSION OF ORDNANCE SURVEY ON BEHALF OF THE CONTROLLER OF HER MAJESTY'S STATIONARY OFFICE.
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REV	Date	Description	Drawn	Check	Approv
01	28/01/22	Initial Issue	MS	EG	BM

Client: Levitt Bernstein

Levitt Bernstein People.Design

Client: Levitt Bernstein, United Kingdom

Site: Chiltern Dene, 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 Chiltern Dene

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



1:500

0 15 30 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
- Dense scrub
- Fence
- Building
- Hardstanding

Client

Levitt Bernstein

Levitt Bernstein
People.Design

Client
Levitt Bernstein,
United Kingdom

Site
Chiltern Dene, 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
Chiltern Dene

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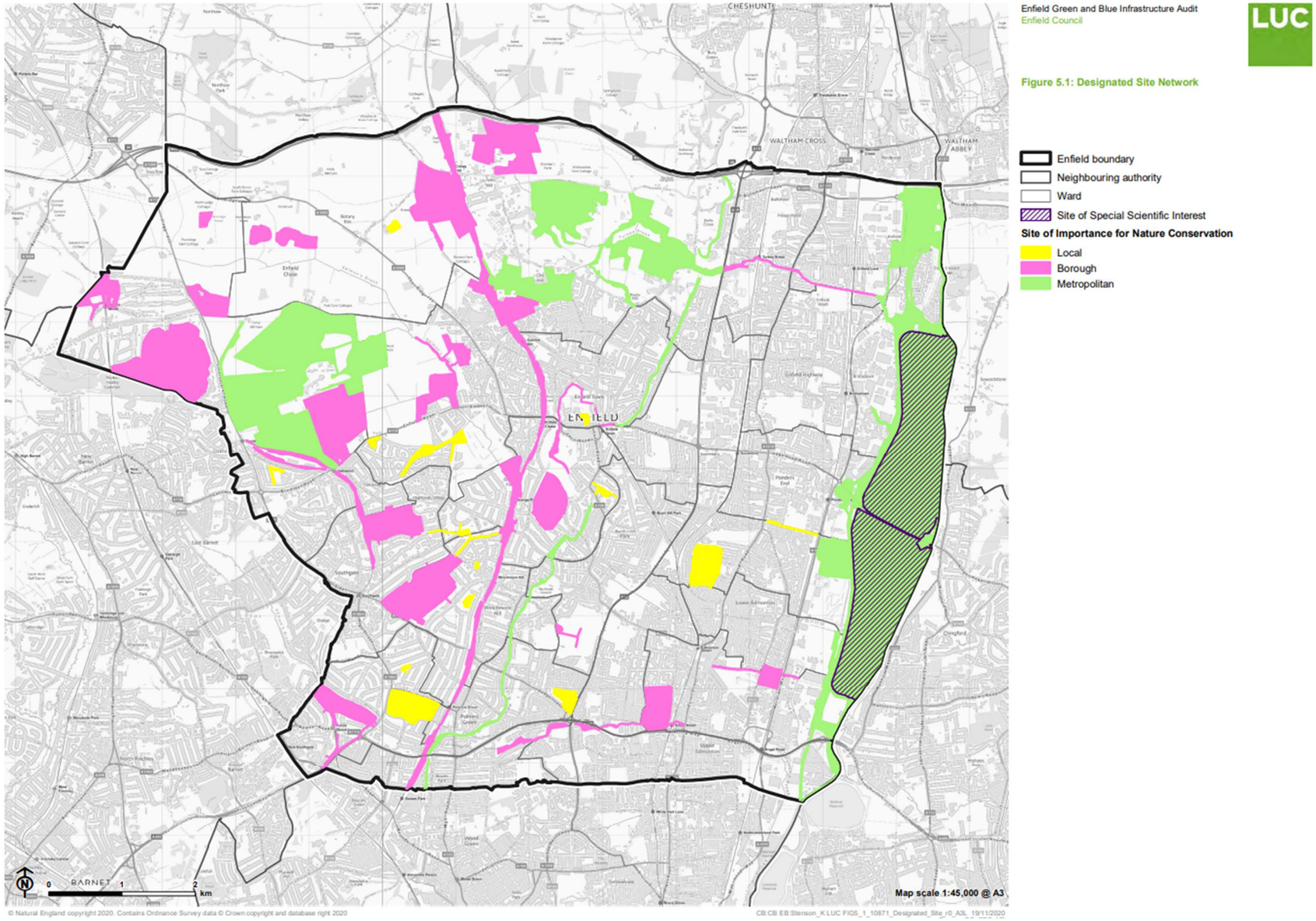
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FIGURE 3: SINCS IN ENFIELD COUNCIL[22]



[22] 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 or Statutory Designated Sites within 2km of the Site.

It was assessed that there was negligible potential for significant impacts to designated sites from any development on the Site.

Woodlands registered on the Ancient Woodland Inventory (AWI)

The desk study one areas of ancient woodland within 2km of the Site:

- Moat Wood, ancient and natural replanted woodland, located approximately 1.9km north-west of the Site.

Non-statutory Designated Sites

The desk study found the following non-statutory designated sites in proximity to the Site:

- Boxers Lake and Lonsdale Drive Woods (SLINC)
- Oakwood Park (SBINC)

Non-Statutory Designated Sites

Table A:1: Statutory Designated Sites

Site Name	Designation	Size (ha)	Distance (km)	Direction	Description
Ancient Woodland (AW)					
Moat Wood	AW	12.97	1.9	North-west	Mixed woodland of Oak (*Quercus obur, Q. petraea*), Sweet Chestnut (*Castanea sativa*), Hornbeam (*Carpinus betulus*) and Sycamore (*Acer pseudoplatanus*), with Willow (*Salix spp.*), Alder (*Alnus glutinosa*) and Ash (*Fraxinus excelsior*) in wetter areas; some of these trees may be ancient.
Site of Local Importance for Nature Conservation (SLINC)					
Boxers Lake and Lonsdale Drive Woods	SLINC	4.93	0.24	West	Consisting of a large ornamental Lake and area of woodland. Species present include Willow and Alder trees. Beside the inflow and outflow streams grow stands of reed sweet-grass *(Glyceria maxima).* The woodland tree canopy is dominated by Oak, with Ash, Hornbeam, Hawthorns And Blackthorn. Breeding wildfowl include mallard (*Anas platyrhynchos*), Canada goose (*Branta canadensis*) and great crested grebe (*Podiceps cristatus*).
Site of Borough Importance for Nature Conservation (SBINC)					

Site Name	Designation	Size (ha)	Distance (km)	Direction	Description
Oakwood Park	SBINC	26.04	0.9	South-west	Amenities included a square pond, now being converted into a wildlife area. A poplar avenue commemorates and from 1945 an avenue of Oak trees was gradually planted.

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 (LISI)[10:] 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 LISI species

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

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 daubentoni* in the vicinity of open water) noctule (*Nyctalus noctula*) and brown long-eared (*Plecotus auritus*). These are all London BAP species and S41 priority 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 as priority species under S41, London BAP and/or Birds of Conservation Concern 5[23] that have the potential to be present (Table A3).

Table A:3*:* *Birds of conservation concern associated with London*

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

[23] Birds of Conservation Concern, 2021. Available online: https://britishbirds.co.uk/content/status-our-bird-populations [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 [24]. 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:

- Fox (*Vulpes Vulpes)*; and
- Hedgehog (*Erinaceus europaeus*).

Table A:4: Designated sites descriptions

Designation	Description
Special Areas of Conservation (SAC) Special Protected Areas (SPAs)	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
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 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.

[24] Capital Great Crested Newts Revisited (2012). Project report – Public Web Edition

Designation	Description
Sites of Metropolitan Importance for Nature Conservation (SMINCs)	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
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	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions[a] 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). 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.	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. 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.
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).	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. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
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.	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. 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. Site is close to and connected to known roosts.

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	*Rhinolophus ferrumequinum*	Endangered BAP Priority	Extinct	Last Greater London record from Oxleas Wood in 1953.
Lesser horseshoe bat	*Rhinolophus hipposideros*	Endangered BAP Priority	Extinct	Last Greater London record from Abbey Wood (Woolwich) in 1952-3.
Whiskered bat	*Myotis mystacinus*	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	*Myotis brandtii*	Vulnerable	Rare	
Natterer's bat	*Myotis nattereri*	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	*Myotis daubentoni*	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	*Eptesicus serotinus*	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	*Nyctalus noctula*	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	*Nyctalus leisleri*	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).

Common Name	Latin Name	UK Status	London Status	Notes
Common pipistrelle	*Pipistrellus pipistrellus*	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	*Pipistrellus pygmaeus*	BAP Priority	Common	Also widespread and probably London's commonest bat. Apparently more associated with wetland habitats than its close relative, *P. pipistrellus*. Known roosts currently number 15-25?, but many more pass undetected.
Nathusius's pipistrelle	*Pipistrellus nathusii*	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	*Plecotus auritus*	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
Nesting Birds	The legislation relevant to the potential ecological constraints on site associated with nesting birds. 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: • intentionally kill, injure or take any wild bird; • intentionally take, damage or destroy the nest of any wild bird while that nest is in use or being built; or • intentionally take or destroy an egg of any wild bird. It is also an offence to: • 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 • disturb dependent young of such a bird. • Species listed on Schedule 1 include the black redstart, barn owl (*Tyto alba*), Cetti's warbler (*Cettia cetti*) and kingfisher (*Alcedo atthis*). 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.
Badger	Badgers are protected from inhumane killing or injury under Badgers Act (1992)[25], this also protects their setts from damage and prohibits blocking access to their setts.
Bats	The legislation relevant to the constraint identified associated with bats. Bats are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. 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: • 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; • intentionally or recklessly obstruct access to any structure or place used for shelter or protection by a wild animal listed on Schedule 5; • 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. Bats are also listed on Schedule 2 (European protected species of animals) of the he 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: • deliberately capture, injure or kill any wild animal of a European protected species; • 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

[25] Protection of Badgers Act 1992 (as amended)

Receptor	Legislation
	hibernate or migrate; or to affect significantly the local distribution or abundance of the species); • damage or destroy a breeding Site or resting place of such an animal; or • 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.
Great Crested Newts	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: • Intentionally or recklessly kill, injure or take a great crested newt; • Possess or control any live or dead specimen or anything derived from a great crested newt; • Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt; and • Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose.
Reptiles	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: * • intentionally kill or injure a reptile; or * sell, offer or expose for sale, or • to possess or transport for sale alive or dead reptile or any part of, or anything derived from, a reptile.
Other Mammals	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. 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.
Non Native Invasive Species	Numerous species are listed on Schedule 9 (of the Wildlife and Countryside Act 1981, 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 (*Fallopia japonica*) which is also covered by the Environmental Protection Act (EPA) 1990 which designates this as a controlled waste.

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
Red list criteria	Globally threatened
	Historical population decline in UK during 1800–1995
	Rapid (> or =50%) decline in UK breeding population over last 25 years Rapid (> or =50%) contraction of UK breeding range over last 25 years
Amber list criteria	Historical population decline during 1800–1995, but recovering; population size has more than doubled over last 25 years
	Moderate (25-49%) decline in UK breeding population over last 25 years
	Moderate (25-49%) contraction of UK breeding range over last 25 years
	Moderate (25-49%) decline in UK non-breeding population over last 25 years
	Species with unfavourable conservation status in Europe, termed Species of European Conservation Concern (SPEC)
	Five-year mean of 1–300 breeding pairs in UK
	> or =50% of UK breeding population in 10 or fewer sites, but not rare breeders
	> or =50% of UK non-breeding population in 10 or fewer sites
	> or =20% of European breeding population in UK
	> or =20% of northwest European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK
Green list	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)[26]: 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** (NERC) Act 2006[27] 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[28] 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)[29]:** 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)[30]", 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

[26] MHCLG (2021) National Planning Policy Framework .
[27] The Natural Environment and Rural Communities Act (2006) HMSO, London. Available at: Natural Environment and Rural Communities Act 2006 (legislation.gov.uk)
[28] Department for Environment, Food and Rural Affairs (2011) *Biodiversity 2020: A strategy for England's Wildlife and Ecosystem Services*
[29] 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
[30] 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

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 [31], 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 (LISI)**: Managed by the London Biodiversity Partnership, LISI lists non-native invasive species that should be controlled in London.
- **The London Plan (2021)** [32]. 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)[33]:** 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)[34]:**
    - 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.

[31] 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
[32] Greater London Authority (2021) London Plan - 2021. Available at: https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf
[33] Greater London Authority (2016) London Plan 2016 Implementation Housing Supplementary Planning Guidance adopted in March 2016
[34] Greater London Authority (2011), The London Plan *Sustainable Design and Construction Supplementary Planning Guidance adopted in April 2014*

- **London Environment Strategy – (2018)**[35] 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.

[35] Greater London Authority (2018), London Environment Strategy. Available at: https://www.london.gov.uk/sites/default/files/london_environment_strategy_0.pdf

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