

# 12 SPRING COURT ROAD ENFIELD

## INTERIM ECOLOGICAL IMPACT ASSESSMENT (EcIA)



Ecology  
Archaeology  
Arboriculture  
Landscape Architecture

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## **QUALITY ASSURANCE**

This report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing (2nd Edition, December 2017).

The facts stated in this report are true to the best of our knowledge and belief, and any opinions expressed are held genuinely and in accordance with the accepted standards of the profession. ACD Environmental Ltd is a CIEEM Registered Practice.

Client:	Diane Smith
Site/job:	12 Spring Court Road
Author:	B. Hicks
Technical review:	L. Gilbert



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# 1 EXECUTIVE SUMMARY

Purpose of report	To provide an interim assessment of a proposed development at 12 Spring Court Enfield, clearly identifying any 'significant effects' on important ecological features (including designated sites or protected species), and detailing any mitigation and/or compensation measures required, and how these could be secured. The report also confirms how the proposed development could achieve Biodiversity Net Gain.
Description of proposed development	Full planning permission is sought for construction of 4 new homes with car parking and landscaping.
Brief description of the Site	The proposed development site (hereafter referred to as the Application Site) is a parcel of land comprising buildings and hardstanding, trees, ornamental shrub and semi-improved grassland. It is situated within a residential area on the northern side of Enfield.
Designated nature conservation sites	The Application Site is within the IRZ of several designated sites, however residential development is not listed as a risk to those sites.
Key habitats	Habitats on site are considered to be of negligible value with the exception of trees.
Key species	The Application Site has high suitability to support roosting bats within the main building on site. Three emergence or re-entry surveys are required.
Key impacts & mitigation/compensation measures	The proposed development will result in the loss of an area of semi-improved grassland and hardstanding. The buildings will also be demolished.
Mitigation	Mitigation proposals will be dependent on the findings of the bat surveys. Detailed mitigation will be outlined in an updated EclA Report following the further surveys.
Enhancements	To achieve Biodiversity Net Gain, it is proposed that new native hedgerows are planted, invertebrate boxes are installed along with hedgehog boxes, bat and bird boxes, rain planters and green roofs.  The proposed development will lead to a <b>31.94%</b> net gain in habitats and a <b>4259.02%</b> net gain in hedgerows.
Conclusions	Providing the measures outlined within this report are followed, the proposed development will comply with Paragraph 174-182 of the NPPF, and Core Policy 36 of the Enfield Council Core Strategy.

## 2 INTRODUCTION

2.1. This report provides an interim assessment of the ecological effects of the proposed development of an area of land known as 12 Spring Court Road, Enfield EN2 8JP hereafter referred to as the Application Site (see Image 1). The principal author of this report is Brian Hicks. The client is Diane Smith.

### Background

2.2. The Application Site is located on the northern edge of Enfield approximately 1.6km to the northwest of Enfield Town Centre. The grid reference for the centre of the Application Site is TQ31029813.

2.3. The Application Site is situated within a residential area, with houses present to the north and south. Spring Court Road forms the eastern boundary with residential property beyond. Houses are also present to the west, with arable land present to the north-west. The Application Site is shown in **Image 1**.

2.4. This application is for four new dwellings, comprising a semi-detached house and two detached houses, all with gardens. The existing property will be demolished. A proposed development plan is shown in **Appendix 2**.

### Competence

2.5. This report has been written by Brian Hicks, ACD Environmental. Brian is a Senior Ecologist and has been involved in a wide range of surveys including Extended Phase 1 Habitat Surveys and Phase 2 surveys for protected species and reports including Preliminary Ecological Appraisals (PEAs) and Ecological Impact Assessments (EclAs). Brian is a Full Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds Natural England Class Licences for bats, hazel dormouse *Muscardinus avellanarius* and great crested newt *Triturus cristatus*.

2.6. This report has been reviewed by Lily Gilbert, Principal Ecologist at ACD Environmental Ltd who has over 10 years' experience and specialises in European Protected Species mitigation and EclA. She is a full member of CIEEM (MCIEEM) and holds Natural England Class licences to survey for bats (level 2), barn owl, dormouse *Muscardinus avellanarius* and great crested newt.

## **Purpose of the report**

2.7. The purpose of this Interim Ecological Impact Assessment (EclA) is as follows:

- To identify and describe all potentially significant ecological effects associated with the proposed development
- To set out the mitigation measures required to ensure compliance with nature conservation legislation and relevant planning policy, and to address any potentially significant ecological effects
- To identify how mitigation measures will/could be secured
- To identify any significant residual ecological effects and set out any compensation measures proposed to address these
- To identify appropriate enhancement measures in order to achieve Biodiversity Net Gain
- To set out the requirements for post-construction monitoring



**Image 1:** Application Site location and approximate site boundary shown in red. Map data (2017): Google. Imagery (2017): Getmapping plc.

### 3 PLANNING POLICY AND LEGISLATION

#### Legislation

3.1. The following pieces of legislation are of specific relevance to this assessment:

- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019<sup>1</sup>. This piece of legislation is of relevance because the Application Site has potential to support bats, which are European Protected Species (EPS).
- Wildlife and Countryside Act 1981<sup>2</sup> (as amended, including by the Countryside and Rights of Way Act 2000). This piece of legislation is relevant because the Application Site is within the zone of influence of a Site of Special Scientific Interest (SSSI), which is protected in England under this Act.
- Natural Environment and Rural Communities (NERC) Act 2006<sup>3</sup>. Section 41 includes lists of habitats and species recognised as of 'principal importance' for the conservation of biodiversity. Section 40 of the NERC Act 2006 requires all public bodies to have regard for biodiversity conservation when carrying out their function. This is commonly referred to as the 'biodiversity duty'.

3.2. The following pieces of legislation have been considered, but are not considered to be of specific relevance in this case:

- Protection of Badgers Act 1992 (no badger setts are present within the Application Site or sufficiently close to be affected)
- Hedgerows Regulations 1997 (the Regulations do not apply to the hedgerows in this context)

#### Planning policy

##### National Planning Policy Framework 2021<sup>4</sup>

3.3. Paragraph 174-182 of the NPPF relates to 'Conserving and enhancing the natural

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<sup>1</sup> Great Britain. *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019* No.579 [online]. Available from: <https://www.legislation.gov.uk/ukdsi/2019/9780111179512/contents>

<sup>2</sup> Great Britain. *Wildlife and Countryside Act 1981* [online]. Available from: <http://www.legislation.gov.uk/ukpga/1981/69/contents>

<sup>3</sup> Great Britain. *Natural Environment and Rural Communities Act 2006* [online]. Available from: <http://www.legislation.gov.uk/ukpga/2006/16/contents>

<sup>4</sup> Great Britain. *National Planning Policy Framework (2021)*. Available at: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>



environment'. Paragraph 180 of the NPPF states that when determining planning applications, local planning authorities should apply the following principles:

- If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused
- Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest
- Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists
- Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

Enfield Core Strategy 2010-2025<sup>5</sup>

3.4. Core Policy 36 (Biodiversity) states the following:

1. CORE POLICY 36 BIODIVERSITY

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<sup>5</sup>Enfield Council. Core Strategy Adoption November 2010.

- The Council will seek to protect, enhance, restore or add to biodiversity interests within the Borough, including parks, playing fields and other sports spaces, green corridors, waterways, sites, habitats and species identified at a European, national, London or local level as being of importance for nature conservation by: Continuing to protect, restore, and enhance sites, habitats and species identified for their biodiversity importance at the national, London, or borough level.
- The Development Management Document will set out criteria to assess development proposals that are likely to have an adverse ecological impact; Requiring improvements to biodiversity provision, with priority given to areas of deficiency identified in the Enfield Open Space Study and proposals which assist in achieving Biodiversity Action Plan objectives.
- Development will be permitted that conserves and enhances biodiversity and geodiversity, providing net gains where possible.

## 4 METHODOLOGY

### Scope of assessment

- 4.1. The EclA focuses on 'important ecological features', i.e. those which are considered to be of relevance to the decision-making process and could be affected by the proposed development. Important ecological features include protected species, habitats/species of 'principal importance' for biodiversity conservation (i.e. Section 41 habitats/species<sup>6</sup>), birds of conservation concern<sup>7</sup>, invasive non-native plant species<sup>8</sup>, and habitats and species identified as priorities for conservation.

### Zone of influence

- 4.2. The 'zone of influence' (ZOI) is the area over which important ecological features (on-site or off-site) may be affected as a result of the proposed development and associated activities. The ZOI can vary for different ecological features, depending on their sensitivity to environmental change.
- 4.3. The ZOI for statutory designated sites has been informed by Natural England's Sites of Special Scientific Interest (SSSIs) Impact Risk Zones<sup>9</sup> (IRZs). IRZs define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts. This has been determined as part of the desk study, as discussed below. In this case it is clear that the Application Site is within the IRZ of the several SSSI's.

### Desk Study

- 4.4. The MAGIC website<sup>10</sup> was used to carry out a data search for SSSIs, Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) with an IRZ that falls within the Application Site, in January 2023.

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<sup>6</sup> Section 41 (41) of the Natural Environment and Rural Communities (NERC) Act, which came into force on 1st October 2006, requires the Secretary of State to publish a list of habitats and species which are of principle importance for the conservation of biodiversity in England.

<sup>7</sup> Red list species are those that are globally threatened, whose population or range has declined rapidly in recent years (i.e. by more than 50% in 25 years), or which have declined historically and not recovered. Amber list species are those whose population or range has declined moderately in recent years (by more than 25% but less than 50% in 25 years), those whose population has declined historically but recovered recently, rare species (<300 breeding pairs or <900 wintering individuals), those with internationally important populations in the UK, those with localised populations, and those with an unfavourable conservation status in Europe. Species that meet none of these criteria are Green-listed.

<sup>8</sup> Invasive non-native plants (Section 14) on Schedule 9 of the Wildlife & Countryside Act 1981 (as amended).

<sup>9</sup> Natural England (June 2019). Natural England's Impact Risk Zones for Sites of Special Scientific Interest (For use by Local Planning Authorities to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites and determine when to consult Natural England).

<sup>10</sup> Multi Agency Geographic Information for the Countryside [online]. Available at: <https://magic.defra.gov.uk/>

## Field surveys

- 4.5. A summary of ecological field surveys is provided in Table 2. Descriptions of full survey methods are provided in Appendix 2.

**Table 2:** Field surveys

Survey	Surveyor/s	Survey date/s	Study Area	Relevant guidelines
Extended Phase 1 Habitat Survey	Brian Hicks MCIEEM	13 <sup>th</sup> January 2023	Red line boundary	JNCC (2010)

## Assessment methodology

- 4.6. The habitats and species evaluations and likely effects are made with reference to the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment<sup>11</sup>.
- 4.7. The Small Sites Metric was used to calculate the Biodiversity Net Gain of the Proposals. The full methodology is provided in Appendix 5.
- 4.8. The importance of ecological features has been assessed by carrying out a suite of specialist surveys (Table 2) to determine whether protected species/habitats, and/or species/habitats of conservation concern are present in the Application Site or its ZOI, then comparing their status at the international/national/county/regional/local scale, through the use of available contextual information, to establish the importance of those features in a geographical context.
- 4.9. The overall effect of the proposed development on a given feature has been predicted, considering the baseline data collected through desk study and field survey, and the various impacts expected to occur. An assessment has then been made as to whether the effect on each important ecological feature is likely to be significant or not.
- 4.10. Significance is the weight that should be attached to effects when decisions are made. For the purpose of EclA, a likely significant effect is an effect that either supports or undermines

<sup>11</sup> CIEEM (2019). Guidelines for Ecological Impact Assessment in the UK and Ireland. Terrestrial, Freshwater and Coastal, Version 1.1. updated September 2019. Chartered Institute of Ecology and Environmental Management, Winchester.

biodiversity conservation objectives for important ecological features (which could be species populations/groups of species, habitats, or a designated site), or for biodiversity in general. Effects have been considered significant at a wide range of scales, from national to local.

- 4.11. A sequential process has been adopted to avoid/mitigate, and if required, compensate for significant negative ecological effects. This is referred to as the 'Mitigation Hierarchy'. Avoidance includes measures to change the design of the proposed development to avoid an impact occurring. Mitigation includes measures to avoid or reduce the negative impacts of the proposed development. Compensation addresses significant negative residual effects (those likely to occur after avoidance and mitigation have been considered). It is this objective of compensation, and not its location, that distinguishes compensation from 'mitigation'.
- 4.12. In EclA, it is only essential to assess and report significant residual effects that remain after mitigation measures have been taken into account. However, the potential significant effects without mitigation as well as the residual significant effects following mitigation have been presented where the mitigation proposed is experimental, unproven or controversial and/or to demonstrate the importance of securing the measures proposed through planning conditions or obligations.

### **Valuation**

- 4.13. The value of important ecological features (sites, habitats and species) is assigned according to their scale of importance using the following terms:
- International importance – ecological features of international importance such as SPAs and SACs, and/or sites that support internationally-important populations of species.
  - National importance – ecological features of national importance such as SSSIs, features which meet the criteria for designation as a SSSI, and/or sites that support nationally-important populations of certain species.
  - Regional importance – ecological features of regional importance, such as a species population that is of importance at a scale greater than the County, but does not meet the criteria for National Importance
  - County importance – ecological features of county-scale importance, including features that have been designated as local wildlife sites, or meet the criteria for designation as a local wildlife site, and/or county-important populations of species

- Local importance – ecological features of local importance, including habitats or species populations listed as being of nature conservation importance (e.g. S41, local BAP, or listed in local planning policy) which are not considered to be of County importance by virtue of the quality, size/number, rarity, the extent to which they are threatened throughout their range, or to their rate of decline.

### **Precautionary principle**

- 4.14. The evaluation of significant effects is based on the results of the ecological surveys carried out in the Application Site and other available evidence. In cases of reasonable doubt, where it is not possible to robustly justify a conclusion of no significant effect, a significant effect is assumed. Where uncertainty exists, it has been duly acknowledged.

## 5 BASELINE ECOLOGICAL CONDITIONS

### Context

- 5.1. The Application Site is a large, detached house with associated gardens, located on the northern edge of Enfield approximately 1.6km to the northwest of Enfield Town Centre. Residential properties are to the north and south, with Spring Court Road forming the eastern boundary with residential properties beyond. Arable land is adjacent to part of the western boundary.

### Designated Sites

- 5.2. There are no SSSIs, SACs and SPAs within 5km of the Application Site. Several of these sites have IRZs within the boundary of Application Site, however residential development is not one of the risks listed.
- 5.3. There are no Local Nature Reserves within 3km of the Application Site. The nearest sites are Oak Hill Wood LNR approximately 3.9km to the south-west and Covert Way LNR approximately 4.4km to the west.

### Habitats

- 5.4. Habitats are listed in order of importance. All the features described are shown on the Phase 1 Habitat Map in Appendix 1.

#### *Semi-improved grassland*

- 5.5. The garden is present to the south and west of the house and is predominantly semi-improved grassland maintained as a lawn. Species recorded include dandelion *Taraxacum officinale*, daisy *Bellis perennis*, creeping thistle *Cirsium arvense*, annual meadowgrass *Poa annua*, Yorkshire fog *Holcus lanatus*, and self-heal *Prunella vulgaris*. A narrow strip of the same habitat is present on the eastern side of the house.

#### *Ornamental Shrub*

- 5.6. Ornamental shrub is present on the north-west edge of the garden with heather *Calluna* sp., privet *Ligustrum ovalifolium* and laurel *Laurus* sp. present.

#### *Hedgerow (non-native)*

- 5.7. A Leyland cypress *Leylandii* sp. hedgerow is present on the north-western boundary.

### *Scattered Trees*

- 5.8. Several trees are present within the garden, including Norway spruce *Picea abies*, holly *Ilex aquifolium* and cypress *Cupressus* sp.

### *Buildings and Hardstanding*

- 5.9. Three buildings are present within the Application Site; the house, a garage and a wooden shed. These buildings are described in more detail in the bat section below.
- 5.10. Hardstanding is present around the western side of the house (patio), and in the southern part of the garden (driveway made up of laid bricks).

### **Invertebrates**

- 5.11. The Application Site comprises common and widespread habitats and is considered to be of negligible value for rare or notable invertebrates.

### **Great crested newts**

- 5.12. No waterbodies are present within the Application Site. The habitats within the Application Site are unsuitable to support foraging or sheltering great crested newts or other amphibians.
- 5.13. One pond is present within 500m of the Application Site, this pond is within hospital grounds approximately 200m to the north-east. Surveys carried out between 2017 and 2019 established that great crested newts were absent from this pond.
- 5.14. Great crested newt and other amphibians are considered likely absent and are not considered further in this report.

### **Reptiles**

- 5.15. The gardens of the Application Site are well managed with little suitability to support reptiles. Surrounding habitats are also considered unsuitable, being arable fields and similarly managed residential gardens. Therefore, reptiles are not considered further.

### **Birds**

- 5.16. Trees and hedgerows within the Application Site are suitable for nesting birds and the Application Site therefore is considered to have site value for nesting birds.



## Bats

- 5.17. The MAGIC search showed three granted European Protected Species Mitigation (EPSM) licences for bats within 1km of the Application Site. The closest is approximately 70m to the south-east and was for the destruction of a common pipistrelle *Pipistrellus pipistrellus*, resting place granted in 2018 (reference number: 2018-36841-EPS-MIT). The next closest is 420m to the south-east and was for the destruction of a common pipistrelle resting place (2017-27551-EPS-MIT). The third site is 870m to the east and was granted for destruction of a breeding site of common pipistrelle and Nathusius' pipistrelle *P. Nathusii* in 2020 (2020-49229-EPS-MIT).
- 5.18. 12 Spring Court Road is a two-storey residential property of brick construction with a pitched roof clad in clay tiles. The roof tiles are in generally good condition and are close fitting with a few exceptions. Three small gable windows and a large gable are present on the eastern side of the building. Clay hanging tiles are present on the gables (Photographs 1 and 2).
- 5.19. The western side of the building is clad in clay roof tiles; however, the interior room height on the first floor has been increased with a bitumen felt clad flat roof extension (Photograph 4). A small extension is also present on the north-western side with a bitumen clad flat roof with a small area of clay tiles.
- 5.20. Gaps are present beneath hanging tiles on the eastern gables, and a gap is present in the south-eastern facing roof tiles on the eastern gable. Gaps beneath the soffit are present on the western side of the building, around the extension, which leads into a small cavity beneath the roof tiles.
- 5.21. Internally the roof is lined with bitumen felt which is in generally good condition.
- 5.22. No evidence of bats or bat activity was recorded inside the loft space, although several mouse droppings were recorded.
- 5.23. The building which will be impacted by the proposed construction works is considered to have **high suitability to support roosting bats** due to the quantity of available roosting features.



**Photograph 1:** Southeast corner of building.



**Photograph 2:** North eastern view of building



**Photograph 3:** Missing tile on south-east side of gable



**Photograph 4:** Western side of house

5.24. Two other buildings are present within the Application Site. A brick shed is present in the western corner of the grounds, with a corrugated asbestos/ cement board roof. This building does not have any gaps suitable for roosting bats to enter and is therefore assessed as having negligible suitability.

- 5.25. A wooden shed is present on the southern edge of the garden. This shed has a pitched bitumen clad roof. No gaps are visible, and it is assessed as having negligible suitability to support roosting bats.
- 5.26. The trees within the Application Site were assessed as having negligible suitability to support roosting bats.

### **Hazel Dormouse**

- 5.27. No dormouse licence returns are noted on MAGIC within 5km of the Application Site.
- 5.28. Habitats within the Application Site are generally unsuitable for dormice, the only hedgerow limited to Leyland cypress which lacks the required availability of food.
- 5.29. Whilst the Application Site is connected to an offsite hedgerow to the west, this hedgerow does not link to other suitable habitats.
- 5.30. It is considered that dormouse are likely absent from the Application Site.

### **Badgers**

- 5.31. No evidence of badger was recorded during the site visit.
- 5.32. Habitats on site are generally unsuitable for badger and the site is not linked to any other suitable off site habitats.
- 5.33. Badger are therefore considered likely absent.

### **Other mammals**

- 5.34. It is likely that hedgehog *Erinaceus europaeus* would access the Application Site if present in the local area.

## 6 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

- 6.1. In accordance with CIEEM guidelines, the following important ecological features have been identified with the potential to be affected by the proposed development and carried forward for further assessment:

**Table 3:** Important ecological features brought forward for impact assessment

Statutory sites	None
Habitats	Trees
Species and species groups	Nesting Birds and Roosting Bats

### Trees

- 6.2. There is a risk of damage to retained trees and hedgerows during construction. Root Protection Zones (RPZs) will be established around all retained trees prior to the start of works within the Application Site. Boundary habitats will be fenced off using Heras fencing during construction to protect them from traffic.

### Nesting Birds

- 6.3. The proposed development will retain the boundary hedgerow and trees within the Application Site. If it is necessary to remove hedgerows and trees then there is a risk of destruction or disturbance of nesting birds.
- 6.4. If clearance of these habitats is required then it is recommended that clearance will be undertaken following a phased methodology outside the bird nesting season (generally taken to be March to August inclusive). If this is not possible then the area must be checked in advance, by an ecologist, for the presence of nesting birds. If there is no evidence of nesting birds, the clearance work must be completed within 48 hours of inspection. If any active nests are identified, vegetation clearance/ demolition must cease and an appropriate buffer zone (as determined by the ecologist, usually approximately 5m) must remain until it has been confirmed that the young have fledged and the nest is no longer in use.

## **Bats**

- 6.5. The house within the Application Site has suitability for roosting bats in the form of gaps beneath roof and hanging tiles. As the building will be demolished there is a risk of harm to roosting bats.
- 6.6. The house will be subject to three emergence or re-entry surveys within the appropriate survey season (May- September inclusive). If bats are recorded using the building, then a European Species mitigation Licence (EPSM) will be required from Natural England before demolition works can commence.
- 6.7. Without appropriate consideration, foraging and commuting bats are likely to be impacted by the increase in lighting from the new development. This could alter and restrict bat movements within the local area and lead to a loss in available foraging habitat for the local bat populations.
- 6.8. Lighting has been shown to have an adverse effect on bats through direct avoidance of illuminated areas and increased mortality of invertebrate prey. Where inappropriate lighting occurs close to roost sites, bats may abandon their roost or delay their emergence, which limits their foraging opportunities. Lighting a commuting or foraging route may also impact upon the integrity of a roost, even if the roost itself is not directly affected.
- 6.9. Artificial lighting will be minimised within the scheme and new lighting will have hoods and cowls to minimise light spill into the sky or onto trees. Consideration will be given to:
- Lighting will only be installed where there is significant need, a minimal amount of light will be used, and lighting will be dimmed during periods of low public use;
  - Avoid the use of high-pressure sodium lights, white LED broad spectrum lights and short wavelength 'blue' white sources throughout the Application Site;
  - Using low spectrum lights with no UV content such as warm white LED; and
  - Lights must have focused luminance on their target area preventing light pollution into other areas, for example using directional downlights, illuminating below the horizontal plane; using the lowest necessary lighting column and ideally achieve beneath 1 lux at 2m above ground level.
- 6.10. If suitable protection measures are followed and the suggested mitigation put in place, the overall residual impacts will be neutral.

## **Other Ecological Features**

### **Badger**

- 6.11. Badgers have been scoped out of further assessment because no badger setts or evidence of foraging or commuting badgers has been recorded within the Application Site. An update walkover of the Application Site will be carried out within three months of the start of works on-site to ensure the conditions remain the same.
- 6.12. It is possible that badgers occasionally pass through the Application Site, therefore the following precautionary measures will be followed during the construction phase of the development.
- Trenches will be covered at the end of each working day and any temporarily exposed pipes will be capped to prevent badgers or hedgehogs gaining access during the night;
  - Any trenches or deep pits which must be left open overnight will be provided with a means of escape should an animal enter. This would simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface;
  - Any trenches/pits will be inspected each morning to ensure no animals have become trapped overnight. Should a badger become trapped in a trench it may attempt to dig itself into the side of a trench and form a temporary sett. Should a trapped badger be encountered, the advice of an ecologist must be sought immediately. If necessary, the ecologist will contact the RSPCA or a vet who will move the badger to safety or provide treatment if required;
  - The storage of topsoil or other 'soft' building material within the construction site will be given careful consideration. Badgers may readily adopt such mounds as setts. To avoid this, mounds will be kept to a minimum and any essential mounds will be subject to daily inspections;
  - The site must be kept clear of food and litter, particularly overnight; and
  - The storage of any chemical within the construction site will be contained in such a way that they cannot be consumed or knocked over by any wildlife.

### **Hedgehog**

- 6.13. Areas of ornamental shrub will be cleared carefully, using hand tools. If a hedgehog is found at any point, works will stop and the hedgehog will be carefully moved to a suitable area with vegetative cover outside of the Application Site.

6.14. Hedgehog links will be created under new close-board/solid fences (at the boundary or between plots) and existing boundary fences to maintain connectivity for hedgehog through the Application Site.

## 7 BIODIVERSITY NET GAIN

### Biodiversity Enhancements

7.1. In order to comply with Local and National planning policy and planning policy guidance, the following enhancements will be delivered as a commitment to the planning application:

- Two invertebrate boxes will be installed on houses and garages. Recommended boxes include: Green & Blue bee bricks and Woodstone Insect Blocks.
- Two HH7 Hogilo Hedgehog House's will be provided within boundary habitat. The boxes will be located within cover, close to vegetation and out of the prevailing wind.
- The Application Site will be enhanced for roosting bats through the provision of 4 integrated bat boxes within the new buildings. Recommended boxes include: Habibat Unfaced Bat Box or similar.
- Four integrated Habibat sparrow nest boxes will be installed within the buildings on-site.
- Sustainable Urban Drainage will be achieved through the use of rain planters planted with appropriate native plant such as bugle *Ajuga reptans*, yellow flag iris *Iris pseudocorus*, purple loosestrife *Lythrum salicaria* and Bistort *Persicaria bistorta*.
- Green roofs are proposed for the rear of plots 1 and 2. These will be extensive green roofs which require little management and are planted with sedums, sempervirens and moss. These roofs will contribute to sustainable urban drainage and provide a habitat for a range of invertebrates.
- New hedgerows are proposed between gardens. These will be native species and include a range of plants such as hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, spindle *Euonymus europaeus*, holly *Ilex aquifolium*, guelder rose *Viburnum opulus* and field maple *Acer campestre*.
- Hedgehog friendly fencing (hedgehog 'highways') will be installed across the proposed development to ensure hedgehogs within the locality can commute and forage across the Application Site. Any closed board fencing will be raised to leave a gap of 13cm under the fence or small holes (13cmx13cm) will be cut into fencing at ground level. Gaps of this size are too small for most pets to move through but will allow hedgehogs to move between gardens.



## 8 BIODIVERSITY NET GAIN

8.1. The Small Sites Metric has been completed for the Application Site. This has been calculated using baseline habitat and species information collected during the Extended Phase 1 Habitat Survey and using post-development landscape proposals<sup>12</sup>. A full methodology is provided in Appendix 5. A completed version of the Small Sites Metric has been submitted in full as a separate Excel document.

**Table 4:** A summary of the results of the Small Sites Metric.

<b>On-site baseline</b>	Habitat units	0.7168
	Hedgerow units	0.0160
<b>On-site post-intervention</b>	Habitat units	0.9466
	Hedgerow units	0.6974
<b>Total net unit change</b>	Habitat units	0.2291
	Hedgerow units	0.6814
<b>Total net % change</b>	Habitat units	<b>31.94%</b>
	Hedgerow units	<b>4259.02%</b>

8.2. The results of the Small Sites Metric indicate that the development of the Application Site will lead to a **31.94%** net gain in habitats and a **4259.02%** net gain in hedgerows. This is predominantly due to the current composition of the site, being predominantly developed land and lawn. The trading rules are satisfied.

8.3. The following habitat and hedgerow creation measures have been incorporated within the landscape masterplan and are included within the Small Sites Metric calculations. For details on the locations of these habitats please refer to the habitat creation plan which is presented within Appendix 3.

- Inclusion of good quality amenity turf.
- Inclusion of new native hedgerow planting.
- Inclusion of new wildflower grassland.
- Green roofs on two of the new buildings.
- Inclusion of twenty native trees.

<sup>12</sup>Kirby Cove Architects. Site Location Plan and Proposals Plan. September 2022. DWG.2389/300/P1.

## 9 CONCLUSIONS

- 9.1. The Application Site has suitability to support roosting bats. Further surveys are required to determine the use of the building by bats and the requirement for a EPSM licence. An update EclA will be prepared following the further surveys.
- 9.2. The proposals for four new homes will result in the loss of buildings and hardstanding and a limited quantity of semi-improved grassland.
- 9.3. In order to demonstrate Biodiversity Net Gain, the Applicant has committed to new native hedgerow planting, invertebrate boxes, hedgehog houses, bird and bat boxes, green roofs, and rain planters.
- 9.4. The proposed development will result in a **31.94%** net gain in habitats and a **4259.02%** net gain in hedgerows.
- 9.5. Assuming the implementation of the mitigation and enhancement measure set out in this report, the proposed development would conform to Policy 36 of the Enfield Council Core Strategy 2010-2025 (Adopted November 2010) and would deliver biodiversity enhancements in accordance with the NPPF.
- 9.6. The proposed mitigation includes measures to ensure compliance with the legislation relating to protected species and invasive non-native plant species.

# APPENDIX 1: PHASE 1 HABITAT MAP



- Point
  - Tree
- Line
  - Red Line
  - Species poor intact hedgerow
- Polygon
  - A2.1 = dense scrub
  - B2.2 = semi-improved neutral grassland
  - J3.6 = buildings
  - J4 = bare ground
- Google Satellite



Scheme: Spring Court Road Enfield  
Client:  
Drawing: Ecological Features Plan  
Date: 19/05/23  
Scale: NTS@A3  
Drawing no.: PRI24122\_60  
Drawn: BH



# APPENDIX 2: PROPOSED SCHEME



No dimensions are to be scaled from this drawing

Rev.	Date	Description	Name
P1	12.05.2023	Remove 1no parking space to units 3 and 4 and include dedicated cycles stores within front gardens	ER

12 Spring Court Road  
Enfield EN2 8JP

Site Location Plan and Proposed Site Plan  
4no. new dwellings

**Kirby . Cove . Architects**  
Studio 10 Dimsdale House Hertford SG14 1BY 01992 538088

drawn	2389	date	300	chk A	chk B	scale	P1
AK		September 2023				1:200 @A1	



**APPENDIX 3: ENHANCEMENTS PLAN**



- ◆ Starling Box
- ◆ Sparrow Terrace
- Mixed Native Hedgerow
- ▲ Bat Box- Habitat
- ▨ Wildflower Rich Grassland
- Green Roof
- Semi improved grassland
- ▨ Hardstanding
- Buildings

2389 300-P1 Proposed Site Plan  
Google Satellite Hybrid



**ACD**  
ENVIRONMENTAL

scheme: Spring Court Road  
 client:  
 drawing: ECOLOGICAL ENHANCEMENTS PLAN  
 date: 15.6.23  
 drawing no: PRI24122\_63  
 drawn: BH

## APPENDIX 4: FIELD SURVEY METHODOLOGY

### Extended Phase 1 Habitat Survey

The Phase 1 Habitat Map is shown in Appendix 1.

The Phase 1 Habitat Survey methodology<sup>13</sup> was used to classify the Application Site into habitat types, as listed in the Phase 1 Manual. Where appropriate, dominant species codes within habitat types were recorded. Descriptive target notes were used for particular areas of interest.

Incidental records of fauna were made during the Phase 1 Habitat survey and the habitats identified were evaluated for their potential to support legally protected species and species of Principal Importance.

### *Limitations*

There were no limitations associated with the Extended Phase 1 Habitat Survey.

### Badger field signs survey

Badger evidence was also searched for on the original Extended Phase 1 Habitat Survey in January 2023 and the updated Extended Phase 1 Habitat Survey of 28th June 2019 by ACD Environmental. Badger field signs surveys comprised walking the perimeter and interior boundaries of the Site, searching for evidence of badgers, in accordance with Harris et al<sup>14</sup> (1989) and Scottish Natural Heritage<sup>15</sup> (2018).

### Preliminary Bat Roost Assessment

A Preliminary Roost Assessment (PRA) was carried out<sup>16</sup>. This is an external and internal inspection survey, the purpose of which is to search for bats/evidence of bats and assess the likelihood of bats being present and the need for further survey and/or mitigation.

A systematic search was made of the building and the ground, especially below potential access points where present. Such features include windows sills, window panes, walls, tiles, weather boarding, lead flashing, eaves, behind surfacing materials and under tiles, and other cracks and crevices that provide protection from the elements. Such features are known to be used by roosting bats.

The internal inspection included searching for the following evidence of roosting bats:

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<sup>13</sup> JNCC, (2010), *Handbook for Phase 1 habitat survey - a technique for environmental audit*. JNCC, Peterborough.

<sup>14</sup> Harris, S., Cresswell, P., and Jefferies, D. (1989). *Surveying Badgers*. Mammal Society.

<sup>15</sup> Scottish Badgers (2018). *Surveying for Badgers: Good Practice Guidelines*. Version 1.

<sup>16</sup> Collins J. (ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn)*. The Bat Conservation Trust, London.



- Roosting bats within crevices or free-hanging
- Bat corpses e.g. on the floor, in uncovered water (header) tanks or other containers in roof voids
- Bat droppings beneath roosting features
- Feeding remains e.g. moth/butterfly *Lepidoptera* spp. wings and beetle *Coleoptera* spp. wing casings
- Scratch marks and characteristic staining from urine and/or fur oil beneath roosting features e.g. on roofing timbers and walls within roof voids
- 'Clean' gaps associated with bat roosts
- Bat-fly *Nycteribiid* spp. pupal cases
- Droppings, corpses, feeding remains and/or bat-fly pupal cases beneath roof insulation, which indicates use by bats before the insulation was installed
- Clean swept floors, which may indicate evidence has been removed

The internal inspection included searching for the following features:

- Gaps within the structure of the roof e.g. mortise joints and junctions between roof timbers and between timbers and walls, and between the roof lining and roof covering
- Gaps within the structure of walls and potential access points to cavity or rubble-filled walls
- Gaps around the structure chimneys or within disused chimneys
- Suitable locations for free-hanging bats and/or night/feeding perches e.g. timber beams
- Gaps between lintels above windows or doors
- Light gaps in the roof indicating access points to the outside
- Cool areas suitable for torpor or hibernation e.g. cellars.

The following equipment was used for the bat survey:

- Binoculars
- Powerful torch to illuminate dark corners from the ground

- Ladder
- Collection pots and labels for corpses and droppings;
- Camera to record evidence and potential roosting sites; and
- Personal protective equipment (e.g. boots, gloves, helmet, mobile telephone).

In addition to the buildings, the trees were also searched for bats/evidence of bats and assessed for their potential to support roosting bats. The evidence of roosting bats searched for is detailed above with regard to buildings (e.g. bat droppings and feeding remains). The features of bats were searched for on the trees with reference to the three broad categories of Potential Roost Features (PRFs) and sub-categories of PRFs from the Bat Tree Habitat Key<sup>17</sup>. These are as follows:

- Disease and decay PRFs:
  - Woodpecker and squirrel holes;
  - Knot holes;
  - Pruning-cuts;
  - Tear outs;
  - Compression forks;
  - Wounds;
  - Cankers; and
  - Butt rots.
- Association PRFs:
  - Fluting; and
  - Ivy.
- Damage PRFs:
  - Hazard beams;

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<sup>17</sup> Bat Tree Habitat Key 2018. *Bat Roosts in Trees – A Guide to Identification and Assessment for Tree-care and Ecology professionals*. Exeter: Pelagic Publishing.



- Frost cracks;
- Subsidence/shearing and helical splits;
- Lightning strikes;
- Desiccation fissures;
- Transverse snaps;
- Welds; and
- Lifting bark.

### *Limitations*

There were no limitations to the Preliminary Roost Assessment.

### Bird nesting

Evidence of nesting birds recorded during the PRA and any incidental bird observations/birds heard were noted.

The assessment included searching for the following with regard to barn owl:

- Birds present - roosting or nesting within buildings/trees;
- Birds present - corpses;
- Pellets - undigested feeding remains;
- Nests - formed on layers of degraded pellets;
- Droppings or 'liming' - often present on/below roosts such as roof timbers;
- Eggs - intact/broken or within nest/below nest; and
- Feathers - adult or natal down.

The internal inspection of the buildings included searching for the following features with regard to barn owl:

- Suitable access points (e.g. open doorways);
- Suitable ledges for nesting; and

- Suitable timbers for roosting.

## APPENDIX 5: BIODIVERSITY METRIC METHODOLOGY

### Assessment Framework

For the purposes of this assessment, the Small Sites Metric (JP040) has been utilised.

The Small Sites Metric is accompanied by a 'Calculation Tool'. This was used to calculate the biodiversity units for the Application Site before (baseline) and after development. The User Guide<sup>18</sup> has been followed.

### Habitat Measurements

Baseline habitat measurements were carried out in line with the results of the 2023 Extended Phase 1 Habitat Survey. Measurements were made using QGIS.

Proposed habitat measurements were taken from the Soft Landscape Proposals .

Measurements were entered to the nearest 1m<sup>2</sup>.

### Distinction Assessments

Habitats are assigned to distinctiveness bands automatically within the Metric. These are based on an assessment of the distinguishing features of a habitat or linear feature, including the consideration of species richness, rarity (at local, regional, national and international scales), and the degree to which a habitat supports species rarely found in other habitats.

The distinctiveness band of each habitat is preassigned in the Small Sites Metric. The bands are based upon the UK habitat classification system. A combination of simple rules and professional judgement have been used to assign each habitat type to the appropriate distinctiveness band. The distinctiveness categories used are tailored to habitat type.

Distinctiveness Assessments are assigned according to **Table 6**.

**Table 6:** Distinctiveness Assessment

Category	Scores	Multiplier
Medium	4	Semi-natural habitats not classed as a Priority Habitat
Low	2	Habitat of low biodiversity value. Temporary grass and clover ley; intensive orchard; rhododendron scrub

<sup>18</sup> STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A (2022). *Small Sites Metric Calculation Tool :User Guide. Natural England*. A – Natural England, B – Environment Agency, C – Department for Environment, Food and Rural Affairs, D – Tweek Environmental Consultants Ltd, E – eCountability Ltd

Category	Scores	Multiplier
Very Low	0	Little or no biodiversity value e.g. hard standing or sealed surface

### Strategic significance

The spatial location of a habitat is treated as a component of the quality of a habitat parcel in the same way as distinctiveness or condition. Strategic significance is used to determine whether the habitat is of increased importance due to its location.

### Risk Factors

As part of any proposed habitat creation and restoration, risk factors must be taken into account to correct for disparity, delay or risk. These values are preassigned within the Small Sites Metric and take into consideration the following factors:

- Temporal risk; and
- Difficulty of creation and restoration.

Advance/delay in habitat creation takes into account any significant time difference in the creation of a habitat type. This time is measured in full years and is entered by the assessor.

Habitat creation in advance is rewarded by reducing the difficulty and temporal risk multipliers applied. This reflects the lower delivery risk - there is less risk of failure when a habitat is already making progress towards its target condition.

Any significant delay in the creation of a habitat type relative to loss of on-site habitats (e.g. due to phased developments and developments that temporarily require parts of the development site for construction purposes) is added to the pre-populated time to target condition and increases the effect of the risk multiplier accordingly.

### Limitations

Although the Small Sites Metric is a valuable tool underpinned by ecological evidence, there are certain limitations that must be considered when applying the metric. The key principles and rules for the use of the Small Sites Metric have been followed at all times, in line with these limitations. Further detail is available within the Small Sites Metric User Guide<sup>18</sup>.



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