

Preliminary Ecological Appraisal - Survey Report Arches and Land at Page Green Road, Tottenham, London

15 May 2023

For: Planning Prospects

Version 1



ecologylink

Ecology Link Ltd
61 Middlewatch
Swavesey
Cambridge
CB24 4RW

Tel: 01954 231375
www.ecologylink.com

Table of Contents

1. INTRODUCTION	4
BACKGROUND	4
SITE LOCATION AND DESCRIPTION	4
2. SCOPE OF WORKS	5
PHASE 1 HABITAT (ECOLOGY) SURVEY	5
DESK STUDY (BIOLOGICAL RECORDS DATA SEARCH)	5
BUILDINGS AND STRUCTURES SURVEY	5
SURVEY CONSTRAINTS.....	5
3. RESULTS.....	5
DESK STUDY.....	5
DESIGNATED SITES.....	6
PROTECTED SPECIES.....	6
PHASE 1 SURVEY – HABITATS.....	7
HARD SURFACES (TARMAC, CONCRETE AND GRAVEL).....	7
RUDERAL	7
SCRUB.....	8
SCATTERED TREES.....	8
PHASE 1 HABITAT SURVEY – PROTECTED SPECIES.....	8
BADGERS.....	8
BARN OWLS.....	9
BATS.....	9
BIRDS.....	10
HAZEL DORMICE	11
GREAT CRESTED NEWTS	11
HEDGEHOGS.....	11
INVERTEBRATES.....	11
OTTERS	12
REPTILES.....	12
WATER VOLES	12
WHITE-CLAWED CRAYFISH	12
OTHER SPECIES.....	13
INVASIVE SPECIES	13
4. EVALUATION AND RECOMMENDATIONS	13
HABITATS	13
PROTECTED SPECIES.....	13
ECOLOGICAL AND BIODIVERSITY ENHANCEMENTS – PLANNING CONSIDERATIONS.....	15
BIODIVERSITY NET GAIN.....	16
5. FURTHER HABITAT AND SPECIES SURVEYS	16
6. APPENDICES	17
APPENDIX 1 – PHASE 1 HABITAT MAP & TARGET NOTES	17
APPENDIX 2 – LEGISLATION.....	17
APPENDIX 3 – BAT ROOST ASSESSMENT CRITERIA & CLASSIFICATION	17

By their very nature, ecological surveys can only assess a site or particular species at a set point in time, thus providing a snapshot of the environment and not a definitive evaluation. Every effort has been taken to provide an accurate assessment of the habitats or species surveyed. However, presence and population sizes of species can change over time and the accuracy of this report will be affected by time and seasonality.

This document has been prepared by Ecology Link Ltd for the sole use of the client.



1. Introduction

Background

1.1 Ecology Link Ltd. was commissioned by Planning Prospects, on behalf of their client, to undertake a Preliminary Ecological Appraisal (PEA) survey. The survey area included arches and Land at Page Green Road, London (herein referred to as 'the site'). The purpose of the survey was to assess the conservation value of the site, including the likely presence of rare or protected species. Any features, habitats or species constituting potential constraints to the development were identified, with recommendations for appropriate further surveys and mitigation.

1.2 **Development Proposal:** The redevelopment of the site for a Enterprise Rent-A-Car UK facilities.

Site Location and Description

1.3 **National Grid Reference Location** (approx. centre of site): TQ 34128876

1.4 **Site Address:** Arches and Land at Page Green Road, Tottenham, London, N15 4PG.

1.5 **Site boundaries:**

- North –commercial sites, residential properties and gardens.
- South – rail line.
- East – rail land and commercial.
- West – wider rail land.

1.6 **Site Habitats:** The site included the following dominant habitats (Table 1.1).

Table 1.1 Site habitat areas (m²).

Habitats	Area m ²
Building (footprint)	161
Hard Surface	3540
Ruderal	418
Scrub	149
Total Site Area	4968

1.7 **Wider Landscape Context:** Predominately surrounded by urban residential, within the wider environment. Habitats extended southward beyond the rail line with sports pitches and playing grounds.

2. Scope of Works

Phase 1 Habitat (Ecology) Survey

- 2.1 An extended Phase 1 habitat survey was conducted on the 24th April 2023.
- 2.2 The survey was undertaken by Jon Panter, an experienced ecologist and full member of the Chartered Institute of Ecology and Environmental Management (CIEEM).
- 2.3 The weather conditions were calm with occasional light rain. A risk assessment was completed and all appropriate PPE worn. The client granted access to the site.
- 2.4 An evaluation was made of the habitats within the site and where possible, of the immediate surrounding environs. Methodology followed the standard survey criteria as set out in the JNCC Survey Handbook (2010) and a Phase 1 map (Appendix 1) was produced to show the distribution of habitats and plant communities across the site. Target Notes (TN) were used if required, to give greater detail for specific features. The information gathered provided a record of the existing wildlife habitats present, in accordance with the habitat codes within the JNCC guidelines. The potential for the site to support protected species was also assessed, some of which may be protected by UK or European legislation (Appendix 2).

Desk Study (Biological Records Data Search)

- 2.5 A desk-based data search was not deemed necessary, due to the small size and existing nature of the site, with proposed changes to an already developed site. There is limited scope for any previous records for this private site to have been supplied to data holders. Any specific protected species potential will be assessed through further surveys.

Buildings and Structures Survey

- 2.6 Any buildings or other structures (if present) on site were surveyed. This comprised both an external visual inspection and internal search (where safety allowed) to look for signs of, or potential for, protected species (most likely to include bird and bat species). These were assessed against Bat Roost Classification Criteria (Appendix 3). Indicators of use could include live animals, carcasses, droppings, feeding remains and nesting material. A ladder, high-powered torch, angled mirror and endoscope were available for use as required.

Survey Constraints

- 2.7 There were no constraints. The survey was undertaken during the optimal season (April to September). It may be that additional plant species were present, which were not visible at the time of survey. It is important to note that species diversity and dominant plant assemblages may increase or change throughout the season.

3. RESULTS

Desk Study

- 3.1 The following sites and species records were returned from within a 1km radius of the site (reduced radius due to the site's location, connectivity and condition). Only species likely to be impacted within or in close proximity to the site have been summarised within this report. Records more than ten years old have been omitted.

Designated Sites

- 3.2 One record of an internationally or nationally important sites was returned (Table 3.1). No statutory protected sites were identified (e.g. County Wildlife Site). No non-statutory protected sites were identified (e.g. Local Wildlife Site).

Table 3.1 – Designated Sites

Site name and designation	Reason for designation	Distance from site
Walthamstow Reservoirs (SSSI) & Lee Valley (Ramsar)	Both designations covered a range of reservoirs and the River Lee. These waterbodies support internationally important numbers of wintering gadwall and shoveler and nationally important numbers of several other bird species. The site also contains a range of wetland and valley bottom habitats, both man-made and semi-natural, which support a diverse range of wetland fauna and flora.	500m

SPA – Special Protection Area; SAC – Special Area of Conservation; NNR – National Nature Reserve; SSSI – Site of Special Scientific Interest; CWS – County Wildlife Site; LWS – Local Wildlife Site

Protected Species

- 3.3 Records were returned or notably absent for the following protected species within a 1km radius of the site.

- 3.4 There were no records of Natural England European Protected Species (EPS) Licence Applications (such as for great crested newts, bats, hazel dormice).

European Protected Species:

- 3.5 No great crested newt records were returned within 1km from the site. Only smooth newt and common frog and common toad records were provided.

- 3.6 Bat records were returned within 1km from the site. Daubenton's bat was recorded within 1km east of the site.

- 3.7 One water vole record was returned from within 1km of the site, associated with the Walthamstow Reservoir complex.

WCA Schedule:

- 3.8 Two reptile species records were provided from within 1km of the site. Grass snake and red terrapin, again associated with the Walthamstow Reservoir complex.

Mammals:

- 3.9 Records of hedgehog from within 1km of the site were provided. A mink record and a number of rabbit and fox records.

Birds:

145 bird species records were provided. However, many of these were species which would be utilising the wetland habitats within the Walthamstow Reservoir complex.

Plants:

- 3.10 A range of common and introduced species were provided, predominately trees and shrubs. Ferns and mosses were also dominant components of the list, reflecting the urban environment.

- 3.11 Invasives such as giant knotweed and floating pennywort, were also recorded associated with the River Lee.

Invertebrates:

- 3.12 Dominated by insect records. Particularly macro groups such as grasshoppers, crickets and dragonflies.

Phase 1 Survey – Habitats

- 3.13 The following habitat classifications were recorded on site. BNG codes and areas are provided on the habitat map (Appendix 1). The main site was between the two rail lines, with the smaller section to the north providing access from Page Green Road.

Hard Surfaces (tarmac, concrete and gravel)

- 3.14 The hard surfaces consisted of a tarmac access road from Page Green Road, to an area of vehicle maintenance associated with the arches on the northern side of the rail line (Photo 1).
- 3.15 The majority of the site consisted of concrete or hard-core, allowing access beneath an arch to the wider works site to the south, between the rail lines (Photo 2).

Ruderal

- 3.16 Ruderal colonisation had occurred in small areas of the western corner of the site (Photo 3). This area seemed to lack any constant use, which had allowed vegetation to establish in these marginal areas.
- 3.17 A diverse but typical range of species had colonised, such as annual meadow-grass (*Poa annua*), false oat-grass (*Arrhenatherum elatius*), creeping and spear thistle (*Cirsium arvense*; *C. vulgare*), rosebay willowherb (*Chamaenerion angustifolium*), mugwort (*Artemisia vulgaris*) and ribwort plantain (*Plantago lanceolata*).
- 3.18 Wider vegetation was minimal, being recorded on the boundary edges. Again, where frequent foot and vehicle traffic was limited. Species reflected the vegetation found above and associated with the rail line.
- 3.19 This habitat provided transient and limited ecological value, reflecting the similar vegetation along the adjacent rail lines.

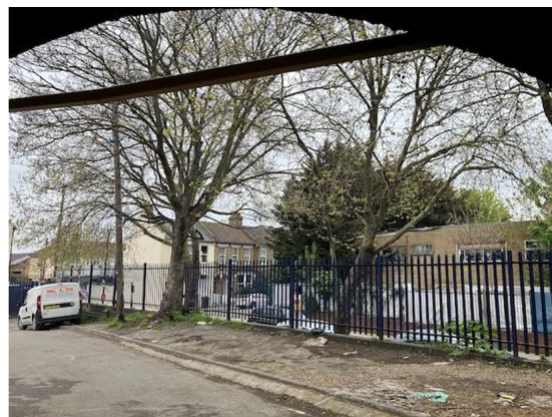


Photo 1: access road from Page Green Road.



Photo 2: wider hard standing showing parking and storage areas.



Photo 3: area of ruderal colonisation within the western area of the site.

Scrub

- 3.20 Scrub development was very limited and was only associated with the ruderal vegetation. Key species included butterfly bush (*Buddleja* sp.), bramble (*Rubus fruticosus* agg.) and some sycamore (*Acer pseudoplatanus*) and willow (*Salix* sp.) saplings. This was evident in the western area, which had been fenced for safety reasons (Photo 4).
- 3.21 This had created some interconnected habitat with the surrounding rail line, although some management had occurred to reduce woody vegetation growth in working areas.
- 3.22 This habitat held limited ecological value to the site.



Photo 4: limited scrub development in the western area of the site.

Scattered trees

- 3.23 A number of scattered trees were recorded along the boundaries and within the site entrance off Page Green Road (Photo 1).
- 3.24 A number of semi-mature ash (*Fraxinus excelsior*) trees were recorded on the northern boundary of the site within the rail lines (Photo 5). These were in good condition.



Photo 5: trees on the northern boundary of the site, between the rail lines.

Phase 1 Habitat Survey – Protected Species

Badgers

- 3.25 Badgers (*Meles meles*) are protected under the Protection of Badgers Act 1992. This legislation makes it an offence to kill or injure a badger, damage or destroy a sett, or disturb a badger whilst it occupies a sett.
- 3.26 The site and a 30m buffer (where accessible), were surveyed for badger evidence, such as setts, latrines, pathways, footprints, snuffle holes and badger hairs. Any setts recorded were classified according to published criteria (Harris, et al., 1989).
- 3.27 There was no suitable sett building habitat for badgers on site. The hard surface across the site limited any digging or provision of key foraging opportunities. No evidence in the form of paths, prints, foraging, latrines or runs under fencing were noted.
- 3.28 This species needs no further consideration or survey.

Barn Owls

- 3.29 All breeding wild birds are protected under Part 1 of the Wildlife and Countryside Act (WCA) (1981, as amended). Offences include taking, damaging or destroying a nest or eggs; barn owls (*Tyto alba*) receive special additional protection under Schedule 1 of the WCA. Barn owls (and other Schedule 1 species) are protected from any form of intentional or reckless disturbance when they are nesting or rearing dependent young. Any such activity constitutes an offence.
- 3.30 There were no roosting or breeding opportunities for barn owls within the site. The site did not provide any hunting habitat, although there was connectivity with adjacent habitats along the rail line.
- 3.31 This species needs no further consideration or survey.

Bats

- 3.32 All British bat species are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); under Schedule 2 of the Conservation of Habitats and Species Regulations 2017; as European Protected Species (EPS). This makes it an offence to kill or injure a bat, or damage or destroy a place of shelter or protection.
- 3.33 Potential for the site to support roosting, foraging and commuting bats was assessed in line with the Bat Conservation Trust (BCT) Bat Surveys for Professional Ecologists Good Practice Guidelines (Collins, 2016).
- 3.34 Buildings or structures (if present) were assessed for suitability to support roosting bats according to the classifications (Appendix 3). Any potential roosting features (PRFs), sites and roost access points were highlighted. Evidence of bats was also searched for externally and internally where access allowed. Equipment available to aid inspection included binoculars, a ladder, a handheld thermal imaging unit and a high-powered torch. The surveyor looked for bats, droppings, staining, scratch marks and feeding remains in any potentially suitable locations.
- 3.35 Trees were also assessed for potential bat roosting features such as rotten cavities, woodpecker holes, cracked or split limbs, and lifted bark. Trees displaying potential features were assigned a level of suitability for roosting bats (Appendix 3).
- 3.36 The site was also assessed for overall value for foraging, commuting or dispersing bats (i.e. how well the habitats on the site link to other offsite habitats and in particular the presence of sheltered linear habitats on the site).
- 3.37 Features were recorded with either negligible, low, moderate or high potential to support roosting bats (Appendix 3). These are summarised below, which includes a building or tree reference, description of feature (if present), any evidence identified and a photographic record.

Buildings

- 3.38 The only building on site was a single storey flat roofed structure on the southern boundary of the site (Photo 6). This was used for storage, being in a relatively dilapidated state. The doors and windows were intact with no access for bats to enter.



Photo 6: building on site showing flat roof and intact windows and door.

3.39 The roof structure and felting looked intact and weatherproof. There was potential access for bats adjacent to the timber roof beams, which were exposed at the end joists (Photo 7). However, the PRFs were still limited.

3.40 The external lighting across the site for operational activities and security, would restrict the suitability for bats accessing the building and foraging across the site. The adjacent rail line did provide commuting routes to and through the site. The adjacent sports grounds, gardens and nature reserves provided better feeding and roosting opportunities.

3.41 **The building held negligible PRFs.**

3.42 The other structures on site were for materials storage and provided no bat potential (Photo 2).

3.43 A series of rail arches across the site had been utilised for storage (Photo 8) or provided workshops on the Page Green Roadside of the rail line. These provided little bat roost potential (no signs of gaps, cracks or crevices) and would not be part of the redevelopment, due to being owned by Network Rail.

3.44 **The arches structure held negligible PRFs.**

Trees

3.45 None of the trees recorded on site provided any PRFs.

Birds

3.46 All birds, their nests and eggs are protected under the Wildlife and Countryside Act 1981, as amended. It is illegal to take, damage or destroy the nests of wild birds whilst being built or in use.

3.47 Buildings, other structures and vegetation were assessed for suitability to support any species of nesting bird. This included searching for evidence of nesting or roosting barn owls or other raptors.

3.48 The habitats and general location of the site were assessed for their overall likely value to birds, including the likelihood for bird species of conservation importance to use the site.

3.49 The small areas of scrub provided very little suitable habitat for nesting birds during the breeding season. Species observed during the survey included robin (*Erithacus rubecula*), magpie (*Pica pica*) and a small flock of ring-tailed parakeets (*Psittacula krameri*). None displayed any nesting behaviour at the time of survey.



Photo 7: exposed roof beams at end of building.



Photo 8: the series of rail arches provided no PRF.

Hazel Dormice

- 3.50 Dormice (*Muscardinus avellanarius*) are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. This makes it an offence to kill or injure dormice, or damage or destroy a place of shelter or protection.
- 3.51 There was no suitable habitat to support dormice within the site boundary.

Great Crested Newts

- 3.52 All life stages of the great crested newt (*Triturus cristatus*) and their habitats are protected under the Wildlife and Countryside Act 1981, as amended. They are also protected by the Conservation of Habitats and Species Regulations 2017 as a European Protected Species (Appendix 2).
- 3.53 The site was assessed for suitability to support amphibians, including great crested newts (GCN), common toad (species of conservation importance) and common frog. The assessment was undertaken in accordance with Gent & Gibson (2003) and Langton et al (2001).
- 3.54 A search for all waterbodies on site or within a 500m radius was completed using OS maps and aerial imagery. A focus on those within 250m was applied, which is generally considered to be the critical distance of dispersal by most amphibians. Consideration was given to how well any identified waterbodies were connected to the site in terms of terrestrial habitat quality and features. Any obvious barriers to dispersal or unsuitable habitat were identified.
- 3.55 There was no breeding habitat for GCN on site. No ponds were identified within 500m of the site, although maps do not highlight small garden ponds which may be present in adjacent gardens. The closest waterbody was the River Lee (approximately 350m), which would not provide any breeding for amphibians.
- 3.56 The terrestrial habitat within the site offered very limited foraging, commuting and shelter. There were limited hibernation opportunities due to the mostly intact hard surfaced areas. With no records of GCN and no ponds identified within 500m, the risk of GCN presence is very low.
- 3.57 This species requires no further specific survey but precautionary recommendations for considerate timing have been made.

Hedgehogs

- 3.58 Hedgehogs (*Erinaceus europaeus*) are listed under the Habitats and Species of Principal Importance in England. The Natural Environment and Rural Communities (NERC) Act came into force in 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. These are habitats and species that had been identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and which continue to be regarded as conservation priorities.
- 3.59 There was no evidence of hedgehogs on the site. The site had some suitability, providing some foraging throughout the site. It is possible that hedgehogs use the site for foraging and commuting throughout adjacent gardens and the rail line.
- 3.60 This species requires no further survey. Maintaining continued access for hedgehogs must be included in the landscaping and fencing scheme.

Invertebrates

- 3.61 Many invertebrates are listed as UK Biodiversity Action Plan (UK BAP) priority species and as Species of Principal Importance (Section 41) of the Natural Environment and Rural Communities Act 2006.
- 3.62 The habitats were not considered of importance to notable invertebrates in the locality. Apart from through field observation during the walkover survey, the site was not evaluated in detail

for the likely presence of important invertebrates. Surveys require specialist methods, timings and equipment and are seasonally restricted, with samples collected over a number of months and removed from site for expert identification.

- 3.63 This group needs no further consideration or survey.

Otters

- 3.64 In the UK, otters (*Lutra lutra*) are protected under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. This makes it an offence to kill or injure otters, or damage or destroy a place of shelter or protection.
- 3.65 The habitats within and immediately adjacent to the site do not provide suitable habitat for this species.
- 3.66 This species requires no further consideration or survey.

Reptiles

- 3.67 All British reptile species are afforded protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. This makes it an offence to kill or injure reptile species including grass snake (*Natrix helvetica*), adder (*Vipera berus*), common lizard (*Zootoca vivipara*) and slow-worm (*Anguis fragilis*).
- 3.68 The site was assessed for suitability to support reptiles with reference to the (Gent & Gibson, 2003) and Froglife Advice Sheet 10.
- 3.69 The site provided little suitable habitat for common lizards and slow-worms to forage, shelter and disperse. The connectivity with the adjacent rail line increased potential for these species to use the site. However, the limited habitat restricted any migration onto the site.
- 3.70 This species requires no further specific survey but recommendations for considerate timing of works have been made.

Water Voles

- 3.71 Water voles (*Arvicola amphibius*) are protected by the Wildlife and Countryside Act 1981, as amended. This makes it an offence to kill or injure water voles, damage or destroy a place of shelter or protection, or disturb them in these places. They are also listed as a UK Biodiversity Action Plan (UK BAP) Priority Species.
- 3.72 Revised legislation now requires any development which will involve the displacement of water voles from their habitat or their relocation; to be completed either by a water vole survey class licence holding ecologist, or under a specific Natural England project licence.
- 3.73 There was no suitable habitat to support water voles.
- 3.74 This species requires no further consideration or survey.

White-clawed Crayfish

- 3.75 White-clawed crayfish (*Austropotamobius pallipes*) are protected by the Wildlife and Countryside Act 1981, as amended. This makes it an offence to kill or injure white-clawed crayfish, or damage or destroy a place of shelter or protection. They are also listed as a UK Biodiversity Action Plan (UK BAP) Priority Species.
- 3.76 There was no suitable habitat within the site to support white-clawed crayfish.
- 3.77 This species requires no further consideration or survey.

Other Species

- 3.78 No other species of note were encountered during the survey.

Invasive Species

- 3.79 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation dealing with non-native species. It is illegal to release or allow escape into the wild, any animal which is not ordinarily resident in Great Britain and is not a regular visitor to Great Britain in a wild state, or is listed in Schedule 9 to the Act. It is also illegal to plant or otherwise cause to grow in the wild any plant listed in Schedule 9 to the Act.
- 3.80 No notable invasive species were encountered at the time of survey which require any management. Butterfly bush is classed as a non-native invasive species, although is easily removed and managed and would not pose any significant impact to any future development.
- 3.81 Should the project and proposed development be put on hold for 2 years or more, then a repeat survey should be considered to ensure no invasive plant species have colonised the site.

4. Evaluation and Recommendations

- 4.1 The following potential ecological constraints were identified within the site boundary (Table 4.1). Each protected species requiring further investigation or survey has been listed, including the relevant legislation and rationale. Caveat – only species deemed likely to be present either within or immediately adjacent to the site have been considered further.

Habitats

- 4.2 No habitats warranting any specific protection were recorded.

Protected Species

- 4.3 The level of protection for different species varies, often being reviewed and amended. We have stated below, which laws protect which species. A summary of their specific protection has also been provided (Appendix 2).

Table 4.1. Protected Species Protection & Enhancement Recommendations

	No recommendations or enhancements required
	Enhancements required
	Further species surveys required

SPECIES	RECOMMENDATIONS – Protection & Enhancement
Bats	No evidence or potential for roosting bats was found during the survey.
	Recommendations: soft demolition of the building during the summer period. If a bat is found a specialist licence bat survey must be contacted.

SPECIES	RECOMMENDATIONS – Protection & Enhancement
	Enhancements: The proposed development should incorporate a minimum of 2 artificial bat boxes or bricks per structure (where possible). These can either be externally wall mounted boxes or built-in specialist bricks installed during the construction. considerate lighting should be used across the site with no spillage onto the rail lines of other potential flightlines.
Badgers	No evidence of badgers was found during the survey.
	Recommendations: No further surveys will be required.
	Enhancements: No specific enhancements required.
Barn Owls	No evidence of barn owls was found during the survey.
	Recommendations: No further surveys will be required.
	Enhancements: No specific enhancements required.
Birds	No evidence of bird nesting was recorded during the survey, but it is assumed the scrub will be used for breeding. All woody vegetation provides breeding potential for a range of passerine species.
	Recommendations: No further surveys will be required but building demolition and vegetation removal must be undertaken outside of the breeding season (see Table 5.1 for full details on timings).
	Enhancements: The proposed development should incorporate a minimum of 2 artificial bird boxes or bricks per structure (where possible). Boxes could be installed on site (including mounting on trees, boundary fencing and any other suitable structures or features).
Dormice	No evidence or suitable habitat to support dormice was found during the survey.
	Recommendations: No further surveys will be required.
	Enhancements: No specific enhancements required.
Great Crested Newts	No evidence or suitable habitat to support GCN was found during the survey.
	Recommendations: No further surveys will be required but a precautionary considerate timing approach to disturbance or removal of potential refuge and hibernation features is needed [combined with Reptiles].

SPECIES	RECOMMENDATIONS – Protection & Enhancement
	Enhancements: No specific enhancements required.
Hedgehogs	No evidence of, but suitable habitat was present to support hedgehogs was found during the survey.
	Recommendations: No further surveys will be required.
	Enhancements: Gaps (c.13cm by 13cm) must be included within the base of any new fencing and shown on the biodiversity enhancement plan. These should be located every 10m, but fewer where boundaries are immediately adjacent to roads.
Reptiles	The site very little habitat to support reptiles
	Recommendations: Considerate timing of groundworks to potential hibernation features, to avoid the hibernation period. This must be during the active season for reptiles and within stable weather conditions. Under the direction of an ECoW.
	Enhancements: No specific enhancements required at this time. The proposed landscape design should include suitable creation of buffer planting to maintain connectivity and dispersal routes for animals.

Ecological and Biodiversity Enhancements – Planning Considerations

- 4.4 The revised National Planning Policy Framework (NPPF) was updated in July 2021. The following policies contain elements of relevance to this report:

Policy 170: 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.
- Recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services.
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

Policy 175: When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- If significant harm 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 proposals where the primary objective is to conserve or enhance biodiversity should be permitted.
- Opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

- 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.

Policy 180: Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- {...} limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Biodiversity Net Gain

- 4.5 Biodiversity Net Gain (BNG) has been described as a measurable target for development projects where impacts on biodiversity are outweighed by a clear mitigation hierarchy approach to first avoid and then minimise impacts, including through restoration or compensation. Adhering to these Net Gain principles (i.e. pursuing all principles together) will help in under-pinning good practice for achieving and sustaining Net Gain (CIEEM, 2016).
- 4.6 The Defra Biodiversity Metric 4.0 calculation spreadsheet will need completed to quantify the BNG. Sites under 0.5ha qualify for assessment using the slightly simplified Small Sites Metric 4.0. In exceptional circumstances with either negligible value habitats (confirmed during the PEA) or only minor proposed changes with restricted impacts, completion of the Metric may not be required.
- 4.7 The Metric calculates the baseline value of the existing site. By inputting the proposed development areas and habitat types (retained, enhanced, created or lost), the overall biodiversity value of the proposed development is given a unit value and percentage. It informs of the number of habitat units which need to be met to achieve a minimum 10% net gain. Where there is insufficient space or scope to meet these targets on site, then the credits must be purchased for off-site gain, within the wider locality (e.g. same County).
- 4.8 In conjunction with the formal Metric output, a Biodiversity Enhancement Plan (BEP) document which outlines the specific actions required to ensure a net gain in biodiversity of the above site (as required by NPPF, 2021), will need produced. The biodiversity enhancement plan specifically caters for the species and habitats (protected or common) which are likely to either inhabit the site or be present on a more transient or local basis. The plan will include specific information on recommended plant species, habitat creation and maintenance. Optimal locations for ecological enhancement features, such as bird, bat and hedgehog boxes, and bee bricks or hibernacula will also be included.
- 4.9 BNG recognised habitats present on site (and their respective total areas) have been highlighted (Table 1.1). This information will be required when completing a BNG assessment.

5. Further habitat and Species Surveys

- 5.1 The potential ecological constraints discussed in the recommendations, which require further assessment have been provided (Table 5.1), including key survey periods. **It is important to make a note of these restricted survey seasons** when planning your development schedule.

Table 5.1: Outline of Further Surveys and Timings

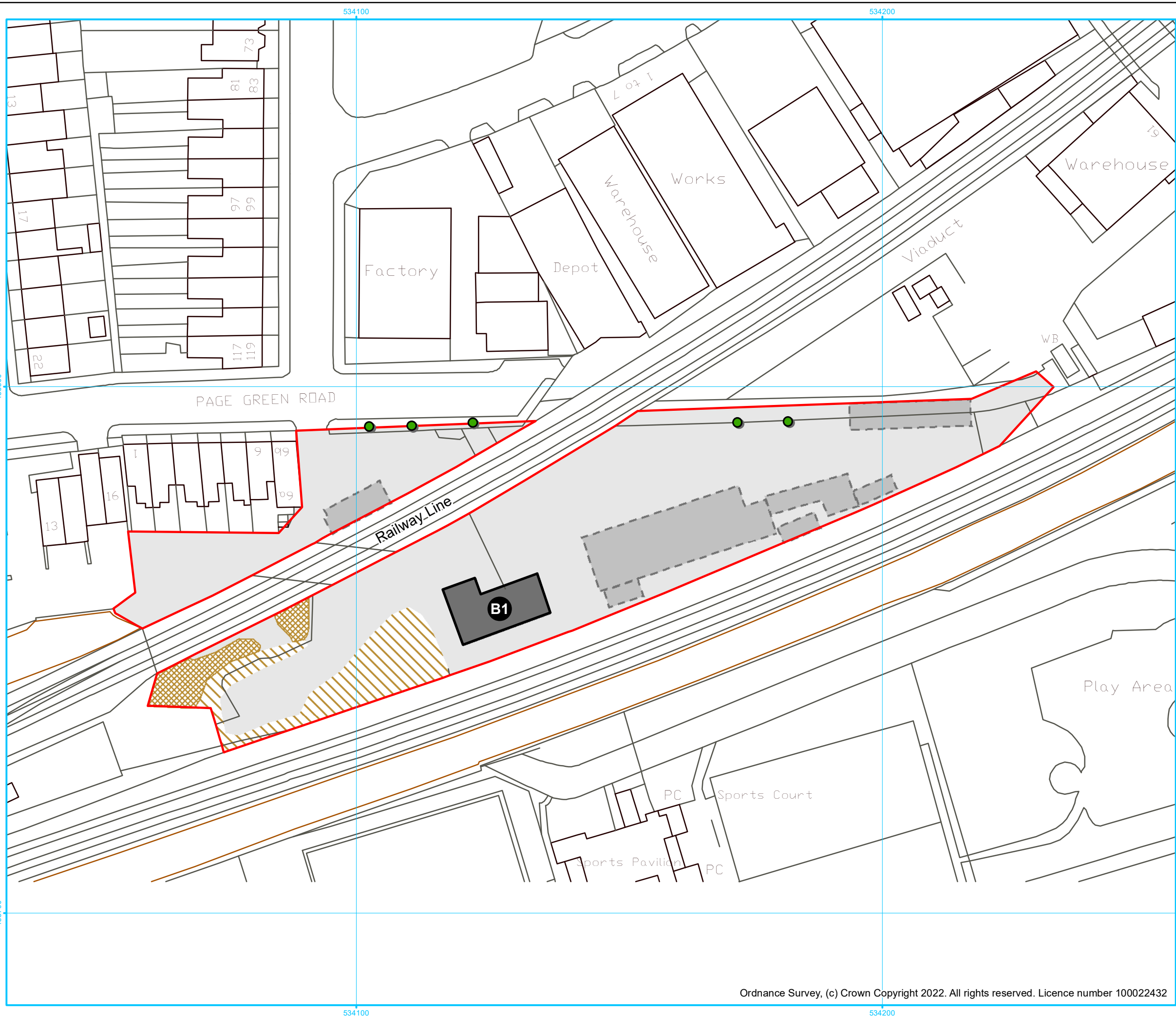
Species Group	Action / Survey Requirement	Optimal Timing (inclusive)
Breeding birds	All building, structures and vegetation clearance outside of breeding season	September to February
Reptiles (& precautionary GCN)	Considerate site clearance	March to October
Biodiversity Net Gain (BNG)	Site specific BNG Metric assessment and biodiversity enhancement plan	Upon completion of final draft building and landscape design but pre-planning submission

6. Appendices

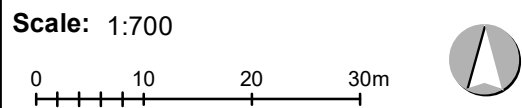
Appendix 1 – Phase 1 Habitat Map & Target Notes

Appendix 2 – Legislation

Appendix 3 – Bat Roost Assessment Criteria & Classification



- Legend
- Site boundary
 - Ruderal
 - Introduced scrub
 - Building
 - Structure (stiing on hard standing)
 - Hard standing
 - Trees (on site)



Title: Appendix 1 – Phase 1 Habitat

Client: Planning Prospects

Project: Land at Page Green Road, Tottenham

Date: May 2023



Appendix 2 – Legislation

This document contains a brief summary of key legislation relating to the protection of wildlife and habitats. Ecology Link Ltd. does not offer legal opinion or provide legal advice. The client is responsible for reviewing the full legislative documents from up-to-date original sources and should seek independent legal advice where appropriate.

European Protected Species

The Bern Convention (The Convention on the Conservation of European Wildlife and Natural Habitats) was adopted in 1979 and came into force in 1982. To implement this agreement, the European Community adopted the EC Habitats Directive in 1992. This directive has been transposed into UK legislation by the Wildlife and Countryside Act 1981 (as amended); and the Conservation of Habitats and Species Regulations 2017. The Countryside and Rights of Way (CROW) Act 2000 strengthened the existing wildlife legislation in the UK. The UK has also signed the Bonn Convention (The Convention on the Conservation of Migratory Species of Wild Animals) and is therefore party to various agreements.

Bats

All species of British bats are fully protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are listed under Appendix III of the Bern Convention and Annex IV of the EC Habitats Directive. Bats and their habitats are also listed under Appendix II of the Bonn Convention and therefore the UK has an obligation to protect their habitat, including links to important feeding areas.

Taken together, these pieces of legislation make it an offence to:

- Intentionally kill, injure or capture bats.
- Deliberately or recklessly disturb bats (whether in roost or not).
- Damage, destroy or obstruct access to bat roosts.

A roost is defined as “any structure which a bat uses for shelter or protection”. As bats tend to re-use the same roosts, legal opinion is that a roost is protected whether or not bats are present at the time of survey.

Dormice

Hazel dormice are classified as Lower Risk-Near Threatened by the International Union for the Conservation of Nature (IUCN) Red List, and as Vulnerable in the UK. They are listed under Appendix III of the Bern Convention and Annex IV of the EC Habitats Directive. In the UK they are fully protected under Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (as amended) and are also protected under Schedule 2 of the Conservation of Habitats and Species Regulations 2017. Taken together, these pieces of legislation make it an offence to:

- deliberately capture, injure or kill dormice.
- damage or destroy a dormouse resting place or breeding site.
- deliberately or recklessly disturb a hazel dormouse while it's in a structure or place of shelter or protection.
- block access to structures or places of shelter or protection.
- possess, sell, control or transport live or dead hazel dormice, or parts of hazel dormice.

Great Crested Newts

Great crested newts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. At the European level they are protected under Annex IV of the EC Habitats Directive. All life stages of great crested newts are protected, including eggs, larvae, juveniles and adults.

Otters

Classified as Vulnerable under the IUCN Red List, they are also listed under Appendix II of the Bern Convention and Annex II of the EC Habitats Directive. They are also protected in the UK by Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In order to minimise disturbance, it is usually recommended that a barrier should be erected to prevent works within 20m of an otter resting place. If the holt is known to be used for breeding, the radius should be extended to 30m.

Legislation Relating to European Protected Species

In relation to a development a person commits an offence if they:

- Deliberately capture, injure or kill a European Protected Species.
- Deliberately or recklessly disturb a European Protected Species in such a way as to be likely to significantly affect;
 - i. the ability of any significant group of animals to survive, breed, rear or nurture their young
 - ii. the local distribution or abundance of that species.
- Damage or destroy a breeding site or resting place (even if unintentionally or when the animal is not present).
- Intentionally or recklessly obstruct access to a structure or place used for shelter or protection.

All aspects of this legislation apply regardless of the life stage.

A European Protected Species Licence is required to carry out any activity that would otherwise involve committing an offence.

The species above are those most frequently encountered. For a full list of current EPS in the UK please refer to the Conservation of Habitats and Species Regulations 2017, available at www.legislation.gov.uk. Lists of animals and plants can be found in Schedules 2 and 5, respectively.

Other Protected Species

Nesting Birds

All wild birds are protected under Part 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, in the UK it is an offence to:

- Take, damage or destroy the nest of any wild bird whilst it is being built or in use.
- Kill, injure or take any wild bird.
- Take or destroy the eggs of any wild bird.

To avoid committing an offence, no works should be conducted on a habitat that is being used by nesting birds. Nesting is deemed to be over when the young have fully fledged. Certain species which are listed on Schedule 1 of the WCA receive special protection. In these cases any form of intentional or reckless disturbance when they are nesting or rearing dependant young constitutes an offence.

Reptiles

Common lizard, slow-worm, adder and grass snake are all protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), as updated by the Countryside & Rights of Way (CROW) Act 2000. They are covered against intentional injuring, killing or selling. To avoid prosecution, wherever works will impact upon these species there must be evidence to show that every reasonable effort was made to avoid breaking the law – including proof of adequate surveys and mitigation plans. Mitigation measures should, ideally, be agreed with Natural England.

Only the sand lizard and smooth snake are fully protected under the Wildlife and Countryside Act (Section 9) and the Conservation of Habitats and Species Regulations (Regulation 9). These protect them against:

- Killing, injuring or capturing.
- Keeping, transporting or selling.
- Damaging or destroying a breeding or resting site.
- Intentionally obstructing access to a place used for shelter.

This means that both the animals and their habitats are protected. These species mainly occur in specific nature reserves, mostly in the south and south-west of England.

Badgers

Badgers are fully protected in the UK by the Protection of Badgers Act 1992 and by Schedule 6 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Willfully kill, injure, take, possess or cruelly treat a badger.
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett.
- Disturb a badger while it is occupying a sett.

Disturbance could include digging or scrub clearance within 30m of a sett and therefore advice should be sought before conducting such activities. Badgers are mainly protected due to persecution in the past and are not rare.

Water Vole

Water voles are fully protected under the Wildlife and Countryside Act 1981 (as amended). Water voles are protected against intentional killing, capture or injury and intentional or reckless disturbance, obstruction, damage or destruction of their burrows. Displacement works (translocation) can now only be undertaken under ecologist direction (Class Licence holder) or with a specific Natural England licence.

White-clawed Crayfish

The white-clawed crayfish is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In addition, Schedule 9 makes it an offence to release, or allow to escape into the wild, all non-native crayfish. It is listed under Appendix III of the Bern Convention, Under Annexes II and V of the EC Habitats Directive, and is classed as Globally Threatened by the IUCN. It is also a Priority Species under the UK Biodiversity Action Plan (BAP).

Invertebrates

Many invertebrates are listed as UK Biodiversity Action Plan (BAP) Priority Species and as Species of Principal Importance (Section 41) of the Natural Environment and Rural Communities Act 2006 (NERC-S41) (see below). Although such species do not receive protection under criminal law, their presence is a material planning consideration and consequently:

- Planning policies and decisions should “promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species...” (taken from NPPF, 2021).

- Local Planning Authorities will use the list to identify the species and habitats that require specific consideration in dealing with planning and development control, recognising that under the NPPF the aim of planning decisions should be to avoid or minimise impacts to biodiversity.

Invasive Species

The Wildlife and Countryside Act 1981 (as amended) is the principal legislation dealing with non-native species. The WCA has been amended in relation to England and Wales by various pieces of legislation, including: the WCA Variation of Schedule 9 Order 2010; the Natural Environment and Rural Communities Act 2006; and the Countryside and Rights of Way Act 2000. Section 14(1) of the WCA makes it illegal to release or allow to escape into the wild any animal which is not ordinarily resident in Great Britain, is not a regular visitor to Great Britain in a wild state, or is listed in Schedule 9 of the Act. It is also illegal to plant or otherwise cause to grow in the wild any plant listed in Schedule 9 of the Act.

Wild Mammals (rabbits, foxes, deer, etc.)

Mammal species that are not of primary conservation importance do receive a degree of protection within the Wild Mammals (Protection) Act 1996. This includes offences which have implications for site clearance (particularly in the case of burrowing species like rabbits and foxes), such as crushing or asphyxiation of any wild mammal with intent to cause unnecessary suffering. To avoid offences under this legislation, it is recommended that where these species are present a method statement is produced, aimed at careful excavation of (or exclusion from) burrows.

The Wildlife and Countryside Act 1981 (as amended)

Protected birds, animals and plants are listed in Schedules 1, 5, 6, and 8 of the Wildlife and Countryside Act.

Schedule 1

The Act makes it an offence to intentionally kill, injure or take any wild bird, their eggs or their nests. Special penalties are available for offences related to birds listed on Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The Act also prohibits certain methods of killing, injuring or taking birds; restricts the sale and possession of captive bred birds; and sets standards for keeping birds in captivity.

Schedule 5

The Act makes it an offence to intentionally kill, injure, take or possess, or trade in any wild animal listed in Schedule 5. It also prohibits interference with places used for shelter or protection, or the intentional disturbance of animals occupying such places. The Act also prohibits certain methods of killing, injuring or taking wild animals.

Schedule 6

The Act makes it an offence to kill or take animals by certain methods. Such methods include: self-locking snares, bows, crossbows, explosives (other than firearm ammunition) or live decoys. Species listed are also protected from the use of: traps, snares or nets; electrical devices for killing or stunning; poisonous, poisoned or stupefying substances, or any other gas or smoke; automatic or semi-automatic weapons; devices for illuminating a target or sighting devices for night shooting; artificial lights, mirrors or other dazzling devices; sound recordings; and mechanically propelled vehicles in immediate pursuit.

Schedule 8

The Act makes it an offence to pick, uproot, trade in or possess (for the purposes of trade) any wild plant listed in Schedule 8, and prohibits the unauthorised intentional uprooting of such plants.

The Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 (abbreviated to the Habitats Regulations) consolidate all of the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994. The 1994 Regulations transposed the EC Habitats Directive into national law in England and Wales. In Scotland the Habitats Directive is transposed through a combination of the Habitats Regulations 2010 (relating to reserved matters) and the 1994 Regulations. The Regulations provide for the protection of European Protected Species; and the designation, protection and adaptation of planning and other controls for the protection of European Sites. Under the Regulations, competent authorities (e.g. Ministers, government departments, public bodies or persons holding public office) have a general duty, in the exercise of any of their functions, to regard the EC Habitats Directive.

Schedule 2: European protected species of animals; Schedule 3: Animals which may not be taken or killed in certain ways; Schedule 4: European protected species of plants.

The UK Biodiversity Action Plan List of Priority Species and Habitats

Starting in 2005, the old UK BAP priorities were reviewed and, after adoption by the Governments of all four UK administrations, a new list called the UK List of Priority Species and Habitats was published in 2007. The species and habitats on this list help guide the conservation actions being made in the UK, as part of the UK contribution to the Convention on Biological Diversity.

The Hedgerows Regulations 1997

The Hedgerows Regulations were made under Section 97 of the Environment Act 1995 and came into effect in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside. Under the Regulations it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. The Regulations specify the criteria to be used by the local planning authority in determining which hedgerows are important. The criteria relate to the value of hedgerows from an archaeological, historical, landscape, wildlife or amenity perspective. Local planning authority permission is normally required before removing hedges that are at least 20m in length, more than 30 years old, or contain certain plant species. If a hedgerow is at least 30 years old and qualifies under any one of the criteria, then it is important.

The National Planning Policy Framework

The National Planning Policy Framework (NPPF) came into force on the 27 March 2012, being updated in 2021. Relevant policies include the following:

Policy 170: 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
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures

Policy 175: When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- If significant harm 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 proposals where the primary objective is to conserve or enhance biodiversity should be permitted.

- Opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.
- 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.

Policy 180: Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- {...} limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.

Appendix 3 - Bat Roost Assessment Criteria & Classification (adapted from Collins, 2016)

Suitability	Description of Potential Roosting Features (PRFs)	Commuting & Foraging Habitat
NEGLIGIBLE	Negligible roosting features on site that are likely to be used by bats	Negligible habitat features on site likely to be used by foraging or commuting bats
LOW	A structure with one or more features that could be opportunistically used by individual bats. Unlikely to support maternity or hibernation roosts. 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 which could be used by small numbers of commuting bats such as a gappy/defunct hedgerow, unvegetated stream/ditch, isolated scrub (not well connected to surrounding landscape by another habitat, or lone tree (not in parkland situation).
MODERATE	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat (unlikely to support roosts of high conservation status). A tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat. These trees are unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees, scrub, watercourses, grassland or interlinked gardens.
HIGH	A structure 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. A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat which is well connected to the wider landscape that is highly likely to be used regularly by commuting bats. Habitats such as tree lined watercourses, river valleys, hedgerows, grazed parkland, lines of trees, broadleaved woodland and woodland edges. Site is close to or connected to known roosts.

Company Directors

Jonathan Panter

Mobile: 07506 703540

j.panter@ecologylink.com

Helen Parish

Mobile: 07917 208040

h.parish@ecologylink.com

Ecology Link Ltd. | Registered Office: 61 Middlewatch, Swavesey, Cambridge CB24 4RW
Tel: 01954 231375 | Registered in England No. 07015978 | VAT registration No. 982 3666 82
www.ecologylink.com



ecologylink