



Preliminary Ecological Appraisal

Firs Hotel, Bedford Road, Hitchin

Feb 2026

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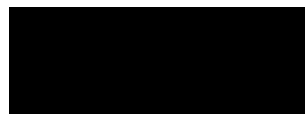
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Executive Summary

Site

Location	Land at Firs Hotel, Bedford Road, Hitchin SG5 2TY
Site Context	The Site is a flat parcel of land dominated by an existing hotel and hardstanding with a small amenity lawn. A treeline is present across the northern boundary.
Landscape Context	Habitats within the vicinity of the Site were largely dominated by the urban area of Hitchin. Various recreational grounds, treelined streets, residential gardens were also present.

Project

Proposed works	Proposals for the Site include redevelopment for residential units with associated amenities and access features.
Ecological Background	No previous ecological assessments are known to have been undertaken on habitats within the Site at the time of writing.

Methods

Objectives	• Outline all recorded ecological constraints associated with the Site with a focus on protected and notable habitats and species. • Provide a baseline of onsite habitats and other ecological features. • Deliver specialist advice to ensure compliance with relevant environmental and wildlife legislation, and current best practice guidelines.
Approach	A desk-based assessment was conducted using readily available online resources and local biological records up to 2 km from the Site boundary obtained from Herts Environmental Records Centre. A UKHab survey of the Site was conducted by Brown & Co Senior Ecologist Ryan Clark on 30 June 2025. All habitats within the Site were identified, assessed, and the potential of the Site and immediate vicinity to support protected and notable species was estimated.

Results

Habitats	The Site was dominated by a hotel and hardstanding. A small amenity lawn was present as well as a tree line and hedgerow.
Species	Adjacent habitats had potential to support nesting birds.

Recommendations

Further Work & Surveys

- Nesting Birds – clearance/management of any onsite vegetation higher than 300 mm should take place outside of the core nesting bird season (March-August inclusive). **If this cannot be achieved**, it is recommended that a pre-works check by a suitably qualified ecologist should take place within 48 hrs prior of any works.

Mitigation

- Other taxa – various recommendations to protect and mitigate risks to animals outlined in section 4.2.2.
- Environment – various recommendations to protect and mitigate risks to the environment outlined in section 4.2.3.

Enhancement

- Inclusion of biodiversity enhancement features outlined in section 4.3.1.
- General biodiversity enhancements recommendations are outlined in section 4.3.2.

1. Introduction

1.1 Project Background

Brown & Co was commissioned by Capital Developments Group in June 2025 to undertake a Preliminary Ecological Appraisal (PEA) of land at Firs Hotel, Bedford Road, Hitchin SG5 2TY (NRG: TL 17925 29803)—hereafter referred to as ‘the Site’.

This PEA sets out the results of a desk-based study and a survey of the Site undertaken on 30 June 2025.

The Site was dominated by a hotel and hardstanding. A small amenity lawn was present as well as a tree line and hedgerow.

This report has been produced to support a planning application to Proposals for the Site which include redevelopment for residential units with associated amenities and access features. Works and Site personnel are anticipated to access the Site via existing roadways.

1.2 Site Description

1.2.1 *Present Context*

The Site is a flat parcel of land on Bedford Road, Hitchin, in the north of Hertfordshire (See Figure 1). The Site was dominated by an existing hotel and hardstanding with a small amenity lawn. A small amenity lawn was present as well as a tree line and hedgerow.



Figure 1 – Site location (redline), showing the wider local landscape (© 2025 Microsoft Corporation, © 2025 Maxar, ©CNES (2025) Distribution Airbus DS).

Imagery taken from Aerial Imagery May 2025.

1.2.2 Landscape Context

The Site is situated in the north of Hertfordshire, in the west of the town of Hitchin. The wider landscape around the Site was dominated by the urban area of Hitchin, with a few recreational grounds and playing fields, tree-lined streets and residential gardens.

Multiple public roadways, chiefly associated with the urban area of Hitchin are present within the local vicinity of the Site.

One Statutory Main River, the River Purwell, lies within 2 km of the Site.

1.2.3 Connectivity

Considering the above outlined contextual features regarding the Site and its surrounding

landscape, it is estimated that overland connectivity of the Site to local habitats is low owing to boundaries with moderate dispersal barriers including multiple roadways, residential estates and watercourses associated with the urban area of Hitchin.

One pond is present 200 m North of the Site. However, this feature lies beyond urban areas. This is considered to leave a low potential of semi-aquatic species with terrestrial life phases to commute to/from the Site due to significant dispersal barriers.

It is further estimated that more mobile, flying species, such as bats, birds, and certain insect taxa, would be more readily able to commute to/from the Site.

2. Methods

All methodology associated with the onsite and desk-based elements of this document have been undertaken with reference to CIEEM (2017a and 2017b) and British Standards (2013) and adapted for the specific context of the Site and project proposals.

2.1 Objectives

The aim of this report is to provide a 1st-stage assessment of the Site and certain aspects of adjacent areas in regard to identifying and discussing any potential ecological constraints associated with the project. Such constraints include statutory designated sites and their associated Impact Risk Zones, protected and notable species and habitats, and invasive non-native species. A plan showing all onsite habitats and important ecological features within the zones of influence will be generated. Recommendations for further work/surveying, appropriate mitigation, and enhancement opportunities will be provided.

With reference to Delahay & Bartlett (2024) and other reviews of evidence-based approaches to ecological consultancy in Britain, this report seeks to critically analyse the methods employed where possible, and to provide full and current literature reviews at available opportunities, with particular focus on recommended outputs. So-called ‘best practice guidance’, including government and non-governmental organisation produced documents (not including laws and acts), is not assumed to be authoritative scientific advice at any stage of this report. Where more current or empirically robust literature is available on the various ecological and environmental principles, methods, and recommendations outlined in this assessment, these sources are laid-out, discussed and juxtaposed against ‘traditional’, perhaps alternative, narratives. Professional judgement based on project knowledge and survey observations are occasionally relied upon.

All standards, guidance, and professional opinions within this assessment are subject to ongoing review and scrutiny in the light of newly emerging data and information sources.

2.2 Mitigation Hierarchy

In applying the widely used professional guideline of the mitigation hierarchy (see Figure 2), the following processes for this report was adhered to:

Avoid – ecological features of note, as identified by this report, should be avoided in the first instance. This can be achieved by applying a compensatory design strategy that appropriately buffers said features or shifts the Site footprint.

Minimise – any potential adverse impacts identified in this report should be appropriately mitigated for in the design and project implementation phases.

Compensate – when avoidance and minimising options have been exhausted, impacts can be compensated for via project outcomes. Compensation should seek to provide adequate project and design options that will equal or exceed the impact to be compensated for.

Offset – the project has the opportunity to deliver enhancements to offset and exceed the requirements of avoidance, minimisation, and compensation.

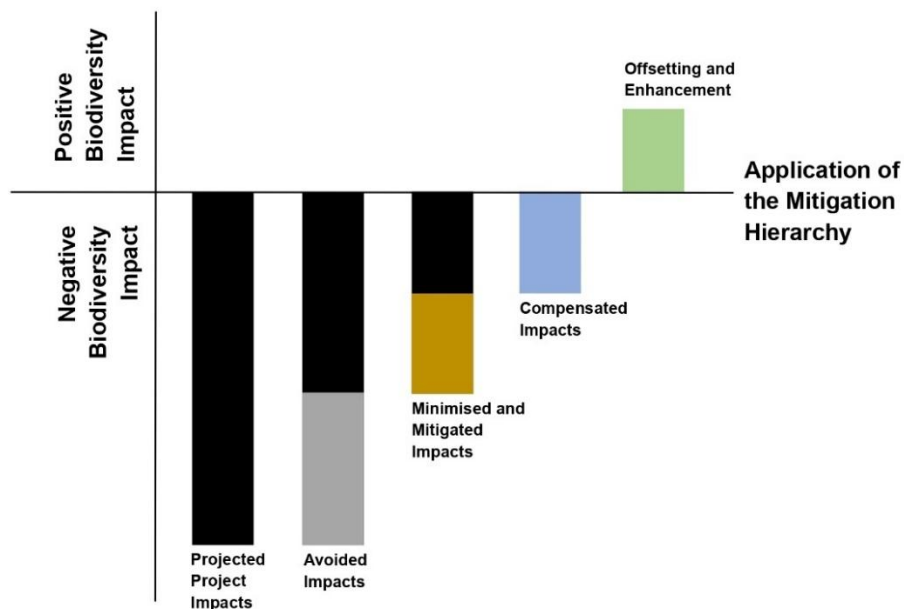


Figure 2 – Summary of the process of applying the mitigation hierarchy adhered to during this assessment.

2.3 Criteria of Importance

Statutory and non-statutory designated sites and habitats within the zones of influence were assessed on the following criteria to allocate their relative importance:

- Type of designation.
- Habitat Rarity.
- Protected, notable and/or threatened species records.
- Biodiversity – quantity of native or widely naturalised animal, plant and fungal species; and genetic diversity within individual species' populations.
- Diversity of habitat type, age, and structure.
- Connectivity on a Site, local vicinity, and landscape level.

2.4 Legislation and Policy

Appendix A sets out the national and local planning policy, as well as environmental and wildlife legislation relevant to the Site. The project must adhere to these documents at all times. The contents of this Preliminary Ecological Appraisal are written in part to avoid an offence being committed in regard to this policy and legislation.

2.5 Zones of influence

Zones of influence include the Site, any adjacent areas/features that could be impacted by the project (including hydrological and nutrient cycling disruption), and areas/features that could be temporarily impacted by the project, such as access routes and equipment and/or materials storage areas. Current guidance from CIEEM (2018) recommends that all zones of influence are assessed as part of ecological assessments.

Table 2.1 presents the zones of influence employed in this assessment.

Table 2.1 – Zones of influence investigated during this Preliminary Ecological Appraisal

Ecological Feature	Zone of Influence
European statutory designated sites notified for bat populations	10 km
Statutory designated sites	5 km
Non-statutory designated sites	2 km
Local biological records and granted European Protected Species licences	2 km
Priority habitats (habitats of principle importance to biodiversity conservation in England listed under Section 41 in the Natural Environment and Rural Communities Act (NERC) 2006 (as amended))—desk-based assessment	1 km
Non-priority habitats assessed at the time of survey	50 m
Badger (<i>Meles meles</i>) setts/activity	50 m
Bat suitable habitat – commuting and foraging	2 km
Bat roosting features	30 m
Beaver (<i>Castor fiber</i>), otter (<i>Lutra lutra</i>), water vole (<i>Arvicola amphibius</i>), and white-clawed crayfish (<i>Austropotamobius pallipes</i>) suitable habitat/signs	100 m
Bird records (direct observations at the time of survey) of species listed under Schedule 1 of the Wildlife and Countryside Act (WCA) 1981 (as amended)	500 m.
Waterbodies suitable as breeding sites for great crested newt (<i>Triturus cristatus</i>)	250 m
Hazel Dormouse (<i>Muscardinus avellanarius</i>) suitable habitat/signs	50 m
Reptile (direct observations at the time of survey and hibernacula/shelter searches)	30 m
Roman Snail (<i>Helix pomatia</i>) suitable habitat	30 m
Other protected species records (direct observations at the time of survey) listed on Schedules 5 and 8 of the WCA and/or European Protected Species (EPS) listed on the Conservation of Habitats and Species Regulations (CHSR) 2017 (as amended) and suitable habitat	100 m
Priority species records (direct observations at the time of survey) as listed under Section 41 of the NERC Act 2006 (as amended) such as brown hare (<i>Lepus europaeus</i>), harvest mouse (<i>Micromys minutus</i>), and polecat (<i>Mustela putorius</i>)	50 m.
Other common and widespread species records (direct observations at the time of survey) such as small mammals and insects	10 m

2.3 Desk Study

A desk-based assessment was conducted of the following features:

2.3.1 *Statutory and Non-statutory Designated Sites Notified for Nature Conservation*

A search on Defra's online MAGIC tool was used to identify and assess statutory designated sites within the zone of influence. The local records provided Herts Environmental Records Centre (HERC) were used to set out the non-statutory designated sites located within the zone of influence. Descriptions of the sites were given using information set out in the biological records and information published by Natural England, e.g. SSSI citations. Distance (nearest 5 m), direction, connectivity, and any notified protected or notable species were also discussed where relevant. Statutory sites designated for non-conservation purposes, such as geological sites, were excluded from this assessment.

2.3.2 *Priority Habitats*

Priority Habitats were assessed up to 1 km from the Site boundary. Defra's online MAGIC tool was used to identify these habitats and their extent. The Woodland Trust's Ancient Tree Inventory was used to search for Priority Trees within the zone of influence. Distance and connectivity were also discussed where relevant.

2.3.3 *Protected and Notable Species Records*

Local biological records supplied by HERC and a variety of opensource webpages, and citizen science observations were used to inform an assessment of protected and notable species within the zones of influence. Given that species' distributions, populations, and individual territories change relatively often through time (Bright *et al.* 2006; Matthews *et al.* 2018; Thaxter *et al.* 2010), species records are only considered relevant to this assessment if they occurred within the last 10 years.

2.3.4 Connectivity

Connectivity is discussed and referred to in multiple sections throughout this report to support the ecological assessment of the Site and proposed works.

While the scientific concept of connectivity has been traditionally hard to define (Crooks 2010) and is potentially a complex of different processes (Fahrig *et al.* 2021), for the purposes this assessment Merriam (1984) and Taylor *et al.* (1993) are lent from in the following definition:

The degree to which isolation of organisms is prevented via biotic and abiotic factors that impact movement and/or dispersal.

With this definition of connectivity, in the context of the Site's connectivity to the various features outlined in this report, this can include physical barriers such as public roadways or watercourses, or behavioural responses such as animals' reactions to disturbance (Tischendorf & Fahrig 2000)—where physical barriers are not present, functional barriers may still exist where species are less able/likely to use certain areas (Crooks 2010).

The permeability of landscapes and habitats is assessed on a taxa, species, and population level as the consequences of dispersal barriers can vary markedly between these groups depending on their ecology. For example, connectivity for flying bats and birds to onsite habitats could be assessed to be higher than that of terrestrial small mammals that need to locomote at ground level.

Different levels of connectivity can impact species in different ways. For example, species that naturally exist in metapopulations—a group of geographically local populations that share occasional migration of individuals and gene flow between them—may be more negatively impacted by relatively low connectivity than species with less frequent landscape gene flow. At an ecosystem level, reduced connectivity through fragmentation of

landscapes (physically or functionally) is considered to have negative biodiversity effects (Rudnick *et al.* 2012). Although, reduced connectivity and fragmentation is often thought to be conflated with habitat loss and may have some positive impacts (Fahrig 2016 & 2017). Nevertheless, less connectivity reduces species' capacity to disperse through landscapes and improving connectivity in mainland Britain fits in with a key output of the Lawton reviews' (2010) 'bigger, better, *more joined up*' recommendation for ecological sites and networks to the then UK Environment Secretary.

This assessment ranks connectivity on the following scale:

High – good connectivity, perhaps with direct linking features and habitats. No major or moderate dispersal barriers present.

Moderate – medium connectivity. Opportunities for dispersal are present, perhaps under certain conditions such as time of day or year, but dispersal barriers are present to some degree and may inhibit species' movement. More permeable corridors and habitats may be preferred.

Low – poor connectivity. At least one major dispersal barrier is present; there is negligible potential for movement to/from the Site.

2.4 Field study

A survey of the site was conducted on 29 May 2025 by Senior Ecologist Ryan Clark BSc (Hons) MSc ACIEEM.

The survey area was defined to include the Site and relevant zones of influence shown in Table 2.1. The survey area was subject to a walkover by the attending ecologist, where in the onsite habitats were identified and assessed in accordance with the UK Habitat Classification Version 2.0 (UKHab Ltd 2023). Flora species lists were compiled for each habitat and assigned positions on the DAFOR (Dominant, Abundant, Frequent, Occasional,

or Rare) scale as laid out in Walker *et al.* (2010). Additionally, the Site was assessed for its suitability for protected and notable species. Any evidence of such species, e.g. Badger setts and signs, was recorded and geo-referenced onsite.

An adaptation of Jukes (2021) 'checklist' for considering site suitability for invertebrates in initial scoping was employed in reference to onsite habitats. This method seeks to identify the presence/absence of ecological features that benefit invertebrate abundance and diversity.

2.5 Limitations

The survey of the Site was conducted in June 2025, within the optimal botanical assessment period and habitat survey season (April-September inclusive). Thus, it is considered that an accurate baseline ecological condition of the Site was captured at the time of survey.

While searches of opensource aerial imagery are useful resources to provide data on the Site and its surrounding landscape, there are inevitable situations where some features, such as garden ponds, are not detected and other features misidentified. These limitations are considered to be unavoidable when employing such tools, however, this assessment does not provide significant enough weight to the results of these searches that they would impact its findings.

References to protected species within this report do not constitute full protected species survey results and should not be treated as such.

3. Results

3.1 Desk Study

3.1.1 Designated Sites

No European statutory designated sites notified for bats were identified within 10 km. Six designated sites were identified within 5 km of the Site (Table 3.1), and twelve non-statutory designated sites were identified within 2 km of the Site (Table 3.2).

Table 3.1 – Statutory Designated Sites

Site and Designation	Distance and Direction	Connectivity	Site Description and Ecological Features
Oughtonhead Common Local Nature Reserve (LNR)	897 m W	Moderate – LNR lies beyond an urban area with some tree lined streets and residential gardens but multiple roadways and a small parcel of agricultural land	A 17.35 ha site containing woodland and a wide variety of habitats. The river Oughton flows alongside the common.
Purwell Meadows LNR	1, 832 m E	Low – LNR lies beyond an urban area with some tree lined streets and residential gardens but multiple roadways and a railway line	A 8.59 ha site containing a mixture of meadow land and play areas and a stretch of the river Purwell. Noted for presence of kingfishers in the area.
Knocking Hoe Site of Special Scientific Interest (SSSI)	4, 624 m W	Moderate – SSSI lies beyond multiple agricultural field parcels and areas of woodland but across an urban area with residential gardens and treelined streets, and multiple public roadways	A 7.7 ha chalk grassland site supporting species-rich calcareous turf with plants including squinancywort, pyramidal orchid, cowslip, yellow-wort, sainfoin, and flea sedge. Noted for its structural diversity with areas of scrub dominated by hawthorn, wild rose, spindle, privet, and wayfaring tree. The site supports several nationally rare plant species and illustrates classic chalk flora, particularly on steep, south-facing slopes.
Knocking Hoe National Nature Reserve (NNR)	4, 624 m W	Moderate – NNR lies beyond multiple agricultural field parcels and areas of woodland but across an urban area with residential gardens	An 8 ha site containing species-rich lowland calcareous grassland supporting rare plants including moon carrot, spotted catsear, field fleawort, burnt tip orchid, and pasque flower. Also contains horseshoe vetch, small scabious, rock rose, clustered bellflower, and the orchid autumn lady's-tresses. Notable butterflies

			and treelined streets, and multiple public roadways	include common blue, chalkhill blue, and brown argus.
Wain SSSI	Wood	3, 993 m S	Moderate – SSSI lies beyond multiple agricultural field parcels and areas of woodland but across an urban area with residential gardens and treelined streets, and multiple public roadways	A 19.2 ha site containing ancient and semi-natural oak and hornbeam woodland which supports species including bluebell, bramble, bracken, dog's mercury, and bryophytes, and acidic grassland supporting sheep's sorrel, yellow pimpernel, common centaury, field scabious, hairy St John's wort, lady's mantle and eyebright. Notable fauna includes purple hairstreak.
Norton Common LNR		4, 772 m NE	Low – LNR lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways and a small area of agricultural land	A 25.69 ha site containing woodland, grassland with wildflowers, and a mineral brook.

Table 3.2 – Non-statutory Designated Sites

Site Designation	and	Distance and Direction	Connectivity	Site Description and Ecological Features
Oughton Head Local Wildlife Site (LWS)		930 m W	Moderate – LWS lies beyond an urban area with some tree lined streets and residential gardens but multiple roadways and a small parcel of agricultural land	A 25.26 site containing wet woodland, marshy grassland with fen, neutral grassland, scrub, woodland and fen woodland. Noted for presence of grass snake, harvest mouse, European hare and water voles.
Windmill LWS	Hill	960 m SE	Low – LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways	A 2.81 ha calcareous gravel hill supporting short grassland and steep roadside banks with diverse grassland flora. Noted for presence of Wild Clary, a species rare in Hertfordshire.
The Willows (Hitchin) LWS		1, 230 m S	Low – LWS lies beyond multiple urban areas with residential gardens and treelined streets, and	A 3.74 ha fen woodland dominated by Alder and Willow, with marshy grassland, Hazel coppice, scrub, springs and small streams. Noted for frequent Lesser Pond-sedge and wet woodland flora.

			multiple public roadways	
Cadwell Marsh & Burymead Springs LWS	1, 320 m NE	Moderate	- LWS lies beyond an urban area with some tree lined streets and residential gardens but multiple roadways	A 11.89 ha site containing marshy meadows, scrub, reed beds, hazel coppice and willow plantation, and spring-fed pools. Noted for presence of water vole and harvest mouse.
Westmill Lane, Ickleford LWS	1, 300 m N	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways and an agricultural field parcel	Buildings and surrounding areas important for protected species.
Priory Park Icehouse LWS	1, 330 m S	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways	Buildings and surrounding areas important for protected species.
River Purwell LWS	1, 450 m NE	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways and a railway line	River Purwell and banks with some botanical interest and record of water vole.
Hitchin Railway Cutting LWS	1, 620 m E	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways	A site with chalk cutting, calcareous grassland, scrub, rocky ground, and railway infrastructure. Noted for presence of Great Crested Newt, Smooth Newt, Toad, and Frog.
Charlton Mill Pool LWS	1, 810 m S	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways and agricultural field parcels	A 1.04 ha site containing an old mill pool, swampy channels, and wet Willow/Alder woodland. Noted for wet secondary woodland features and periodic river flooding.
Purwell Meadows LWS	1, 860 m E	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined	A 9.53 ha site of unimproved calcareous grassland, marshy ground, springs, neutral grassland, and scrub. Noted for Quaking Grass, Spiny Rest-harrow, Greater Bird's-foot Trefoil,

			streets, and multiple public roadways and a railway line	Adder's-tongue, Southern Marsh-orchid, and local importance to birds.
Cadwell Lane Gasworks Meadow	1, 880 m NE	Low	- LWS lies beyond multiple urban areas with residential gardens and treelined streets, and multiple public roadways and a railway line	A 3.16 ha site containing dense Hawthorn scrub, calcareous spoil with herb-rich communities, remnant old grassland, and hedgerow boundaries. Noted for the presence of Agrimony, Common and Greater Knapweed, Lady's Bedstraw, Bird's-foot Trefoil, Wild Basil, Meadow Vetchling, Common Spotted-orchid, and Southern Marsh-orchid. Protected species have been recorded.
Hitchin Road Verge (S. of Pirton) LWS	1, 890 m W	Moderate	- LWS lies beyond an urban area with some tree lined streets and residential gardens but multiple roadways and a small parcel of agricultural land	A 1.28 ha road verge with calcareous grassland backed by ditches and hedgerows. Noted for Greater Knapweed, Restharrow, Harebell, Ox-eye Daisy, and the uncommon Field Mouse-ear and Cornflower.

3.1.2 Priority and Notable Habitats

Priority Habitats (habitats of Principle Importance to biodiversity Conservation in England as outlined in Section 41 of the Natural Environment and Rural Communities Act 2006 (as amended)) that were identified within 1 km of the Site on Defra's MAGIC tool are shown in Table 3.3.

Table 3.3 – Priority Habitats

Habitat	Number, Distance and Direction of Closest Parcel	Connectivity
Lowland mixed deciduous woodland	33 parcels; 450 m SE	<u>Moderate</u> – connected via an urban area with residential gardens, tree lined streets and recreational grounds
Lowland meadows	6 parcels; 910 m W	<u>Low</u> – connected via agricultural field parcels, an urban area with tree-lined streets and residential gardens, and multiple public roadways
Reedbeds	1 parcel; 1, 410 m NE	<u>Moderate</u> – connected via agricultural field parcels, residential gardens and recreational grounds, but across an urban area with public roadways

Traditional Orchard	2 parcels; 1, 508 m S	<u>Low</u> – connected via an urban area with residential gardens and tree-lined streets and multiple public roadways
Coastal and floodplain grazing marsh	1 parcel; 1, 985 m NE	<u>Moderate</u> – connected via agricultural field parcels, residential gardens and recreational grounds, but across an urban area with public roadways

No records of ancient or veteran trees were identified within 2km of the Site.

It is considered that multiple native hedgerows and ponds within 1 km of the Site may meet the criteria of Priority Habitats.

3.1.3 *European Protected Species Licences*

One granted Natural England European Protected Species Application for bats noted in the last 10 years was present 227 m SW of the Site.

3.2 **Field Study**

3.2.1 *UK Habitat Classification Survey*

This section outlines all habitats recorded within the Site on the 30 June 2025. A plan depicting the onsite habitats, their extent and location, and relevant target notes are shown in Appendix B; photographs of the Site are shown in Appendix C.

UKHab habitats identified within the Site:

- Developed land
- Modified grassland – g4
- Other woodland; mixed; mainly broadleaved – w1h5 (Secondary code: 33 – line of trees)
- Non-native and ornamental hedgerow – h2b

3.2.1.1 Developed Land

The majority of the Site comprised existing building and hardstanding (Photograph 1).

3.2.1.2 Modified Grassland

Small parcel of amenity grassland in the centre of the Site (Photograph 2). The sward was dominated by perennial ryegrass (*Lolium perenne*). Forbs included dandelion (*Taraxacum* agg.), ribwort plantain (*Plantago lanceolata*), rough hawkbit (*Leontodon hispidus*) and selfheal (*Prunella vulgaris*).

3.2.1.2 Line of Trees

Line of trees (Photograph 3) dominated by Italian cypress (*Cupressus sempervirens*) and Lawson's cypress (*Chamaecyparis lawsoniana*), with English yew (*Taxus baccata*) and Japanese wild cherry (*Prunus serrulate*).

3.2.1.2 Non-native and Ornamental Hedgerow

Scarlet firethorn (*Pyracantha coccinea*) dominated hedgerow (Photograph 4).

3.3 Protected and Notable Species Evaluation

A search of local biological records was conducted by HERC up to a distance of 2 km from the Site boundary. Only records within the last 10 years were included in this assessment. Certain records were selected in this assessment in reference to their relative relevance to the Site and project proposals. Any records not accurate to 100 m or less are considered to fall below the spatial accuracy threshold for this investigation and are not considered further.

All records of species protected under the Conservation of Habitats and Species Regulations 2017 (as amended), the Natural Environment and Rural Communities Act

2006 (as amended), and the Wildlife and Countryside Act 1981 (as amended) were included in this assessment, as well as additionally selected notable species records.

3.3.1 *Badger*

The local records returned seven occurrences of badger within 2 km of the Site, the closest of which was 854 m E of the Site. Connectivity is moderate across an urban area with multiple public roadways but also with residential gardens and treelined streets.

No suitable badger habitat was present within the Site.

No signs of badger were recorded at the time of survey.

Therefore, it is considering that potential for the Site to support badger is low—no impacts from the proposed works to these species are anticipated.

3.3.2 *Bat*

No occurrences of bat species were returned by the local records.

No onsite buildings or trees had potential roosting features for bats. The loft voids of the onsite building (Photograph 5) were inspected at the time of survey. No signs of bats or potential roosting features were identified—the building structure was well-sealed, with no significant entrance features for bats to exploit and the building was disturbed by frequent human use.

Therefore, it is considering that potential for the Site to support roosting bats is negligible—no impacts from the proposed works to these species are anticipated.

It is estimated that more optimal habitat for foraging bat was present in the local vicinity in the form of more extensive hedgerows, woodland blocks, and waterbodies.

3.3.3 Birds

Birds that are protected or are Priority Species (species of Principle Importance to biodiversity Conservation in England as outlined in Section 41 of the Natural Environment and Rural Communities Act 2006 (as amended)) that were returned by the local records are detailed in Table 3.4.

Table 3.4 – bird records

Species	Number of Records	Location & Direction (Closest Record)	Connectivity (All Records)
Schedule 1			
Red Kite (<i>Milvus milvus</i>)	327	388 m SE	Moderate – connected via an urban area with tree lined streets and residential gardens
Kingfisher (<i>Alcedo atthis</i>)	44	757 m SE	Moderate – connected via an urban area with tree lined streets and residential gardens
Barn Owl (<i>Tyto alba</i>)	5	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Wryneck (<i>Jynx torquilla</i>)	2	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Fieldfare (<i>Turdus pilaris</i>)	165	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Redwing (<i>Turdus iliacus</i>)	192	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Firecrest (<i>Regulus ignicapilla</i>)	1	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Brambling (<i>Fringilla montifringilla</i>)	3	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Hobby (<i>Falco subbuteo</i>)	5	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens

Peregrine (<i>Falco peregrinus</i>)	6	1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Mediterranean Gull (<i>Ichthyaetus melanocephalus</i>)		1, 070 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Dartford Warbler (<i>Curruca undata</i>)	1	1, 215 m SW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Merlin (<i>Falco columbarius</i>)	1	1, 503 m SW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Priority Species			
Lesser Redpoll (<i>Acanthis cabaret</i>)	10	691 m W	Moderate – connected via an urban area with tree lined streets and residential gardens
Corn Bunting (<i>Emberiza calandra</i>)	7	691 m W	Moderate – connected via an urban area with tree lined streets and residential gardens
Hawfinch (<i>Coccothraustes coccothraustes</i>)	1	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Yellowhammer (<i>Emberiza citrinella</i>)	14	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Grey Partridge (<i>Perdix perdix</i>)	8	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Song Thrush (<i>Turdus philomelos</i>)	1	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens

Lesser Spotted Woodpecker (<i>Dryobates minor</i>)	2	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Yellow Wagtail (<i>Motacilla flava</i>)	4	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Linnet (<i>Linaria cannabina</i>)	8	1, 071 m E	Moderate – connected via an urban area with tree lined streets and residential gardens
Cuckoo (<i>Cuculus canorus</i>)	4	1, 098 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Spotted Flycatcher (<i>Muscicapa striata</i>)	2	1, 196 m NW	Moderate – connected via agricultural fields with hedgerow margins, and an urban area with tree lined streets and residential gardens
Ring Ouzel (<i>Turdus torquatus</i>)	1	1, 546 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Lapwing (<i>Vanellus vanellus</i>)	1	1, 546 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Bullfinch (<i>Pyrrhula pyrrhula</i>)	4	1, 546 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens

Skylark (<i>Alauda arvensis</i>)	1	1, 551 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
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Records of notable and protected birds are present within the zone of influence for these taxa and nesting habitat in the form of trees and hedges could be impact by the works. All British birds are protected while nesting.

Therefore, it is considering that nesting birds may be present within the Site and be impacted by the proposed works.

3.3.4 *Great Crested Newt*

The local records identified no location records of great crested newt (GCN) populations within 2 km of the Site.

There is one pond 200 m N of the Site. However, this feature lies beyond urban areas that are considered to be a major dispersal barrier for GCN. No suitable terrestrial habitats was present within the Site.

Therefore, it is considering that potential for the Site to support breeding GCN is negligible—no impacts from the proposed works to these species are anticipated.

3.3.5 *Hazel Dormouse*

No occurrences of hazel dormouse were returned in the local records. No onsite vegetation stands are considered capable of supporting viable hazel dormouse populations – this species has a naturally low population density, 1.75-2.5 individuals per ha on average

(Bright *et al.* 2006) and therefore generally requires larger blocks of suitable habitat (or connected areas of habitat) to support breeding populations.

Therefore, it is considered that the potential for the Site to support breeding hazel dormouse is negligible—no impacts from the proposed works to this species are anticipated.

3.3.6 Invertebrates

Seven records of invertebrate Priority Species were returned from the local records (Fig. 3.5)

Figure 3.5 – Invertebrate Priority Species

Species	Number of Records	Location & Direction (Closest Record)	Connectivity (All Records)
Stag Beetle (<i>Lucanus cervus</i>)	1	1, 235 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Shaded Broad-bar (<i>Scotopteryx chenopodiata</i>)	1	1, 235 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Latticed Heath (<i>Chiasmia clathrata</i>)	1	1, 236 m NW	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
Purple Emperor (<i>Apatura iris</i>)	1	1, 395 m E	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens

Small Heath (<i>Coenonympha pamphilus</i>)	1	1, 834 m N	Moderate – connected via agricultural fields with hedgerow margins, woodland and an urban area with tree lined streets and residential gardens
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No other notable invertebrate species were recorded on the Site and the onsite habitats are not deemed suitable to support other notable and protected invertebrates such as Roman snail.

Table 3.6 outlines an adaptation of Jukes (2021) good practice guidance on invertebrate ecology surveying on initial site assessments regarding the results of the Site survey.

Table 3.6 – Jukes (2021) criteria for good invertebrate sites

Criteria of Good Invertebrate Habitat	Site Passes Criteria (Y/N)	Rationale
Range of habitat types or features	N	The site was dominated by developed land.
Structural variation within habitats	N	Onsite habitats were relatively uniform.
Variation in topography	N	The Site was a flat parcel of land.
Abundance of flowering plants	N	A poor diversity and abundance of flowering plants was present within the Site.
Availability of sunlight	Y	The Site is largely open with sunlight being readily available.

Considering the relative lack of extensive resources and habitats for invertebrates within the Site, and the relatively small scale and low impact nature of the proposed works, it is estimated that the potential for the Site to support and impact protected invertebrates is negligible—no impacts from the proposed works to these species are anticipated.

3.3.7 Other Mammals

128 occurrences of European Hedgehog (*Erinaceus europaeus*) were returned from the local records 903 m E of the Site with moderate connectivity via an urban area with treelined streets and residential gardens. Opportunities for this species within the Site are not present.

The local records also returned 9 occurrences of Brown hare (*Lepus europaeus*), the closest of which was 1, 464 m SW of the Site, and one occurrence of Polecat (*Mustela putorius*) 1, 823 m SW of the site. Connectivity is considered to be moderate connectivity across agricultural fields with hedgerow corridors, woodland, and an urban area with treelined streets and residential gardens.

The Site is considered to be unsuitable for Brown hare (*Lepus europaeus*) by providing no large open areas of agricultural land.

Therefore, it is considering that brown hare may be present within the Site and be impacted by the proposed works.

3.3.8 Plants

Two records of plants listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended), or the Natural Environment and Rural Communities Act 2006 (as amended) were returned by the local record search: One occurrence of water fern (*Azolla filiculoides*) 1, 408 m NW of the Site, and one occurrence of Japanese Knotweed (*Fallopia japonica*) 1, 912 m NE of the Site. Connectivity is considered to be moderate due to the presence of vegetated residential gardens in the urban area, and treelined streets.

No records of vascular plants listed under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as

amended), or the Natural Environment and Rural Communities Act 2006 (as amended) were returned by the local record search.

No protected, notable, or invasive vascular plant species were recorded onsite at the time of survey.

No impacts from the proposed works to these species are anticipated.

3.3.9 *Reptiles and Amphibians*

Two records of Common Lizard (*Zootoca vivipara*), the closest of which was 1, 763 m NW of the Site, and five records of Common Toad (*Bufo bufo*), the closest of which was 1, 247 m NW of the Site were returned from the local records search. Connectivity is considered to be moderate across an urban area with vegetated residential gardens and treelined streets.

Habitats within the Site suitable for common and widespread reptiles were limited to basking and commuting resources via the existing hedge and tree bases. However, onsite habitats are relatedly highly exposed and disturbed, and much more extensive areas of reptile suitable habitat are present within the wider landscape, e.g. waterbodies and agricultural field margins, that would likely be preferred by reptiles and could support viable populations.

No signs of reptile were recorded onsite at the time of survey.

Therefore, it is considered that the potential for the Site to support reptiles is negligible—no impacts from the proposed works to these species are anticipated.

3.3.10 Watercourse Species

One record of Brown/Sea Trout (*Salmo trutta*) 1, 192 m NW of the Site was returned from the local records search with low connectivity across agricultural land and an urban area. No other records of watercourse species were returned from the local records search.

There were no watercourses within the Site.

Therefore, it is considered that the potential for the Site to support watercourse species is negligible—no impacts from the proposed works to these species are anticipated.

3.4 Evaluation

Evidenced by the results of this assessment, Table 3.7 outlines the various ecological features associated with the Site and project proposals and determines the need for further actions.

Table 3.7 – *ecological feature evaluation*

Ecological Feature	Further consideration	Rationale
Designated sites	No	The identified designated and non-designated sites are considered to be located relatively far from the Site with generally low connectivity. The project proposals are small scale and low impact and are therefore considered to have negligible potential to impact designated sites.
Priority Habitats	No	As the proposed project does not involve the removal of large areas of habitat or extensive development, no impacts to these habitats are anticipated.
Onsite habitats	No	All onsite habitats are common and widespread within Britain.
Badger	No	No evidence of badger setts were recorded at the time of survey.
Bat	No	The onsite habitats and features are considered to have negligible potential to support roosting bats.

		The wider landscape is estimated to have myriad opportunities for foraging and commuting bats.
Birds	Yes	Adjacent features have potential to support nesting birds.
Great crested newt	No	No breeding habitat for this species is present within the Site or within 250 m.
Hazel dormouse	No	No stands capable of supporting viable hazel dormouse populations were present within the Site or within adjacent habitats.
Invertebrates	No	Habitats within the Site offer relatively little resources for common and widespread invertebrate species.
Other mammals	Yes	Habitats within the Site may support Brown Hare. Feature only considered further in regard to brown hare.
Plants	No	No protected, notable or invasive plants were recorded within the Site.
Reptiles	No	Onsite habitats had no potential to support commuting and sheltering reptiles. It is considered that the wider landscape would be preferred by these species.
Watercourse species	No	There are no watercourses or riparian zone habitats within the Site.

4. Outputs and Opportunities

4.1 Further Work & Surveys

The following recommendations are required regarding protected species within the Site. The outputs will inform more detailed mitigation and potential licencing recommendations in the context of the project proposals.

4.1.1 *Nesting bird*

Clearance/management of any onsite vegetation higher than 300 mm should take place outside of the core nesting bird season (March-August inclusive). **If this cannot be achieved**, it is recommended that a pre-works check by a suitably qualified ecologist should take place within 48 hrs prior of any works.

Any identified nests may need to be buffered by 5 m, or greater, exclusion zones where no works can take place until the young have fledged or the nest is deemed to be no longer active.

4.2 Mitigation

4.2.1 *General Animal Protection Measures*

The following measures should be adhered to throughout the project to protect local fauna:

- If any potentially protected, notable or vulnerable animals, such as newts, bats, or reptiles, are encountered in the works area or in directly adjacent habitats, **all works must stop** and a suitably qualified ecologist consulted before proceeding.
- Creation of unintended habitat features that may be used by terrestrial fauna, e.g. spoil piles and brash piles, to be avoided during works where possible.
- No works to take place between sunset and sunrise.

- Avoidance of artificial lighting after dusk to minimise potential impacts to nocturnal fauna—lighting scheme to be in line with guidance set-out in Institution of Lighting Professionals (2023).

4.2.2 *General Environmental Protection Measures*

The following measures should be adhered to throughout the project to protect the local environment:

- Avoid unnecessary chemicals, herbicides, pesticides, vermicides and creating debris on the Site as these substances could harm wildlife. Liquid chemicals could further drain into the groundwater, causing contamination of the wider landscape.
- Plant, equipment, and/or materials should be stored on areas of hardstanding where possible.
- Fuel considerations to avoid leakage and pollution of the local environment:
 - All equipment, machinery and/or plant used in the scope of the proposed works should be fitted with fuel drip trays where possible.
 - All storing of fuel and re-fuelling of equipment, machinery and/or plant should take place with the use of drip-capture devices.
 - All onsite personnel should have access to spill mitigation devices for other equipment capable of leaking fuel or oil.
- Activities generating dust should be avoided or dampened where possible.

4.3 **Enhancement**

All enhancements set out in this section seek to uplift biodiversity—the variability within and among living organisms, species and ecosystems—local to the Site. These recommendations will adhere to the principles and guidance set-out in The National Pollinator Strategy: for bees and other pollinators in England (Defra 2014), the Environmental Improvement Plan (Defra 2023a), Making Space for Nature: A review of

England's Wildlife Sites and Ecological Network (Lawton *et al.* 2010), and the National Planning Policy Framework (Department for Leveling Up, Houseing & Communities 2023), among other documents, as well as following standing advice from Buglife, Championing the Farmed Environment, the Environment Agency, Farm wildlife, Hedgelink, Natural England, and the People's Trust for Endangered Species.

4.3.1 Taxa-specific Biodiversity Enhancement Opportunities

The proposed works have potential to provide taxa-specific enhancements to benefit local biodiversity in the following recommended ways:

- Artificial bird boxes to benefit threatened, protected and notable species. To include features for swift, starling, and barn owl, among other species. Boxes to be affixed to buildings or mature trees.
- Artificial bat boxes to benefit all bat species. Boxes to be affixed to buildings, mature trees, or to be pole mounted.
- Features for invertebrates to provide novel resources for a variety of niches. To include deadwood features, seed sowing and general planting for pollinators, and artificial nesting habitat for solitary bees.

4.3.2 General Biodiversity Enhancement Opportunities

The following measures are recommended to provide supplementary enhancements to benefit local biodiversity:

- Where biological resources are used on Site, such as wood for fences, materials should be sustainable and locally sourced where possible; Forestry Stewardship Council certified for timber resources.
- Avoid transporting offsite soil onto the Site. Where unavoidable, ensure that soil is peat free and suitable for the proposed transplant location. Peat free soil/compost retains water reducing the amount of watering required, it also releases nutrients

slowly and has a reduced impact on the environment when compared with compost containing peat.

- Avoid pollutants and general litter/debris which can cause harm to wildlife.
- Naturally occurring vertebrate carcasses to be left in situ if deemed not to be a danger to public health. This promotes necrobiome ecology and encourages taxa such as fungi and beetles—keystone species in woodland habitats (Mondor *et al.* 2012).

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APPENDIX A: Planning Policy & Legislation

Relevant Planning Policy

National Planning Policy Framework 2024

Section 15 of the NPPF states that planning policies and decisions should contribute and enhance the natural and local environment by:

- Protecting and enhancing sites of biodiversity value.
- Recognising the character and beauty of the countryside and the benefits of natural capital and ecosystem services.
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks.
- Preventing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.

This section goes on to recommend that plans should:

- Distinguish between international, national and locally designated sites.
 - Allocate land with the least environmental or amenity value.
 - Maintain and enhance habitats and green infrastructure networks.
 - Enhance natural capital at a catchment or landscape scale across local authority boundaries.
 - Give weight to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty.
 - Map and safeguard components of local wildlife-rich habitats and wider ecological networks, including wildlife corridors and stepping stones, and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.
 - Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species.
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Environment Act 2021

Schedule 14 of The Environment Act 2021 makes it mandatory for all new developments (with some limited exceptions) to achieve a biodiversity net gain (BNG) of at least 10% by the time the development is completed compared to the pre-development biodiversity value of the onsite habitat. This percentage may be amended in the future by the Secretary of State.

Conservation of Habitats and Species regulations 2017 (as amended).

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (animals) as listed on Schedule 2:

- Deliberately capture, injure or kill any wild animal of a European protected species.
- Deliberately disturb wild animals of any such species.
- Deliberately take or destroy the eggs of such an animal.
- Damage or destroy a breeding site or resting place of such an animal. (*Note: no intentionality is necessary to prosecute this activity*).

Section 43 of Part 3 of this legislation makes it an offence to do any of the following with regards to European Protected Species (plants) as listed on Schedule 5:

- Deliberately pick, collect, cut, uproot or destroy a wild plant of a European Protected Species.
- Be in position of or to transport said plant.

Natural Environment and Rural Communities Act (as amended).

Section 40 of Part 3 of this act compels public bodies (local authorities, police, fire and health authorities, and utility companies) with exercisable functions within England to consider actions to be taken to conserve and enhance biodiversity in England—in particular to have regard to the United Nations Environmental Programme Convention on Biological Diversity of 1992, any relevant local nature recovery strategies, and any relevant species conservation

strategy or protected site strategy (prepared by Natural England).

Section 41 of Part 3 of this Act ensures the publishing of a list containing species and habitat types that are of principle importance for the purpose of conserving or enhancing biodiversity in England.

Wild Mammals (Protection) Act 1996.

Under this legislation it is an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with the intent to inflict unnecessary suffering.

Protection of Badgers Act 1992

Under this legislation it is an offence to (or intend to, or to be reckless as to whether your actions would have these consequences):

- Wilfully kill, injure or take a badger (or attempts to do so).
- Damage or destroy any part of a badger sett. (Note: no intentionality is necessary to prosecute these activities).
- Obstruct access to a badger sett. (Note: no intentionality is necessary to prosecute these activities).
- Disturb a badger when it is occupying a sett. (Note: no intentionality is necessary to prosecute these activities).

Wildlife and Countryside Act 1981 (as amended).

Part 1 of this act makes it an offence to intentionally or recklessly kill, injure or take any wild bird, to take, damage or destroy the nest of any wild bird while that nest is in use or being built, and/or to take or destroy an egg of any wild bird.

Part 1 also makes it an offence to intentionally or recklessly disturb any wild bird included in Schedule 1 of the act, and to take, damage, or destroy the nest of any wild bird included in Schedule ZA1.

Schedule 5 list non-avian species that are afforded various protections under Sections 9.1a, 9.1b, 9.2, 9.4a, 9.4a (Whales), 9.4b, 9.4c, 9.5a and 9.5b.

Schedule 8 lists plant species that are protected from intentionally picking, uprooting or destroying under Section 13.

Schedule 9 lists non-native invasive plants for which it is an offence under Section 14 to plant or otherwise cause to grow in the wild any part of said plants. (Note: no intentionality is necessary to prosecute these activities).

Other Legislation (England)

- The Environmental Impact Assessment (EIA) Regulations 2017
- Anti-social Behaviour Act 2003 (as amended).
- Countryside and Rights of Way Act 2000
- Hedgerows Regulations 1997.
- Weeds Act 1959.

APPENDIX B: Site Habitat Plan

See overleaf.

Plans are indicative approximations of the layout of onsite habitats and are not drawn to measurable scale.



APPENDIX C: Photographs



Photograph 1: developed land.



Photograph 2: modified grassland.



Photograph 3: line of trees.



Photograph 4: non-native hedgerow.



Photograph 5: loft void.