# Vicarage Farm, L B Enfield: Preliminary Ecological Appraisal

January 2024



For:

## Friends of Trent Country Park,

by

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# Contents:

Executive Summary ..... 1

1.0 Introduction ..... 4

2.0 Methodology ..... 2

3.0 Survey results ..... 9

4.0 Site evaluation ..... 25

5.0 Discussion and Conclusions ..... 30

6.0 Recommendations ..... 43

7.0 References ..... 45

Appendix 1: Habitat map of site ..... 48

Appendix 2: Chase Park Placemaking Area (CPPA) - illustrative framework plan ..50

Appendix 3: Vascular plant species list ..... 52

Appendix 4: List of birds previously identified at Vicarage Farm ..... 58

Appendix 5: Analysis of BTO (Bird Track) species records ..... 63

Appendix 6: Legislation, planning policy and Biodiversity Action Plans ..... 65

Appendix 7: Trent Country Park - assessment of Visitor Impact ..... 76

Appendix 8: Site photographs ..... 85

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# Executive Summary


- Denis J Vickers (Consultant Ecologist) was commissioned by Fiends of Trent Country Park to carry out a preliminary ecological appraisal of Vicarage Farm in the London Borough of Enfield. The land is owned by the Comer Homes Group.
- The Enfield Draft Local Plan, Pre-publication Version (December 2023) shows Vicarage Farm as lying within the Chase Park Placemaking Area (CPPA) which is earmarked for a housing led development. In accommodation, the current Green Belt designation from central and southern parts of the site would be lifted. Additionally, a vehicular access is shown cutting across the Royal Enfield Rifles and Woodland at Vicarage Farm Site of Borough Importance for Nature Conservation to the east.
- Vicarage Farm does not enjoy any nature conservation designation. There are five non-statutory designated SINCs within a 1km radius including Trent Country Park (a Site of Metropolitan Importance), Trent Park Golf Course, and Royal Enfield Rifles Site and Woodland at Vicarage Farm (Sites of Borough Importance) which abut the site.
- The site chiefly comprised several ex-agricultural fields now under coverage of grass. The perimeters of some fields were marked by native hedgerows, several of which included broken lines of scattered trees. There were two livery stables and associated paddocks, one to the south-east and one to the north of the site. Three watercourses cross the area.
- A habitat survey of the site was carried out on the 26th of September 2023 with a supplementary visit taking place on the 31st of October 2022. Habitats were described following the UK Habitat Classification method.
- As Vicarage Farm is private property the only access was via Merryhills Way (a public footpath). Habitats away from the footpath were surveyed using binoculars, and high-definition aerial photographs (including drone imagery aside the footpath) and Google historical imagery. This involved using remote sensing techniques to identify ‘distant’ habitats using those near to the footpath for ground truthing purposes. The aims of the survey were:
    - Assess the site’s potential to support protected habitats or species.
    - Assess the site’s current ecological value.

  - Evaluate ecological resources / features at the site and place these in the appropriate geographical context following standard CIEEM (2018) guidance on ecological impact assessment.
  - Advise on any additional (phase 2) ecological surveys which may be required to better inform current knowledge of the site's ecology.
  - Suggest the possible impact of a housing led development on nearby and adjoining SINCs.
  - Comment on possible biodiversity off-setting should a housing led development take place on the land.
  - Draw conclusions as to the appropriateness of any housing led development with regards the site's ecology.

- Just over 80% (112.5ha) of the site's vegetation was assessed as g4 - modified grassland, the species richness of which was assumed poor to average. Other habitats included w1d - wet woodland, w1f6 - oak-hornbeam forest and h2a – native hedgerows which are of Principal Importance in England. The ecological assessment suggested the g4 – modified grassland was particularly rich in avifauna. Analysis of biodiversity records found that ~70% of the site's 151 recorded taxa of birds had some affinity for farmland / grassland. These combined data also included records of 79 taxa of Red and Amber listed Birds of Conservation Concern. BTO records show a number of these species confirmed as breeding during the period 2017-2022. The populations of some species were known to be in national decline.
- The preliminary ecological assessment indicated that the site met or exceeded many of the key criteria cited by the London Wildlife Sites Board which would suggest designation as a Site of Borough Importance for Nature Conservation. Although the species richness of vascular plants was judged as poor-average and habitat diversity low, the potentially rich avifauna of the site, largely associated with farmland / grassland, generally offset the lack of floral diversity. The GOV.UK website suggested important examples of wild bird habitat are protected by LPAs by designating them as local wildlife sites.
- Biodiversity net gain (BNG) was not viewed as an appropriate method of creating and improving natural habitats with regards bird-rich g4 – modified grassland as Biodiversity Metric calculations do not consider the rarity or diversity of fauna in that particular habitat.
- Despite some proposed woodland planting to the north-west of the CPPA, the impact of the development is highly likely to be negative, >moderate, and permanent in restricting

Vicarage Farm's functionality as a wildlife corridor due to habitat loss and disturbance. The type and level of public activity expected at Trent Country Park (particularly the eastern end near the CPPA) and Royal Enfield Rifles and Woodland at Vicarage Farm, would be elevated. This would be mostly due to increased numbers of people, dogs and trampling. The overall impact would be negative, moderate but ongoing.

- Recommendations include several surveys to inform future management including a full botanical, breeding bird assemblage, bats and badger surveys; and suggestions to enhance the biodiversity.
- In conclusion, the report states:
    - If the biodiversity value of Vicarage Farm is confirmed by the phase 2 surveys recommended in this report, designation as Site of Borough Importance for Nature Conservation should be considered.
    - Vicarage Farm's high potential for biodiversity enhancement should be exploited by restoring and managing native hedgerows and hay meadows (Habitats of Principal Importance in England), which are habitats compatible with current farmland / grassland fauna.

# 1.0 Introduction

## 1.1 BACKGROUND

**1.1.1** Denis J Vickers (Consultant Ecologist) was commissioned by the Friends of Trent Country Park to carry out a preliminary ecological appraisal (PEA) of land at Vicarage Farm in the London Borough of Enfield.

**1.1.2** The land, concerned is owned by the Comer Homes Group. Land in their ownership also includes part of the Royal Enfield Rifles Site and Woodland at Vicarage Farm which is a Site of Borough Importance for Nature Conservation (SBINC). The SBINC extends beyond Corner's ownership to the east. For completeness, this section part of the site has also been included in the appraisal. Its extent is indicated by the redline boundary in Appendix 1.

**1.1.3** The proposal (Local Plan Policy PL10: Chase Park) is for 3,700 dwellings within the area marked in purple in Appendix 2

## 1.2 SCOPE OF THE REPORT

**1.2.1** This report is based on a desktop study, and field survey using the UK Habitat Classification Method (Butcher *et al*, 2023). This approach is designed to identify broad habitat types at a site, to identify the potential of habitats to support protected species, and to assist in providing an overview of the ecological interest of the site.

**1.2.2** The assessment broadly follows guidelines produced by the Chartered Institute of Ecology and Environmental Management (CIEEM 2017 & 2018). It is generally the most widely used and professionally recognised method for Preliminary Ecological Appraisal.

## 1.3 SITE OVERVIEW

**1.3.1** The site chiefly comprised a good number of ex-agricultural fields now under coverage of grass. The perimeters of some fields were marked by native (flailed) hedgerows, several of which included broken lines of (sometimes mature) scattered trees.

**1.3.2** There were two livery stables and associated paddocks, one to the south-east and one to the north of the site.

**1.3.3** Three watercourses crossed the area; these were generally contained within wooded corridors: Salmons Brook, which flows north to south towards the site's eastern end; the Leeging Beech Gutter which empties into the brook towards its northern end; and

Merryhills Brook which flows west to east across the south of the site. Its confluence with Salmons Brook was located to the south-east just outside the site's boundary.

**1.3.4** The south-eastern corner of the Vicarage Farm area has been designated as part of a Site of Borough Importance for Nature Conservation (SBINC) by virtue of the range of habitats present e.g., deciduous and wet woodland, hedgerows, running water and veteran trees, with connections with other SINCs and areas of green space. The SBINC extends beyond the site's eastern boundary.

## 1.4 SITE HISTORY, CONTEXT AND STATUS

### 1.4.1 Brief history

a) The John Rocque map of the County of Middlesex from 1757 shows the area as a wooded part of Enfield Chase (a royal forest and hunting ground) north-west of the confluence of Merryhills and Salmons Brooks. Enfield Chase was inclosed and divided into lots circa 1777 – it was usual for woodland to be grubbed up soon after and to be replaced by farming. A series of Ordnance survey maps shows the following:

- In 1863/64 the area was largely as it is today other than the liveries and Enfield Rifles sites had not yet been developed and the watercourses were less wooded (Middlesex Sheet VII Surveyed: 1863 to 1864, Published: 1879).
- By 1895 the buildings associated with Vicarage Farm and South Lodge Farm were established (Middlesex Sheet VII.NW Revised: 1895, Published: 1897).
- By 1938 a sports ground and miniature rifle range were present to the south-east of the site (Hertfordshire Sheet XLVI.NW Revised: 1938, Published: ca. 1946)

b) Overall, this demonstrates the land has remained overwhelmingly open with relatively few buildings constructed or significant numbers of trees planted for a period of about 250 years.

c) Unlike most of Enfield's Green Belt, it seems Vicarage Farm was never owned by the Council and most likely in private hands from the Division of 1777.

d) Vicarage Farm was mentioned in the censuses of 1881, 1891 and 1901 when it was worked by farmer and journeyman Richard Head and his family. The farm appears to have been used for cattle farming and hay production. Newspaper articles and the 1939 England and Wales Register suggest the farm had been a dairy farm from at least 1901. In 1939 it was farmed by the Frederick Goddard a dairy farmer [possibly a tenant]. The occupations of others living and working on site indicate agricultural fruit growing was also practiced. T J

Harman and Sons purchased the site circa 1952. It's not clear what sort of farming Harman's did on the land, as a company, they were however involved in a wide range of agricultural pursuits. Harmans appear to have sold the land to CP Holdings (no date), a Hertfordshire-based company with an agricultural arm. In 2005, they sold to Lindentree Properties [a subsidiary of Comer, registered in the British Virgin Islands] for £2.75M, a characteristically low price for agricultural land within the Green Belt.

e) Most of the fields which were not used as paddocks or formed part of the SBINC were being used to grow oil-seed rape in 2013. Subsequently, they seem to have been laid to grass and cut periodically. There is evidence of a hay crop being gathered and baled but not to the extent of this practice.

### 1.4.2 Context

a) The Vicarage Farm site is an irregular shaped area of land of 140.9ha which is situated between Enfield Road (A110) to the south and Hadley Road to the north. Immediately at the site's western edge is a treelined bridleway and footpath which includes veteran and ancient trees. Beyond which is located Trent Park Golf Course and Trent Country Park (Shaws Wood and Williams Wood). To the east are open spaces associated with the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC and urban fabric associated with The Ridgeway (A1005). The centre of Cockfosters is situated approximately 1.8km to the south-west and Enfield Town, 1.9km to the south-east. The site's centroid is located at national grid reference TQ3036297265. Green space extends to the north and west of Vicarage Farm and is represented to the south as Glebe Fields.

### 1.4.3 Status

a) No known nature statutory conservation designations apply to the site. There are no European or national statutory designated sites or local nature reserves (LNRs) within a 1km search radius of the site. There are five non-statutory designated SINCs: Trent Country Park (a Site of Metropolitan Importance), Trent Park Golf Course, and Royal Enfield Rifles Site and Woodland at Vicarage Farm (Sites of Borough Importance) and Lakeside and Boxer's Lake, and Lonsdale Drive Woods (Sites of Local Importance). The locations of these SINCs are indicated in the context map (Figure 1) below:

**1.4.4** Enfield Council's current Local Plan Policies Map depicts Vicarage Farm as situated in an area designated as Metropolitan Green Belt and an Area of Special Character.

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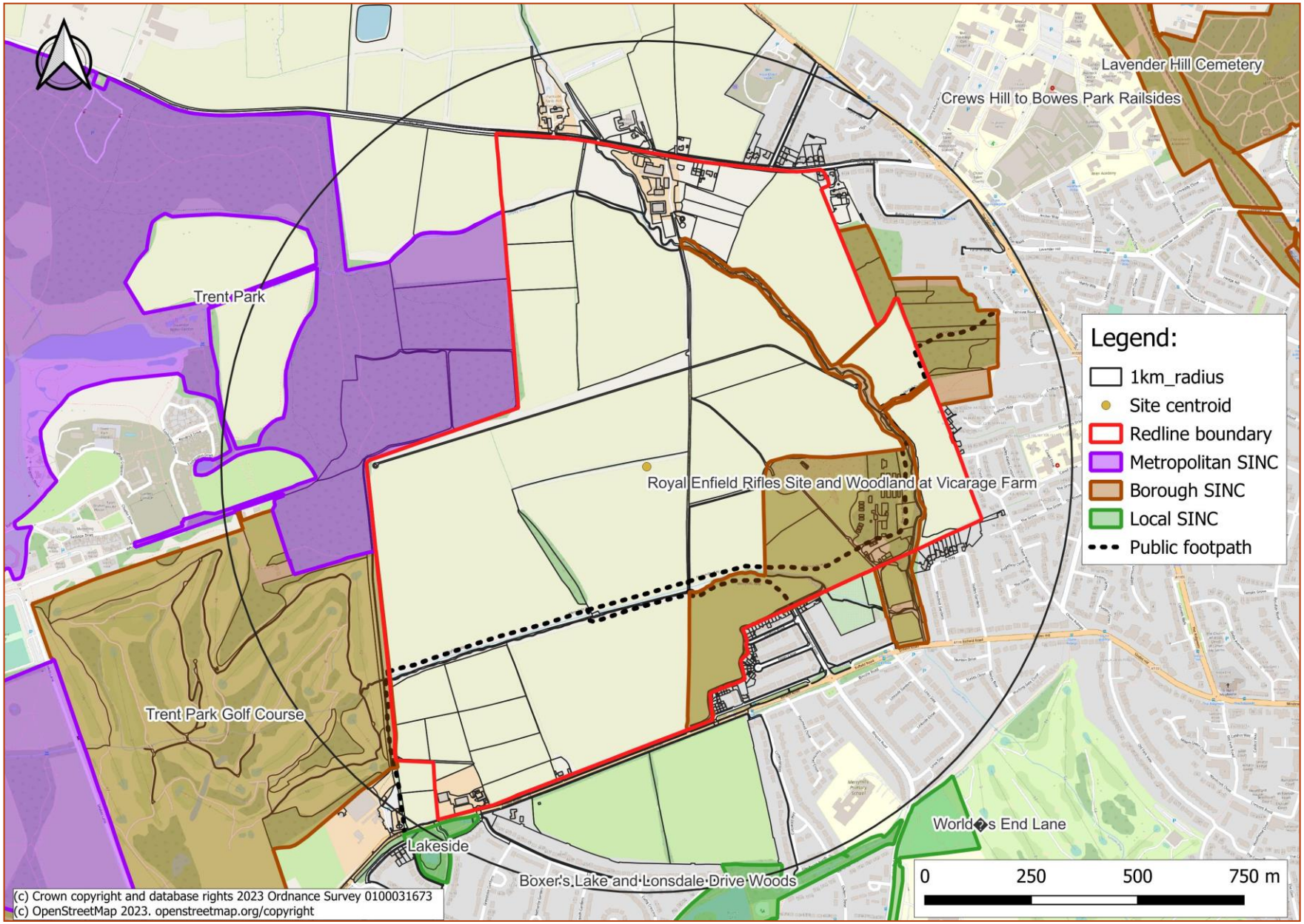
***Figure 1: Context***



## 1.5 SITE PROPOSALS

**1.5.1** The Enfield Draft Local Plan, Pre-publication Version (December 2023) shows Vicarage Farm as lying within Chase Park Placemaking Area which is earmarked for a housing led development (Appendix 2). In accommodation, the current Green Belt designation from central and southern parts of the site would be lifted. Additionally, a vehicular access is shown cutting across the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC to the east. The remaining Green Belt to the north would be used largely for public open space or woodland planting. Overall, at Vicarage Farm and associated areas, approximately 3,700 dwellings are suggested by the Council. These would be delivered over the next ten years or so.

## 1.6 AIMS OF SURVEY

**1.6.1** This preliminary ecological appraisal aims to:

- Assess the site's potential to support protected habitats or species.
- Assess the site's current ecological value.
- Evaluate ecological resources / features at the site and place these in the appropriate geographical context following standard CIEEM (2018) guidance on ecological impact assessment.
- Advise on any additional (phase 2) ecological surveys which may be required to better inform current knowledge of the site's ecology.
- Suggest the possible impact of a housing led development on nearby and adjoining SINCs.
- Comment on possible biodiversity off-setting should a housing led development take place on the land.
- Draw conclusions as to the appropriateness of any housing led development with regards the site's ecology.

## 1.7 EXPERIENCE OF SURVEYOR

**1.7.1** The habitat survey was completed by Denis J Vickers BSc (Hons), FLS, CBiol, MRSB, MCIEEM. Denis has over 30 years of experience of working in the field of ecology and conservation. Further details are available at https://www.consultantecologist.co.uk/.

# 2.0 Methodology

## 2.1 DESKTOP STUDY

**2.1.1** Information regarding the recent and historical ecological interest of the site within a 1km radius was requested from Greenspace Information for Greater London (GiGL).

**2.1.2** A number of other organisations and individuals were also contacted – the following supplied ecological information:

- The British Trust for Ornithology Bird Track database entries for TQ3097
- Clive Herbert Herpetologist and mammal ecologist. The records are held on the County Mammal Database, maintained by the London Mammal Group and the London Natural History Society, and County Herpetofauna Database maintained by the London Essex & Hertfordshire Amphibian and Reptile Trust. Data Search area: approximate 1-km radius from TQ 3095 9705
- Butterfly Conservation (Herts & Middlesex) for TQ3096

**2.1.3** The Bat Atlas of London (Law, R E, 2015) was consulted.

**2.1.4** NBN Atlas https://species.nbnatlas.org/species/ regarding general distribution of species within in the area.

**2.1.5** In addition, a search was completed of an on-line mapping service (www.magic.defra.gov.uk) for statutory designated sites.

**2.1.6** Consideration was given to Habitats and Species of Principal Importance for the Conservation of Biodiversity in England listed under the Natural Environment and Rural Communities (NERC) Act 2006, those covered by the London Biodiversity Action Plan (LBAP) and the Enfield Biodiversity Action Plan (EBAP) that were confirmed to be, or are potentially, present at the site.

## 2.2 HABITAT SURVEY

**2.2.1** A habitat survey of the site was carried out on the 26th of September 2023 with a supplementary visit taking place on the 31st of October 2022. Habitats were described following the UK Habitat Classification method (Butcher *et al*, 2023). Weather conditions during the September visit were warm and sunny; in October there was sunny spells and showers. The survey was completed in just over 10 hours over the two days period.

**2.2.2** As Vicarage Farm is private property the only access was via Merryhills Way (a public footpath). Habitats away from the footpath were surveyed using binoculars, and high-definition aerial photographs (including drone imagery to 75m either side of the footpath) and Google historical imagery. This involved using remote sensing techniques to identify 'distant' habitats using those near to the footpath for ground truthing purposes.

**2.2.3** A description of the habitat present is given under paragraph 3.4. A map of the site showing the chief habitats present appears in Appendix 1.

**2.2.4** A full list of vascular plant species identifiable at the site together with an assessment of their abundance using the DAFOR scale, appears in Appendix 3. Scientific names are given after the first mention of a vascular plant taxon; thereafter common names only are used, nomenclature follows Stace (2019). Photographs of features of interest appear in Appendix 8.

**2.2.5** Where appropriate the location of the following species and features were target noted with a 10-figure grid reference:

- Species protected under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended).
- Nationally rare species.
- Nationally scarce species.
- Red data book species.
- Species of Principal Importance in England. These species were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework (Defra 2012).
- Notable species for the Greater London area. Notable is defined as species which were recorded from 15% or fewer of the 400 two-kilometre recording squares (tetrads) in Greater London in the Flora of the London Area (Burton 1983).
- Trees which are notable because of size or likely antiquity.
- Non-native invasive species listed under schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- Features of specific biodiversity interest e.g., hedgerows, ditches and ponds.

**2.2.6** In accordance with best recording practice, each target note for a given species included the name of determiner (if not the report author), common name, scientific name, and parcel grid reference.

**2.2.7** Invasive non-native species (INNS) listed as of concern in London (London Invasive Species Initiative (or LISI), 2014) were recorded where applicable.

**2.2.8** Any birds, butterflies and Odonata observed during the habitat survey were recorded where appropriate.

## 2.3 PRELIMINARY PROTECTED SPECIES ASSESSMENT

**2.3.1** The potential of the site to provide habitat for protected species was assessed from field observations carried out at the same time as the habitat survey, combined with the results of the desktop study.

**2.3.2** Accessible parts of the site was inspected for indications of the presence of protected species as follows:

- Bats Chiroptera - the presence of trees with cracks or holes (such as woodpecker holes), splits or flaking bark and ivy indicating potential for roosting bats. Positive field signs of bat use include:
    - Staining around a feature e.g., cracks, caused by natural oils in bat fur
    - Scratch marks around a feature, caused by bat claws
    - Bat droppings beneath a hole
    - Urine stains below the entrance to a hole.
- Eurasian Badger *Meles meles* – field signs include the presence of:
    - Setts
    - Latrines
    - Badger hair
    - Footprints
    - Feeding remains; and
    - Badger paths
- West European Hedgehog *Erinaceus europaeus* - presence of suitable habitat, scrub and areas of short grassland, scats, runs, diggings and / or nests.
- Water Vole *Arvicola amphibius* - the following were noted: sightings, sounds of entering water, latrines showing discrete piles of droppings, tunnel entrances (above

and below water), cropped 'gardens' or 'lawns' around tunnel entrances, feeding stations of chopped vegetation, paths at water's edge, runs in the vegetation and footprints in the mud.

- Brown hare *Lepus europaeus* – characteristic footprints and droppings on bare ground at field edges.
- Breeding birds – presence of dense hedges and suitable trees with nests from the previous / current year; male birds in song holding territories; active nest sites and juvenile birds.
- Amphibians (including great crested newt) and reptiles – the presence suitable habitat, ponds, partially exposed tree roots, rotting vegetation, rubble piles and other potential refugia.
- Stag Beetle *Lucanus cervus* – The presence of suitable decaying wood resources, and the geographical location.
- Notable trees - as judged by the surveyor. Includes large specimens (e.g., pedunculate oak with a girth ≮2.5m at breast height) and possible veterans (i.e., trees of any age which exhibit ancient characteristics) or trees of significance in the locality, trees subject to Tree Preservation Orders (TPOs).

**2.3.3** These protected species were selected for further consideration because potentially suitable habitat was present on site (or nearby in the locality) and / or species records retrieved from data search were relatively frequent. The likelihood of occurrence is ranked as follows and relies on the current survey and evaluation of existing data:

- NEGLIGIBLE: while presence cannot be absolutely discounted, the site includes very limited or poor-quality habitat for a particular species or species group. No local returns from a data search, surrounding habitat considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known national range for a species,
- LOW: on-site habitat of poor to moderate quality for a given species/species group. Few or no returns from data search, but presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc.
- MODERATE: on-site habitat of moderate quality, providing most or all the known key requirements of given species/species group. Has local returns from the data search, within the national distribution and with suitable surrounding habitat. Factors

limiting the likelihood of occurrence may include small habitat area, habitat severance, and disturbance.

- HIGH: on-site habitat of high quality for given a species/species group. Local records provided by desk-top study. Site within/peripheral to a national or regional stronghold. Good quality surrounding habitat and good connectivity.
- PRESENT: presence confirmed from the current survey or by recent, confirmed records.

**2.3.4** A major purpose of this assessment was to identify whether more comprehensive Phase 2 surveys for protected species should be recommended.

## 2.4 SITE EVALUATION

### 2.4.1 Site of Importance for nature Conservation (SINC) assessment:

a) The site was evaluated as a SINC using the criteria developed by the GLA / London Ecology Unit for determining and designating Sites of Importance for Nature Conservation in Greater London. These criteria and the methodology followed are detailed in the document *Policy, criteria and procedures for identifying nature conservation sites in London* (The London Wildlife Site Board (LWSB) - update 2019):

- Representation
- Habitat rarity
- Species rarity
- Habitat richness
- Species richness
- Size
- Important populations of species
- Ancient character
- Recreatability
- Typical urban character
- Cultural or historic character
- Geographic position
- Access
- Use
- Potential
- Aesthetic appeal

- Geodiversity interest

b) These criteria were used with professional judgement and with adequate information in assessing whether the site remains of SINC value and (if applicable) its position within the local, borough or metropolitan context. The reasons for assessing a site as a SINC and the rational for the grade suggested were reviewed.

### 2.4.2 Evaluation of ecological resources and / or features on site:

The site was evaluated broadly as recommended by standard guidelines (CIEEM 2018 – updated 2022). In particular, the assessment of ecological value was made with reference to criteria such as the following, placed in geographical context (significance from an international level through to site level):

- Any designated sites or features, such as Sites of Local Importance for Conservation, protected trees or important hedgerows.
- Biodiversity value of the habitats, assessed by considering the distribution and status of habitats and species, including issues such as:
    - habitat diversity and connectivity; and
    - plant communities and/or animal groups that are considered typical of valuable natural or semi-natural vegetation
    - especially species-rich plant or animal communities; and
    - animal populations that are notably large in a wider context
- Presence of animal or plant species that are rare or threatened or in decline in a national, regional or local context.
- Habitats and species of Principal Importance for Biodiversity under Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006.
- Habitats and species included on local Biodiversity Action Plans.
- Habitats that are a material consideration in the planning process under NPPF (e.g., ancient woodland and limestone pavement) and Section 41 of the Natural Environment and Rural Communities Act (NERC) 2006.
- Presence of protected species.

## 2.5 LIMITATIONS

**2.5.1** It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

**2.5.2** The chief habitat survey visit was undertaken in late September, just inside the optimum period for vegetation survey (regarded as May to September), therefore a few early flowering components of vegetation may have been missed or absent at the time of the survey or otherwise under recorded. However, these factors were not considered to be significant constraints to habitat identification and / or assessment.

**2.5.3** The Vicarage Farm site is private property; the only access was via Merryhills Way public footpath. Therefore, habitats away from the footpath were surveyed using binoculars, and aerial photographs (including drone aerial photography from aside Merrryhills Way) employing remote sensing techniques. Habitats aside the footpath were used for ground truthing those habitats to which there was no direct access. The obvious implication was the floral composition 'distant' habitats could not be confirmed. However, this was not considered to be a significant constraint to habitat identification and / or assessment.

**2.5.4** The protected and priority species assessment provides a preliminary view of the likelihood of these species occurring on the site. This is based on the known distribution of the species in the local area (provided by the desktop study), the suitability of the habitat and any direct evidence on the site. It should not be taken as providing a full and definitive survey of any protected species group. It is only valid at the time the survey was carried out. Additional surveys may be recommended on the basis of the preliminary assessment or during any subsequent surveys.

# 3.0 Survey results

## 3.1 DESKTOP STUDY

**3.1.1** Greenspace Information for Greater London (GiGL) supplied most records of recent and historical ecological interest from within a 1km search radius of the site centroid. Where records, other than those supplied by GiGL are quoted, these are referenced accordingly:

## 3.2 SITES OF IMPORTANCE FOR NATURE CONSERVATION

### 3.2.1 Statutory sites:

The proposed development site was not subject to any statutory nature conservation designations, such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Sites of Special Scientific Importance (SSSIs) National Nature Reserves (NNRs) or Local Nature Reserves (LNRs) and there were no European or national statutory designations within a 1km radius of the site.

### 3.2.2 Non-statutory sites:

There are five SINCs (Figure 1) i.e., Trent Country Park (a Site of Metropolitan Importance); Trent Park Golf Course and Royal Enfield Rifles Site and Woodland at Vicarage Farm (Sites of Borough Importance); and Lakeside and Boxer's Lake and Lonsdale Drive Woods (Sites of Local Importance).

***Table 1: Sites of Importance for Nature conservation within 1km radius of the centroid of Vicarage Farm***

| Site ref./ Area | Site name | Summary description | Approx. distance | Bearing |
|---|---|---|---|---|
| M156 219.6ha | Trent Park | Trent Park is a complex mosaic of habitats associated with the grounds of a former country estate (now developed for housing). It consists of mixed woodland (some ancient) of pedunculate and sessile oak, sweet chestnut, hornbeam and sycamore, with willow, alder and ash in wetter areas. There are also substantial plantations including Scots pine and coast redwood, as well as significant quantities of standing decaying timber.<br>Notable flora of streamsides and damp woodland includes soft shield fern and bog stitchwort. Large areas | Adjoins site | N-W |

| Site ref./ Area | Site name | Summary description | Approx. distance | Bearing |
|---|---|---|---|---|
| | | of semi-improved neutral grass contrasts with the mown grassland of parkland area. There are also some ancient trees. Acid grassland is present, with characteristic flora including tormentil, heath bedstraw, early hair-grass and sand spurrey on pathways (notable in London). | | |
| EnB15 25,2ha | Royal Enfield Rifles Site and Woodland at Vicarage Farm | The area, formerly occupied by Royal Enfield Rifles, is characterised by roughland. The ground has a varied topography and vegetation structure. The flora includes red clover, wild roses, bracken, Yorkshire fog, false oat-grass, red fescue and occasional sheep's fescue. The area is likely to be particularly important for birds, insects, mammals (including bats) and reptiles. The hedgerow vegetation includes common hawthorn, elder, apple and crack willow, and male-fern and ivy grow in their shade. The course of Salmons Brook runs on the eastern edge of the old Royal Enfield Rifles site. This broad shallow watercourse flows in the shade of trees and scrub and has a native scrub riparian zone. Typical vegetation includes pedunculate oak, alder, field maple and tall fescue and yellow flag. | Forms part of site | E |
| EnB17 57.3ha | Trent Park Golf Course | This is a large, open golf course comprising grassland, parkland trees, the Merryhills Brook and three associated ponds. The sward of the fairways and greens is the only known borough locality for sneezewort, which is uncommon in London, and also supports marsh cudweed, which is rare in Enfield. Marginal and aquatic flora of the ponds and brook include the London notables brooklime, sweet-flag and flowering-rush, with common water-plantain, water mint and white water-lily. Birds to be seen include yellowhammer. | Adjoins site | S-W |
| EnL2 5.0ha | Boxer's Lake and Lonsdale Drive Woods | Boxer's Lake is a large ornamental lake with tree-lined margins of willow and alder. Marginal flora includes yellow flag iris, water mint and the London notable water dock; breeding wildfowl include mallard, moorhen, Canada goose and great crested grebe. There is woodland which improves in quality towards the east. The tree canopy is dominated by pedunculate | 330m | S |

| Site ref./ Area | Site name | Summary description | Approx. distance | Bearing |
|---|---|---|---|---|
| | | oak, with ash, hornbeam, hawthorns and blackthorn. The ground flora of bramble, common nettle and ivy also contains London notable pendulous sedge and Borough notable wood melick. Included within the site are sections of the inflow and outflow streams; these are heavily shaded, but a small stand of reed sweet-grass is present. | | |
| ENL9 1.2ha | Lakeside | This small but popular open space is composed of mature woodland surrounding an artificial lake. The lake has a diverse marginal flora, including trifid bur-marigold, yellow flag iris, branched bur-reed, pendulous sedge and brooklime. White water-lily is also present. The lake supports a population of the specially protected great crested newt. The woodland has a dense canopy of pedunculate and Turkey oaks, with crack willow and horse-chestnut. Holly is abundant in the understorey over a ground flora of bramble and ivy. Breeding birds include great spotted woodpecker. | 11m | S |

**NB.** information supplied by GiGL in Table 1 revised in the light of the local surveys conducted by Vickers 2016- and 2023.

**3.2.3** Geological sites: None present within search area.

## 3.3 PROTECTED SPECIES AND SPECIES OF CONCERVATION CONCERN

**3.3.1** The following data were supplied by GiGL and the organisations / individuals listed under 2.1.2 and where relevant, the field survey. It is important to note that, even where data are held, a lack of records for a defined geographical area does not necessarily mean that there is no ecological interest; the area may be simply under-recorded.

### 3.3.2 Bats (Vespertilionidae)

a) Common pipistrelle *Pipistrellus pipistrellus*

- GiGL reported 57 occurrences, the nearest record was from 968m south (2021) and the most recent 981m south-east (2021).
- Clive Herbert returned 11 records from within his search area. Including two records from 2022.

b) Nathusius's pipistrelle *Pipistrellus nathusii*

- GiGL reported one record of this species from 994m south (2021).

c) Soprano pipistrelle *Pipistrellus pygmaeus*

- GiGL reported nine occurrences, the nearest record was from 989m south (2021) and the most recent 999m south-east (2021).
- Clive Herbert returned 12 records from within his search area (2022).

d) Pipistrelle *Pipistrellus* sp.

- GiGL reported three occurrences, the nearest record was from 994m south (2021) and the most recent 994m south-east (2021).
- Clive Herbert returned five records from within his search area. Including three records from 2021.

e) Noctule bat *Nyctalus noctula*

- Clive Herbert returned three records from within his search area all from 2022.

f) Daubenton's bat *Myotis daubentonii*

- Clive Herbert returned four records from within his search area. Including two records from 2022.

g) Bats Vespertilionidae

- GiGL reported one occurrence in this category from 898m east (1995).

### 3.3.3 Eurasian Badger *Meles meles*

- GiGL reported one occurrence in this category from the 1km search area (2015).
- Nine records of badger were returned by Clive Herbert from within his search area, most were clustered around the south and south-east of the site. Recent records included two sightings from 2022 and three sightings from 2023.

### 3.3.4 Brown hare *Lepus europaeus*

- GiGL - no records were returned.
- Clive Herbert returned two records from within his search area (2020).

### 3.3.5 European water vole *Arvicola amphibius*

- GiGL - no records were returned.
- Clive Herbert returned two records from the Salmons Brook area (2000).

- **3.3.6 West European Hedgehog *Erinaceus europaeus***
  - GiGL reported 14 occurrences, the nearest record was from 735m east (2019) and the most recent 843m east (2019).
  - Clive Herbert returned 15 records from within his search area. Including two records from 2020.

### 3.3.6 Avifauna including breeding birds

a) Records of bird species received from GiGL and BTO were combined into one list[1]. Overall, 151 taxa were recorded at the site (Appendix 3). The list included common species (including several non-natives), rarities, visitors and vagrants. The list also included species known to breed on site although there was no attempt to categorise. Overall, 79 species were Birds of Conservation Concern (Stanbury *et al*, 2021) of which 36 were Red Listed and 43 Amber Listed. At least 104 taxa were associated with grassland and / or farmland at some stage throughout the year (based on an assessment of published material).

b) Farmland indicator species used to establish national trends in farmland bird populations were used to assess the value of Vicarage Farm for farmland birds (Appendix 5). This utilised the comprehensive records supplied by BTO (Bird Track) for the period 2004-2022. It included data for 18 of the 19 farmland indicator species (tree sparrow was not recorded but did appear in earlier GiGL records). Three generalist and seven specialist species were confirmed as breeding during the period 2017-2022. This included five BRed and three BAmb species.

c) Note: all nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). For further information regarding legal status see Appendix 6.

### 3.3.7 Reptiles

- GiGL reported two occurrences of slow-worm *Anguis fragilis*, the nearest record was from 219m east (2019) and the most recent 502m south-east (2021).

[1] BTO (Birdtrack) returned more than 25,000 records of 129 species for TQ3097. This included many species duplicated in the GiGL list as well as common species, seasonal visitors and vagrants.

- One record of slow-worm *Anguis fragilis* was provided by Clive Herbert. This record (from 2022) came from grid square TQ308972 and was located within the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC.
- GiGL reported one occurrence of grass snake *Natrix helvetica*, the nearest and most recent record was from 716m east (2019).
- One record of grass snake *Natrix helvetica* was provided by Clive Herbert. This record (from 2023) came from grid square TQ302979 which was located immediately west of the Vicarage Farm building complex.

### 3.3.8 Amphibians

- One record of common toad *Bufo bufo* was provided by Clive Herbert. This record (from 1999) came from grid square TQ301960 and was located just outside a 1km radius of the site centroid to the south.
- Two records of common frog *Rana temporaria* were provided by Clive Herbert. These records (from 1999) came from grid squares TQ314977 and TQ301960 which were located just outside a 1km radius of the site centroid to the east and the south respectively.
- One record of smooth newt *Lissotriton vulgaris* was provided by Clive Herbert: This record (from 1999) came from grid square TQ301960. This was located just outside a 1km radius of the site centroid to the south.

### 3.3.8 Stag beetle *Lucanus cervus*

- There were 14 occurrences of stag beetle returned by GiGL. The nearest record was from 782m east (2020) and the most recent 997m south-east (2022).

### 3.3.9 Other notable invertebrate species

- Other than stag beetle (above) GiGL reported two other Coleoptera recorded in 2016 and 2019 respectively, *Anaglyptus mysticus* and the Adonis' Ladybird *Hippodamia variegata* both are Nationally Notable category B species.
- GiGL records included 17 moth species. These were listed under the NERC Act Section 41. The records were relatively old (1999-2001) – nevertheless, some species may continue to occur on site.
- Ten species of butterfly were listed by GiGL (Table 2 below) and included both older and more recent records:

***Table 2: Butterfly records from within a 1km search radius of Vicarage Farm***

| Scientific name | Common name | Occurences | Most recent | Designation |
|---|---|---|---|---|
| *Coenonympha pamphilus* | Small Heath | 198 | 2022 | S41, LPS, LSoCC, RL_LR |
| *Coenonympha pamphilus pamphilus* | Small Heath | 5 | 2019 | S41, LPS, LSoCC, RL_LR |
| *Lasiommata megera* | Wall | 4 | 2000 | S41, LPS, LSoCC, RL_LR |
| *Leptidea sinapis* | Wood White | 2 | 2000 | S41, LSoCC, RL_E |
| *Lycaena phlaeas* | Small Copper | 80 | 2021 | LPS |
| *Lycaena phlaeas eleus* | A Butterfly | 5 | 2019 | LPS |
| *Ochlodes sylvanus* | Large Skipper | 82 | 2022 | LPS |
| *Satyrium w-album* | White-letter Hairstreak | 1 | 2008 | S41, LPS, LSoCC, RL_E |
| *Thymelicus lineola* | Essex Skipper | 25 | 2022 | LPS |
| *Thymelicus sylvestris* | Small Skipper | 46 | 2018 | LPS |

Abbreviations (Table 2)

Statutory:

- S41 = Natural Environment & Rural Communities Act 2006 (as amended), Section 41

Designations (national):

- RL_E = Red List (England) Endangered
- RL_LR = Red List (England) Lower Risk

Designations (local):

- LBAP = Local (London) BAP species
- LSoCC = London Species of Conservation Concern
- LPS = London Priority Species

### 3.3.10 Notable trees

The field survey noted occasional trees in this category particularly aside Merryhills Brook, immediately north scattered within the w1f6 oak-hornbeam woodland and within the w1f7 woodland in the SBINC to the east of the site (much of which is subject to TPOs). The odd hedgerow trees may also fall in this category.

## 3.4 EXTENDED PHASE 1 HABITAT SURVEY

### 3.4.1 Overview

a) The site chiefly comprised a number of ex-agricultural fields now under coverage of grass. The perimeters of some fields were marked by native (flailed) hedgerows, several of which included broken lines of (sometimes mature) scattered trees.

b) There were two equine livery stables and associated paddocks, one to the south-east and one to the north of the site.

c) Three watercourses crossed the area; these were generally contained within wooded corridors: Salmons Brook, which flows north to south towards the site's eastern end; the Leeging Beech Gutter which empties into the brook towards its northern end; and Merryhills Brook which flows west to east across the south of the site. Its confluence with Salmons Brook being located to the south-east just outside the site's boundary.

d) There was a habitat-rich area at the south-eastern corner of the site. A range of habitats were present including deciduous and wet woodland, hedgerows, running water and veteran trees. This area was designated as part of a Site of Borough Importance for Nature Conservation (SBINC). Its area extended beyond the site boundary and had linkages with other SINCs and greenspaces.

### 3.4.2 Habitat descriptions

a) Introduction

There was no public access to the Vicarage Farm site other than from footpaths. The habitat descriptions below were gathered via a field survey of habitats adjacent to the public footpaths and Enfield Road. The information gathered from the field survey was used to ground truth[2] remote sensing data derived from aerial photography (in areas with no clear view or access)[3]. The habitat descriptions below apply strictly to the parts of the site which lay aside footpaths or could be viewed with binoculars.

b) A map indicating the likely habitats present is depicted in Appendix 1, photographs of the site are displayed in Appendix 8.

c) Grassland (g):

This referred to areas of grassland where information from remote sensing was inconclusive with regards classification at a more detailed UKHab level.

[2] Ground truthing assesses the accuracy of remote sensing data by comparing it with physical data collected at the ground level.

[3] Including drone photography either side of Merryhills way

d) Other neutral grassland (g3):

There was a small area of this grassland towards the south-east corner of the SBINC which was co-dominated by red fescue *Festuca rubra* and common bent *Agrostis capillaris*. Other species included occasional to rare false oat-grass *Arrhenaterum elatius*, cock's-foot *Dactylis glomerata*, common ragwort *Jacobaea vulgaris*, perennial rye-grass *Lolium perenne*, lesser cat's-tail *Phleum bertolonii*, white clover *Trifolium repens* and bird's-foot trefoil *Lotus corniculatus*.

e) Arrhenatherum neutral grassland (g3c5), scattered scrub (10), tall forbs (16), scattered trees (32) - Photos 1 & 2:

These areas were associated with the SBINC in the south and east of the site. False oat-grass was abundant to dominant. Common bent, creeping thistle *Cirsium arvense*, red fescue, perennial rye-grass, hogweed *Heracleum sphondylium* and white clover were frequent. Occasional and rare species included mugwort *Artemisia vulgaris*, cock's-foot, common couch *Elymus repens*, common ragwort, ribwort plantain *Plantago lanceolata*, creeping cinquefoil *Potentilla repens*, creeping buttercup *Ranunculus repens* and broadleaved dock *Rumex obtusifolius*. Common nettle *Urtica dioica* was abundant at field edges. Some scattered scrub, chiefly bramble *Rubus fruticosus* agg. together with the odd specimens of hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and dog-rose *Rosa canina* were present particularly in less frequently used fields.

f) Modified grassland (g4) – Photos 3, 4, 5 & 6:

This was by far the most extensive habitat on site. Used as paddocks adjacent to the liveries and elsewhere occasionally mowed with cuttings possibly collected for hay. Species included abundant to dominant perennial rye-grass; abundant false oat-grass; frequent white clover, creeping bent *Agrostis stolonifera* and common vetch *Vicia sativa*; occasional common nettle, dandelion *Taraxacum officinale* agg., red clover *Trifolium pratense*, creeping thistle, aster *Symphyotrichum* sp., cock's-foot and dove's-foot crane's-bill *Geranium mole*. Rare species included hogweed, curled dock *Rumex crispus*, common ragwort and fox and cubs *Pilosella aurantiaca*.

g) Woodland:

This referred to areas of woodland where information from remote sensing was inconclusive with regards classification at a more detailed UKHab level.

h) Wet woodland (w1c) – Photo 7:

This area was situated aside the eastern stretch of the Merryhills Brook (i.e.., part of the SBINC). Trees included abundant white willow (particularly on the south-side of the watercourse), Species of frequent to occasional occurrence were hybrid crack willow *Salix* x *fragilis*, grey willow *S. cinerea*, ash *Fraxinus excelsior*, pedunculate oak *Quercus robur*, elder *Sambucus nigra*, hawthorn blackthorn, apple *Malus domestica* and bramble. An understorey was apparent in more open woodland areas. Herbaceous species included common nettle, creeping thistle and large bindweed *Calystegia sylvatica*. Immediately aside the stream (but not in deep shade) there were the occasional specimens of pendulous sedge *Carex pendula* and soft rush *Juncus effusus*. The stream itself appeared unvegetated.

i) Oak-hornbeam forest (w1f6) – Photo 8:

This area was represented by a narrow strip of woodland towards the west of Merryhills Brook on its northern side. Pedunculate oak was dominant including large mature and veteran trees. A few small examples of Turkey oak *Qercus cerris* were present. Hornbeam *Carpinus betulus* was abundant mostly as saplings or young trees, however, there were several early mature specimens which had been coppiced. The shrub layer included frequent young holly *Ilex aquifolium*, and bramble as well as the odd examples of young yew *Taxus baccata* and rowan *Sorbus aucuparia*. Ivy *Hedera helix* was an abundant component of the ground flora.

j) Other lowland mixed deciduous woodland (w1f7) Photos 9 & 10:

The woodland abutting the southern boundary of the site (part of the SBINC) was characterised by ash, pedunculate oak, silver birch *Betula pendula*, wild cherry *Prunus avium* and apple. The shrub layer included dominant bramble, young ash and occasional elder and hawthorn. The ground flora included ivy and male-fern *Dryopteris filix-mas*. The area of woodland to the north (outside the site's eastern boundary but part of the SBINC) was dominated by pedunculate oak including some large specimens. Hornbeam was frequent, including some sizeable examples. The shrub layer comprised frequent holly; occasional yew, hawthorn, apple and bramble; and rare elder, field maple *Acer campestre* and English elm *Ulmus procera*. In the shrub layer, the invasive non-native species (INNS) cherry laurel *Prunus laurocerasus* and pontic rhododendron *Rhododendron ponticum* were frequent and occasional respectively. The ground flora included dominant ivy and occasional male fern and broad buckler-fern (*Dryopteris dilatata*).

k) Broadleaved and mixed woodland (w1), line of trees (33), coppice (210) – Photo 11:
A line of early mature hornbeam trees (mostly coppiced), on the northern side of the Merryhills Brook. It included frequent bramble, occasional hawthorn and the odd specimens of veteran pedunculate oak (living and felled).

l) Heathland and scrub (h):
This referred to areas of scrub where information from remote sensing was inconclusive with regards classification at a more detailed UKHab level.

m) Native hedgerow (priority habitat) (h2a) – Photos 12 & 13:
Appear to be predominantly hawthorn, some flailed and gappy, some with mature trees (mostly pedunculate oak) along the hedge-line.

n) Dense scrub (h3d), scattered trees (32) – Photo 14:
These areas were mostly associated with the Salmons Brook and chiefly comprised field maple, hawthorn, elder and bramble with some pedunculate oak and alder *Alnus glutinosa* and the odd specimen odd Norway maple *Acer platanoides*.

o) Bramble scrub (h3d):
This area (part of the SBINC) was dominated by bramble.

p) Mixed scrub (h3h) – Photo 15:
The area to the east of the SBINC, but within the boundaries of the Vicarage Farm site, chiefly comprised abundant hawthorn and bramble; frequent young ash (some clumped), with occasional young oak, silver birch, wild cherry and dog-rose *Rosa canina*. Other areas of mixed scrub (east of the Salmons Brook and extending beyond the site boundary) included abundant hawthorn, frequent blackthorn *Prunus spinosa* and bramble, occasional elder. Other species included hybrid hawthorn probably *Crataegus* x *media* and dog-rose. Young trees were present in mixed scrub area east of the site boundary e.g., pedunculate oak, hornbeam, apple and yew.

q) Other rivers and streams (r2b) Photos 16, 17 & 18:
The streams of accessible watercourses appeared devoid of aquatic vegetation. Sparse marginals occasionally occurred including pendulous sedge, soft rush and yellow iris *Iris pseudacorus* where light levels were adequate.

## 3.5 PROTECTED AND NOTABLE SPECIES ASSESSMENT

**3.5.1** The habitats at the site were evaluated as to their likelihood to provide sheltering, roosting, nesting and foraging habitat for the following animals and support for plants:

- Bats
- Eurasian badger
- Brown hare
- European water vole
- West European hedgehog
- Avifauna including breeding birds
- Reptiles
- Amphibians
- Stag beetle
- Other notable invertebrates
- Notable trees

**3.5.2** These species were selected for further consideration because the species is present or potentially suitable habitat is present on site (or nearby in the locality) and / or species records retrieved from data search were relatively frequent. The results of the field survey, combined with information from the desktop study, are presented in Table 3 below.

**3.5.3** Invasive plant species which occur on site and are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and other invasive / potentially invasive species identified by LISI are itemised in the Table 4.

**3.5.4** The relevant legislation relating to priority / protected species and habitats and scheduled invasive plant species is summarised in Appendix 6.

***Table 3: Assessment of potential presence of protected and BAP priority species at Vicarage Farm, Enfield***

| Species | Main legislation/Policy (See Appendix 6) | Type of areas where presence should be considered | Reasons for consideration | Likelihood of occurrence |
|---|---|---|---|---|
| Bats | Wildlife & Countryside Act 1981 (as amended). Conservation of Habitats and Species Regulations 2010 | Trees (particularly old specimens) with suitable voids and/or dense coverings of ivy. Foraging & commuting along lines of trees and shrubs e.g., perimeter woodlands | Woodland habitat is often associated with bats both for roosting and foraging (Collins, 2023). Records of at least five species of bats were returned by GiGL and Clive Herbert. The most recent records date from 2022 | HIGH – regarding roosting in woodland areas associated with the SINCs that abut the site and the old track / bridleway at the eastern edge of the golf course.<br>MODERATE – regarding old field boundary trees on site.<br>HIGH – foraging / commuting along woodland edges, wooded watercourses and hedge lines |
| Badger | Protection of Badgers Act 1992 (as amended) | In longer established areas of woodland and scrub | Most habitats on site appear to be suitable for badger foraging. Older wooded areas suitable for sett excavation. One record returned by GiGL (from 2015), Nine badger records returned by Clive Herbert the most recent from 2023. Photographed in Trentwood Close | PRESENT |
| Brown Hare | Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (as amended) | Grassland and woodland edges | Suitable habitat on site with good linkages to other appropriate areas of green space. Two records returned by Clive Herbert (from 2020) | MODERATE – most likely in low numbers |
| European water vole | Wildlife & Countryside Act 1981, Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (as amended) | Merryhills Brook and Salmons Brook | Suitable habitats on site. No occurrences noted by GiGL. Two records returned by Clive Herbert (from 2000). | LOW – if found likely in low numbers |
| West European | Section 41 of the Natural Environment and Rural | May forage over most of site e.g., woodland edges | There are suitable foraging and nesting habitats on site and good connections with | HIGH |

| Species | Main legislation/Policy (See Appendix 6) | Type of areas where presence should be considered | Reasons for consideration | Likelihood of occurrence |
|---|---|---|---|---|
| hedgehog | Communities (NERC) Act 2006 (as amended) | and grassland and nest in suitable locations such as hedges, dense scrub, piles of leaves and tall herbs | other areas of green space. GiGL reported 14 occurrences, most recent from 2019. Clive Herbert returned 15 records including two from 2020. | |
| Avifauna including breeding birds | Wildlife & Countryside Act 1981 (as amended) | Grassland, hedgerows, scrub and scattered trees, wooded areas on adjacent SINCs | Suitable habitats on site. A combined BTO/GiGL list recorded 151 taxa, 79 of which were of Birds of Conservation Concern. The BTO records included data for 18 of the 19 national farmland indicator species, 10 of which were confirmed as breeding during the period 2017-2022. | PRESENT |
| Reptiles | Wildlife & Countryside Act 1981 (as amended) | Areas with a mixture of vegetation heights, tangled or thorny areas, mosaics, bare patches with plentiful ecotones and good basking places | Suitable habitats on site.<br>GiGL reported two occurrences of slow-worm, the most recent from 2021. One record was provided by Clive Herbert (from 2022).<br>GiGL reported one occurrence of grass snake (from 2019). One record was provided by Clive Herbert (from 2023) | HIGH |
| Amphibians: Smooth newt & common toad | Wildlife & Countryside Act 1981 (as amended), sale only.<br>Common toad only: Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 (as amended) | Wet areas, logs, rubble, vegetation and other suitable refuges, good (permeable) linkages with other appropriate areas | Some suitable habitats on site.<br>One record of common toad provided by Clive Herbert (from 1999)<br>Two records of common frog provided by Clive Herbert (from 1999)<br>One record of smooth newt provided by Clive Herbert (from 1999) | LOW – for all three species (likely under recorded) |

| Species | Main legislation/Policy (See Appendix 6) | Type of areas where presence should be considered | Reasons for consideration | Likelihood of occurrence |
|---|---|---|---|---|
| Stag Beetle | NERC Act Section 41, BAP Priority London, Local Species of Conservation Concern, UKBAP | Woodland with old trees and ample decay wood e.g., within the two SINCs that abut the site and the old track / bridleway at the eastern edge of the golf course | Suitable habitat mostly at the site edges.<br>There were 14 occurrences of stag beetle returned by GiGL the most recent from 2022 | HIGH – particularly wooded site edges. |
| Other notable invertebrates e.g., Coleoptera & Lepidoptera | Section 41 Natural Environment and Rural Communities (NERC) Act 2006 (as amended), Nationally Notable & London Priority Species | Grassland, tall herbs, scrub & woodland depending on species | GiGL reports the Nationally Notable (cat. B) beetles *Anaglyptus mysticus* and the Adonis' Ladybird *Hippodamia variegata*, 17 species of NERC S14 moths and five recent records of grassland butterflies e.g. small heath, small copper, large skipper, Essex skipper and small skipper | HIGH |
| Notable trees | Enfield Council (2023) Draft Local Plan 2019-2041 (for pre-publication December 2023), BG10 & Enfield BAP Cross-cutting Theme Actions, Objective 7<br>Groups / individual trees subject to Tree Preservation Orders (TPOs) | Royal Enfield Rifles & woodland at Vicarage Farm SBINC; track / bridleway abutting eastern side of Trent Park Golf Course; adjacent to Merryhills Brook, sliver of oak-hornbeam woodland north of brook, and (occasional) in hedgerows at field edges | Survey recorded several relatively large pedunculate oaks with a DBH of >800mm as well as fairly large specimens of hornbeam.<br>There are groups of trees (effectively woodland) and individual trees (oak) with TPOs at Royal Enfield Rifles & woodland at Vicarage Farm SBINC just outside the Vicarage Farm redline boundary.<br><br>**NB.** DBH=Diameter at Breast Height | PRESENT |

***Table 4: Assessment of potential presence of invasive non-native species (INNS) at Vicarage Farm, Enfield***

| Species found on site | Main legislation/Policy (See Appendix 6) | Type of areas where presence should be considered | Other species for consideration | Likelihood of occurrence |
|---|---|---|---|---|
| Japanese knotweed, Pontic rhododendron Virginia creeper | Section 14 and Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) | Any part of the site | Species in far left column were recorded during the field survey. GiGL returned the following records from data search area:<br><br>Japanese knotweed<br>Cotoneaster spp.<br>Giant hogweed<br>Montbretia | PRESENT |
| Turkey oak Cherry laurel | London Invasive Species Initiative (LISI) INNS Categories quoted in brackets (column to the right). This is a non-statutory classification indicative of invasive and potentially invasive species in the context of Greater London | Whole site | Species in far left column were recorded during the field survey. GiGL returned the following records from data search area:<br><br>Snowberry (2)<br>Butterfly-bush (3)<br>Cherry Laurel (3)<br>Gallant soldier (3)<br>Turkey oak (5)<br>Green alkanet (6)<br><br>**N.B.** The full LISI list also comprises those species appearing under Schedule 9 of the Wildlife & Countryside Act (itemised in row above) | PRESENT |

# 4.0 Site evaluation

## 4.1 EVALUATION AS POSSIBLE SINC:

Vicarage Farm (not including the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC) was evaluated as a potential SINC within the London Borough of Enfield / Greater London. This employed using the criteria (and methodology) detailed in the document *Policy, criteria and procedures for identifying nature conservation sites in London* (The London Wildlife Site Board (LWSB) - update 2019) – see 2.4.1 for outline of methodology:

***Table 5: SINC selection criteria – Vicarage Farm (not including the existing SBINC)***

| Criteria | Comments |
|---|---|
| Representation | Farmland and agricultural (modified) grassland, Arrhenatherum neutral grassland, other rivers & streams, native hedgerows, scrub, notable trees, oak-hornbeam forest |
| Habitat rarity | Habitats are not rare; however, three London and UK priority habitats are present: w1d - wet woodland, w1f6 - oak-hornbeam forest and h2a – native hedgerows. r2b - other rivers and streams is a London BAP habitat. |
| Species rarity | Combined data from GiGL and BTO returned records of 79 species of Birds of Conservation Concern. This included a number of species of birds associated farmland / grassland, the populations of which have suffered a particularly steep decline over the past few decades |
| Habitat richness | Moderate (but habitat diversity low) |
| Species richness | Vascular plants: 55 taxa. (poor to average); Avifauna: 151 taxa (high) |
| Size | 122.26ha (large) – SBINC to south-east not included |
| Important populations of species | Records of five species of bats returned by GiGL / Clive Herbert most with multiple occurrences. There is a high likelihood these species use the site for commuting and foraging.<br>Analysis of GiGL / BTO records indicate that a significant proportion of the site's avifauna has an affinity for farmland / grassland. It includes 46 taxa associated with a relatively wide range of habitats including farmland / grassland; 39 taxa associated with a narrower range of habitats including farmland / grassland as well as 18 of the 19 UK farmland indicator species. Eight of which were Red or Amber listed species confirmed as breeding during the period 2017-2022. |
| Ancient character | None |
| Recreatability | Not considered recreatable due to the availability of land in the borough and pressures on farmland / grassland with regards non-compatible uses such as woodland planting, formation of new public open space, residential construction and associated land uses. |
| Typical urban character | Not typical urban character |
| Cultural or historic character | Has a long history (c.250 years) as open land (since the Division of Enfield Chase). Over most of this period it has been used as farmland. Merryhills Way is very well used public footpath and greatly appreciated by residents. The great importance of the landscape with regards historic and intrinsic visual quality was recognised by Enfield Council (2013) in its designation as |

| Criteria | Comments |
|---|---|
| | an Area of Special Character (AOSC). |
| Geographic position | Occupies an area between three SINCs, Additionally, Glebe Fields lies immediately south of Enfield Road with connections to the south of the borough, the Green Belt extends northwards to the M25, beyond which is rural Hertfordshire. |
| Access | Merryhills Way public footpath only |
| Use | Agricultural grassland and equine livery yards |
| Potential | Biodiversity value can be increased by gapping up hedgerows and managing grasslands as hay meadows. The fields lie in a Farm Wildlife Package Area (which have been developed through a partnership approach, with Natural England working with NGO's, the farming industry, farmers and national pollinator scientists). Field edges can be sown with pollen and nectar mixes and wild bird seed mixes and the mowing regime modified to increase overall floral biodiversity and attractiveness to appropriate fauna. |
| Aesthetic appeal | Has the 'feel of the countryside' with attractive vistas available across the valley of the Merryhills Brook and beyond |
| Geodiversity interest | None known |

## 4.2 VALUE OF ECOLOGICAL RESOURCES OR FEATURES ON SITE:

### 4.2.1 Introduction

The value or potential value of an ecological resource or feature on site (i.e., habitats and species) is evaluated following standard guidance on ecological impact assessment published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018-updated 2022). The following geographical frame of reference is used:

- International
- UK
- National (England)
- Regional (South-East)
- County (Greater London)
- District (London Borough of Enfield)
- Local or parish (1km radius of site)
- Immediate zone of influence of the site (Site)
- Negligible

- **4.2.2 Features of International Value:**

a) Primarily these are sites covered by international legislation or conventions, such as those sites designated under the Habitats Regulations[4] and the Ramsar Convention (also known as the Wetlands Convention). Examples include Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar Sites which are designated for habitats and / or important populations of species.

b) There are no sites of international importance for nature conservation within a 1km radius of the site, nor does it meet any of the criteria for designation at this scale.

**4.2.3 Features of National value:**

a) These include statutory sites such as National Nature Reserves (NNRs) and Sites of Scientific Interest (SSSIs) which are designated under the Wildlife and Countryside Act 1981 (as amended).

b) The site does not form part of a site of national importance for nature conservation. None of the habitats or populations or assemblages of species present, or likely to be present, would necessitate designation at the national level using appropriate criteria e.g., Guidelines for Selection of Biological SSSIs (JNCC, 2013).

c) National legislation provides protection to a number of species (in addition to those covered by international legislation) e.g. breeding birds, badger, grass snake, common frog and common toad. While such species may be present, the population of any one species is unlikely to be of national importance in terms of size or rarity.

**4.2.4 Features of County (i.e., Greater London) Value:**

a) The site is not designated as a Site of Metropolitan Importance for Nature Conservation (SMINC) and it does not support habitats of value at this level by virtue of rarity, size or diversity.

b) The following two groups of species were considered of greatest importance at Vicarage Farm. Thus, they were reviewed with regards their significance in Greater London:

[4] Which implemented the Conservation of Natural Habitats and Wild Fauna and Flora (92/43/EC) (or Habitats Directive) until leaving the EU.

1) Avifauna: A total of 151 taxa of birds were identified via records supplied by BTO / GIGL (Appendix 4). An analysis of these records suggested 103 species of bird were associated with farmland / grassland. Of these, 64 species were identified as Birds of Conservation Concern (Stanbury *et al*, 2021). Farmland / grassland habitats are clearly of value to many of these species. However, an analysis of land use data for farmland and pasture (Cole *et al*, 2015) indicated that Enfield accounted for <9% of these habitats in the Greater London area. Therefore, the populations of these birds are unlikely to be of value in the metropolitan context.

2) Bats: The site is seen as highly likely to support commuting and foraging bats (low numbers may also be roosting). All species of bats are London Priority Species and Local Species of Conservation Concern as well as protected under The Conservation of Habitats and Species Regulations 2010 and the Wildlife & Countryside Act 1981 (as amended). However, bats are unlikely to occur in such diversity or numbers as to warrant significance at the metropolitan level.

### 4.2.5 Features of District (London Borough of Enfield) Value:

a) The site is not designated as a Site of Borough Importance for Nature Conservation (SBINC) but is considered here as undervalued. The modified (g4) grassland of Vicarage Farm is poor to average with regards vascular plant species richness but has been identified as supporting an important assemblage of farmland birds (Appendix 4) The populations of some species have been in steep national decline. Indeed, 18 of the 19 UK National Farmland Indicator species (Appendix 5) are known from this location. Eight of these were Species of Conservation Concern documented by BTO Birdtrack as having breed between 2017 and 2022. To quote the Review of the Enfield Biodiversity Action Plan (BAP) (LUC, 2021) '*These foci of farmland biodiversity assets form an important component of Enfield's ecological character.*' These open grasslands and the assemblage of farmland / grassland birds they support are considered here as important within the borough context.

b) the waterways on site (Salmons Brook, Merryhills Brook and Leeging Beech Gutter) and the vegetated corridors which contain them, were also considered features of borough importance with regards nature conservation value.

### 4.2.6 Features of Local Value (1km radius)

The following features / species were regarded as significant at this level:

- Native hedgerows forming a network together with occasional linear woodlands and scattered trees. Hedgerows and woodlands are Enfield BAP habitats (LUC, 2021) and Habitats of Principal Importance in England.

- Eurasian badger is known to be present particularly to the south-east of the site, the territory of which extends beyond the site boundary.
- Bats, records of at least five species were returned from the locality by GiGL / Clive Herbert. These were highly likely to forage and commute across the site with low numbers possibly roosting in appropriate locations. Bats are Enfield BAP species (LUC, 2021).
- West European hedgehog (a NERC Sect. 41 species) records returned by GIGL / Clive Herbert, and suitable habitat on site indicate this species is highly likely to be present (and under recorded) in the locality.

#### 4.2.7 Features of value in the Immediate zone of influence of the site:

Included in this category were notable trees (as defined under 2.3.2); reptiles e.g., grass snake and slow worm; and grassland invertebrates e.g. small heath, small copper, large skipper, Essex skipper and small skipper.

# 5.0 Discussion and Conclusions

## 5.1 DISCUSSION

### 5.1.1 Designated sites:

The site is not situated within any statutory or non-statutory designated nature conservation sites. No statutory European or National sites occur within 1km of the site. However, there are five non-statutory designated SINCs: Trent Country Park (a Site of Metropolitan Importance), Trent Park Golf Course, and Royal Enfield Rifles Site and Woodland at Vicarage Farm (Sites of Borough Importance) and Lakeside and Boxer's Lake, and Lonsdale Drive Woods (Sites of Local Importance).

### 5.1.2 Green Belt and Area of Special Character

Enfield Council's current Local Plan Policies Map[5] shows the site as part of Enfield's Green Belt and recognises it as lying within an Area of Special Character[6] (AOSC). The latter example is said to reflect the important historic and exceptional landscape character traits that should be protected for their intrinsic quality (Enfield Council, 2013). The Enfield Draft Local Plan, Pre-publication Version (December 2023) shows Vicarage Farm as lying within Chase Park Placemaking Area which is earmarked for a housing led development (Appendix 2). In accommodation, the current Green Belt designation would be lifted from central and southern parts of the site. A vehicular access is shown cutting across the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC to the east. The remaining Green Belt to the north would be repurposed as public open space or for woodland planting.

### 5.1.3 Geographic position

Vicarage Farm occupies an important geographic position; it is a wildlife permeable hub and linkage spanning three SINCs i.e., Trent Country Park SMINC, Trent Park Golf Course SBINC, and Royal Enfield Rifles Site and Woodland at Vicarage Farm SBINC. To the south, on the other side of Enfield Road are Glebe Fields (undesignated), Lakeside, and Boxer's Lake & Lonsdale Drive Woods (SLINCs) with links to Enfield Golf Course and

[5] Not dated pre-Regulation 19

[6] Merryhills Brook Valley AOSC

via the Great Northern Railway to the south of the borough. To the north is Hadley Road and Green Belt. beyond which lies the M25 and the Hertfordshire countryside.

### 5.1.4 Habitats

a) The habitats on site were not rare and although several priority Habitats of Principal Importance in England were present (i.e., w1d - wet woodland, w1f6 - oak-hornbeam forest and h2a – native hedgerows), they were relatively small in area. Therefore, habitat diversity was low. No uncommon vascular plant species were recorded. Just over 80% (112.5ha) of the site's vegetation was assessed as g4 - modified grassland, the species richness of which was assumed poor to average. The composition of the grassland was typical of that occurring in agricultural situations. Species-poor g3c5 – Arrhenatherum neutral grassland accounted for approximately 9.3% (13.1ha) of the site's surface area. This grassland type was generally associated with more relaxed management regimes or areas of neglect. Other grassland types (g / g3) accounted for ~ 1.7% (2.3ha) of the site's surface. Grasslands, generally, are Enfield BAP habitats as the biodiversity value of most can be enhanced by relatively modest changes in management regimes.

b) Three categories of scrub (h3 – dense, h3d – bramble and h3h - mixed) were present accounting for 2.8% (3.9ha) of the site's surface area. Scrub was chiefly associated with the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC and the corridors of watercourses.

c) There was just under 2.5km of h2a - native hedgerows typically located at field boundaries. These were regarded as UK Priority Habitat under the UKHab classification system although they were likely species-poor and generally in poor condition.

d) Woodland areas chiefly comprised three habitat types classified as UK Priority Habitat: w1d – wet woodland, occurred at the eastern end of the Merryhills Brook wooded corridor and accounted for 0.45% (0.63ha) of the site's surface area; a sliver of w1f6 – oak-hornbeam forest occurred at the field edges to the north of Merryhills Brook, it was in good condition and covered 0.33% (0.46ha) of the site; w1f7 – other lowland mixed deciduous woodland was associated with the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC and accounted for 1.76% (2.46ha). Woodlands are an Enfield and London BAP habitat.

e) There were 2.85km of r2b – rivers and streams on site comprising the Merryhills Brook, Leeging Beech Gutter and Salmons Brook. Waterways / rivers and streams are Enfield and London BAP habitats.

f) The site's urban habitats (buildings, hard standing, tracks etc) accounted for 2.85% (3.99ha) of the site's surface area. Other minor areas of habitat were not considered significant with regards this analysis.

### 5.1.5 Species

a) Given the constraints outlined under 2.5.3, no notable vascular plant species were recorded on site.

b) Several priority / protected species were highly likely to occur or were present on site. Species included at least five species of bats (foraging / commuting), badger, West European hedgehog, breeding birds / Birds of Conservation Concern, reptiles (grass snake and slow worm) and stag beetle, as well as other notable invertebrates and several notable trees. There was a moderate likelihood of roosting bats and brown hare occurring on site but probably in low numbers.

c) The g4 – modified grassland which covered ~80% of the site was indicated as being particularly rich in avifauna. Analysis of GiGL / BTO records indicated that ~70% of the site's 151 recorded taxa of birds had some affinity for farmland / grassland. These combined data also included records of 79 taxa of Red and Amber listed Birds of Conservation Concern. BTO records show a number of these species confirmed as breeding during the period 2017-2022. The populations of some species were known to be in national decline. Additionally, eight of bird species noted by GiGL / BTO were on the Bird Conservation Targeting Project (BCTP)[7] list i.e. corn bunting, curlew, lapwing*, snipe, grey partridge*, stone curlew, turtle dove and yellow wagtail* (* = possibly / probably breeding).

d) It is highly likely that the site is an important foraging / commuting resource for at least five species of bat. Most roosts would be expected in adjacent woodlands (e.g. Trent Country Park, Royal Enfield Rifles and Woodland at Vicarage Farm and the bridleway immediately east of Trent Park Golf Course). However, bats would follow the edges of woodlands, hedgerows, lines of trees and watercourses during their nocturnal activities. Additionally, it is possible that some of the larger trees and odd wooded areas on site may

[7] The project collects bird records from many sources. The results help to target valuable resources towards important bird sites which are identified by mapping the distributions of farmland and woodland birds of current conservation concern.

support bat roosts. Bats and their roosts are specifically protected by legislation whereas key foraging habitat and commuting routes are not. Nonetheless, maintenance of such habitat is vital if effective species conservation is to be achieved. This means understanding the commuting and foraging habits of bats in the locality. If bats' ability to commute and forage is significantly impaired, the conservation status of bats in that locality may also be adversely impacted even though bat roosts are protected, or their loss mitigated.

### 5.1.6 Recreatability

a) The site is not considered recreatable due to the availability of land in the borough and general pressures on farmland / grassland with regards non-compatible uses such as woodland planting, wetland creation, construction of commercial premises, housing and associated land uses.

b) This is illustrated by the Enfield Chase Landscape Restoration Project[8] which outlines Enfield's council's intent to repurpose its Green Belt '*for the 21st century* by *reinstating the land and transforming it from farmland into woodlands, meadows and wetlands, all while enhancing public access and promoting sustainable commercial activities, there is significant potential to provide a wide range of benefits.*'

c) Vicarage Farm, its farmland and grassland, have a long history (c.250 years), once gone, it is gone forever.

### 5.1.7 Potential

The site exhibited considerable potential with regards nature conservation value. Biodiversity value could be increased by gapping up hedgerows with appropriate native shrub species e.g., hawthorn, blackthorn, hazel and field maple; and managing grasslands as hay meadows (a mid-July to mid-September cut to sward height ~10cm with arisings collected and baled). The fields lie in a Farm Wildlife Package Area (developed through a partnership approach, with Natural England working with NGO's, the farming industry, farmers and national pollinator scientists). Field edges can be sown with pollen and nectar mixes and wild bird seed mixes, and the mowing regime modified to increase overall floral biodiversity and attractiveness to appropriate fauna. What time of year field edges are cut would depend on some degree as to what wildflowers were

[8] https://www.enfield.gov.uk/news-and-events/enfields-woodland-restoration-project-receives-679

included in the seed mixes. Management could include leaving different unmown strips each year along the edge of fields as a resource for pollinators (e.g. bees and butterflies) and other invertebrates.

### 5.1.8 Evaluation as a Site of Importance for Nature Conservation

a) Overview: The following section gives an explanation of tiers of sites and suggests an appropriate grade of designation for the site.

b) Background: The Vicarage Farm site was surveyed in 2007 as part of the GLA rolling programme of borough habitat surveys which were in progress at the time. Because the survey concentrated principally on habitats it was not recognised as a SINC as it chiefly comprised an expanse of agricultural fields and modified grassland. Tight time limitations for the survey meant only casual recording of readily identifiable fauna was undertaken.

c) Tiers of sites: Three tiers of sites of importance for nature conservation are recognised in the London Borough of Enfield:

- Sites of Metropolitan Importance for Nature Conservation are those sites which contain the best examples of London's habitats, sites which contain particularly rare species, rare assemblages of species or important populations of species, or sites which are of particular significance within otherwise heavily built-up areas of London.
- Sites of Borough Importance are important at a borough level in the same way as the Metropolitan sites are important to the whole of London. Although sites of similar quality may be found elsewhere in London, damage to these sites would mean a significant loss to the borough. As with Metropolitan sites, while protection is important, management of borough sites should usually allow and encourage their enjoyment by people and their use for education.
- Sites of Local Importance is one which is, or may be, of particular value to people nearby (such as residents or schools). These sites may already be used for nature study or be run by management committees mainly composed of local people. Where a Site of Metropolitan or Borough Importance may be so enjoyed it acts as a Local site, but further sites are given this designation in recognition of their role. This local importance means that these sites also deserve protection in planning. Local sites are particularly important in areas otherwise deficient in nearby wildlife sites.

d) The site (not including the Royal Enfield Rifles and Woodland at Vicarage Farm SBINC) was evaluated using London Wildlife Sites Board (LWSB), 2019 criteria. A habitat map (Appendix 1) and species lists (Appendices 3. 4 & 5) were produced

highlighting habitats, species and other characteristics which help determine the proposed tier of designation.

e) The site met or exceeded many of the key criteria cited by the LWSB (see 4.1) - the most important of which are reviewed above (5.1.3-5.1.7). Although the species richness of vascular plants was judged as poor-average and habitat diversity low, the potentially rich avifauna of the site (largely associated with farmland / grassland) offset the general lack of floral diversity. Designation as a Site of Borough Importance for Nature Conservation was suggested.

f) Below is an excerpt of the guidance issued by GOV.UK[9] pertinent with regards the importance of farmland and meeting the Biodiversity Duty placed upon a competent authority (e.g., Enfield Council) under the NERC Act 2006 (as amended):

- When you carry out your duties you should aim to provide or protect habitat that allows wild bird populations to maintain their numbers in the areas where they naturally live.
- You should consider habitats used by wild bird species that are in decline and also habitats supporting wild birds with healthy populations.
- protect important examples of wild bird habitat in your area by designating them as local wildlife sites.
- consider how to protect, restore or create wild bird habitats when you consult on or grant permissions, such as planning permissions, licences, environmental permits or consents.

**5.1.9** A breeding bird assemblage survey needs to be undertaken. If the results confirm the importance of Vicarage Farm to farmland / grassland birds, the area's designation as a Site of Borough Importance for Nature Conservation should be considered.

[9] https://www.gov.uk/guidance/providing-and-protecting-habitat-for-wild-birds#identify-areas-with-wild-bird-habitat

### 5.1.10 Biodiversity Net Gain

a) Biodiversity net gain (BNG) calculations are based almost entirely on the habitats present. They seldom take account of the faunal species unless specifically protected by legislation.

b) The Review of the Enfield Biodiversity Action Plan (LUC, 2021) states that '*Threats to the highly valued grasslands of the UK typically relate to the lack of recognition of their importance and, correspondingly, their loss to intensive management (resulting in lower value grassland) or to built development (resulting in loss without appropriate mitigation or compensation)…Farmland habitats support an important assemblage of birds which includes a number of species in fast national decline. Factors including the increased intensity of farming practices and the conversion to built development or other land uses, has incurred dramatic reduction in the extent of hedgerows and open grassland habitats which farmland species that are not tolerant of high levels of disturbance depend on*.' Vicarage Farm is of high importance to farmland birds some in steep national decline. BNG becomes mandatory on the 12th of February 2024. The importance of this particular area of modified grassland is in danger of going unrecognised without appropriate habitat replacement for its loss.

c) If woodland planting were chosen to off-set the loss of grassland, the poor-quality secondary woodland which would be created is likely to take more than 30 years to mature and considerably longer (~100 years) before it supports a relatively wide range of fungi, lichens, Bryophytes and fauna. Moreover, it will do nothing to help the many bird species of open grassland and farmland, the populations of which have suffered unprecedented decline over the last few decades.

d) A potential reduction of grassland at Vicarage Farm must be seen against the backdrop of many other grasslands in the borough which are currently under threat or already lost. e.g., potential development of extensive areas of Green Belt and Metropolitan Open Land, the intentional tree planting on large areas of farmland and the neglect of Priority (NERC Act Section 41) grasslands within several SMINCs including Trent Country Park, Hilly Fields Country Park and Forty Hall Park and Estate.

### 5.11 Likely impacts of CPPA development (Figure 2) on nearby SINCs

a) General: The development of the Chase Park Placemaking Area (CPPA) with new residential areas on greenfield land and repurposing of the remaining Green Belt, would likely reduce its functionality as a wildlife corridor. The passage of small mammals, reptiles and amphibians etc to and from Trent Country Park, Trent Park Golf Course and Royal Enfield Rifles and Woodland at Vicarage Farm SINCs would be impeded via habitat

loss and disturbance. The development is also likely to have an adverse impact on flora and fauna e.g., with regards people (and their pets), there would be a possibility of domestic cats entering woodlands and other habitats and affecting populations of small birds and mammals. Light spill from housing and roads will impact on bats. This is highly likely to discourage foraging / commuting activities and possibly prevent roosting in adjacent trees and woodlands. There is also a high likelihood that many bird species (particularly those strongly associated with farmland and grassland) would become much rarer in the locality or no longer occur. Noise from roads and housing may also be a concern with regards site aesthetics and perceived tranquillity of nearby SINCs.

b) Below is a more focused look at the likely impact of the CPPA development on the three SINCs in the area. A previous ecological report made it possible to produce a more in-depth account for Trent Country Park.

c) Trent Country Park SMINC, increase in visitors, access and likely use: New public access to the park is proposed as part of the CPPA development (see Appendix 2). This is expected to have an overall negative impact on the natural habitats of the site. Durwyn (2020) produced the Epping Forest Visitor Survey[10]. This addressed avoidance and mitigation measures relating to increased recreation from local plan-led developments. The main activities undertaken by participating visitors were collated (shown below). There is no reason to believe that the categories / levels of activities would be significantly different at Trent Country Park.

- Dog walking 40%
- Walking 30%
- Cycling / Mountain Biking 8%
- Running 5%
- Outing with family 3%
- Enjoying scenery / fresh air 3%
- Visiting café / visitor centre 1%
- Bird/Wildlife watching 1%
- Picnic 1%
- Photography <1%

[10] Which would underpin the preparation of a joint strategy [with adjacent local authorities]

- Formal sports <1%
- Horse riding <1%
- Meeting up with friends <1%
- Other <5%

d) Possible visitor impacts: Although there is a difference in scale, the anticipated increase in visitor numbers from the CPPA development would likely have similar impacts on natural environment to those anticipated by the Epping Forest survey, the most appropriate examples are:

- Eutrophication from dog fouling
- Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots
- Increased fire risk
- Direct damage to veteran trees, for example from climbing on them
- Gathering fungi
- Disturbance to birds, invertebrates and other wildlife
- Spread of plant diseases
- Spread of invasive non-native species (INNS)
- Direct damage and vandalism.

e) Vickers (2017) previously carried out a habitat survey of the Trent Country Park. This showed seven parcels[11] of land within the site close to the proposed CPPA development:

- 32001/07 – Camlet Hill
- 32001/08 – Williams Wood (South-west)
- 32001/20 – Williams Wood (North-east)
- 32001/25 - Ride Wood
- 32001/26 – Shaws Wood
- 32001/53 – Dog Field
- 32849/01 - Bridleway

f) A description of each one of these parcels was retrieved from the report (Appendix 7) and considered with reference to the possible impacts listed in ‘c’ above. In addition to the

[11] These are the same parcels and parcel references were used by the GLA for previous habitat surveys.

types of habitats present and sensitivity of composite species, other factors were taken into account such as whether near existing tracks / bridleways and proximity to the CPPA. Using the author's professional judgement and personal knowledge of the site a parcel-by-parcel assessment of the potential impacts was produced. An assessment of the mean impact for the seven parcels combined was undertaken (Table 6 below).

***Table 6: overall assessment of visitor impact Trent Country Park land parcels adjacent to CPPA***

| Impacts | Notes | Degree of impact expected |
|---|---|---|
| Eutrophication from dog fouling | Could lead to a loss of AWIs where present and a proliferation of nettle, cow parsley, docks and other nitrophiles / phosphophiles | High |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | All age classes of trees present over the combined area including seedlings and saplings, occasional patches of ancient woodland indicator species (AWIs) occur - both vulnerable to trampling | Medium |
| Increased fire risk | Includes significant areas of conifers which are relatively combustible in comparison to native broadleaved tree species | Medium |
| Direct damage to veteran trees, for example from climbing on them | Some ancient hornbeams present | Low |
| Gathering fungi | Little gatherable fungi observed during survey | Low |
| Disturbance to birds, invertebrates and other wildlife | Many smaller birds are often low nesting in holes in trees, shrubs and climbers and therefore vulnerable to increased disturbance from people, dogs and cats | Medium |
| Spread of plant diseases | Some plant diseases already present e.g. ash-dieback and oak powdery mildew. An increase in people and their pets is unlikely to have an additional impact of consequence | Low |
| Spread of invasive non-native species (INNS) | Rhododendron and giant hogweed found, the further spread of which might be hastened by the passage of people and their pets | Medium |
| Direct damage and vandalism (not including damage to trees and fire-setting). | Probably limited to the occasional damage of park infrastructure e.g., gates, fences and signage | Low |

Key (Table 6):

High: Likelihood of occurrence – ongoing with easily noticeable effect- detrimental to nature conservation value – difficult to reverse.

Medium: Likelihood of occurrence - ongoing at a low level / will happen from time-to-time – impact noticeable, detrimental to nature conservation value.

Low: Likelihood of occurrence - will happen occasionally - impact minor, not always instantly noticeable / may be manageable.

g) Trent Park Golf Course SBINC: The new residential areas are shown adjoining the site to the east and south. The CPPA - illustrative framework plan (Appendix 2) does not show any direct public access to the golf course. Therefore, most of the additional impacts expected through increased visitor pressure would be avoided (cf. Trent Country Park). A green corridor associated with Merryhills Brook is shown approaching the site to the east and joining the current north-south footpath / bridleway. The wildlife permeability provided by this corridor would most likely be limited due to its comparative narrowness and the expected increased footfall.

h) Royal Enfield Rifles and Woodland at Vicarage Farm SBINC: Appendix 2 shows the site crossed by several existing Public Rights of Way and proposed key walking and / or cycling routes (indicative). The area is depicted partially enclosed by existing and proposed residential areas. Green corridors which double as key walking and cycle routes emanate from the SBINC. The wildlife permeability offered by these corridors is likely to be limited due to comparative narrowness and expected high use by local people. An indicative route for a vehicular / pedestrian / cycle access is shown crossing the SBINC from the east, running parallel to Crofton Way. This part of the site is currently covered in h3 - dense scrub and g3c5 - Arrhenatherum neutral grassland which would likely be lost. A second proposed / potential bus, walking and cycle route heads northwards from the western end of the site ending at Hadley Road. This would effectively bisect the new Public Open Space and will possibly further limit connectivity for wildlife.

i) As suggested by the Trent Country Park assessment, the SBINC is likely to be well used for dog, walking. Increases in dog faeces and urine will lead to soil eutrophication and the growth of vigorous nitrophilous / phosphophilous plants to the detriment of slower growing species. Typically, this will result in the rapid growth of species such as common nettle, broadleaved dock and cow parsley to the detriment of other species often of higher conservation value. The proximity of housing, improved access and increased footfall are highly likely to result in significant trampling, soil compaction and vegetation erosion. This would result in the loss of less resilient types of plant and replacement with species such as perennial rye-grass, greater plantain, knotgrass and pineappleweed. The increase in use of the site by people, dogs and cats (from surrounding properties) will without doubt,

result in the disturbance of small birds and mammals as well as invertebrates. This will be particularly disruptive during the main breeding season (spring-early summer). Occasional fire-setting is likely to take place in more vulnerable areas of grassland and scrub. Such habitats often recover relatively quickly although the fauna they support may not. A certain degree of vandalism could be expected with respects open space infrastructure such as fencing, signage and heritage interpretation.

## 5.2 CONCLUSIONS

a) This report views the development the Chase Park Placemaking Area as inappropriate and contrary conserving biodiversity in Enfield and maintaining the quality of its landscape.

b) The preliminary ecological assessment indicated that site adequately met or exceeded many of the key criteria cited by the LWSB to suggest designation as a Site of Borough Importance for Nature Conservation. Although the species richness of vascular plants was judged as poor-average and habitat diversity low, the rich avifauna of the site, largely associated with farmland / grassland, offset this general lack of floral diversity.

c) The GOV.UK website reinforced this view and suggested important examples of wild bird habitat are protected by LPAs by designating them as local wildlife sites. A bird assemblage survey (6.2) is suggested. If the results confirm the importance of Vicarage Farm to farmland / grassland birds, the area's designation as a Site of Borough Importance for Nature Conservation requires consideration.

d) If the CPPA proposals proceed this would result in the loss of the g4 - modified grassland which currently covers ~80% (112ha) of the Vicarage Farm site. Consequently, a loss of associated farmland birds is highly likely. Combined with other pressures on Enfield's grasslands, a general decline in farmland species across the borough could be expected.

e) Biodiversity net gain (BNG) is not viewed as an appropriate method of creating and improving natural habitats with regards agricultural grassland. BNG calculations are based almost entirely on the habitats present. The methodology fails to adequately take account of the faunal species present if not specifically protected by legislation.

f) Several priority / protected species were highly likely to occur or were present on site. This included at least five species of bats (foraging / commuting), Eurasian badger, West European hedgehog and breeding birds / Birds of Conservation Concern. The populations of these species were highly likely to be negatively and severely impacted on by the CPPA development on an ongoing basis. More information is required with respect other

species e.g., reptiles (grass snake and slow worm), stag beetle, other notable invertebrates and notable trees. Roosting bats and brown hare probably occur in low numbers the potential presence of which also worthy of further investigation.

g) Despite some woodland planting to the north-west of CPPA, the impact of the development is highly likely to be negative, >moderate, and permanent in restricting Vicarage Farm's functionality as a wildlife corridor. The passage of small mammals, reptiles and amphibians between the three adjoining SINCs would be impeded due to habitat loss and disturbance. An adverse impact on SINC flora and fauna could be expected e.g., light spill from housing and roads will impact on bats. This is highly likely to discourage foraging / commuting activities. There is also a likelihood that many bird species (particularly those associated with farmland and grassland) would become much rarer in the locality or possibly no longer occur.

h) The type and level of public activity expected at Trent Country Park (particularly the eastern end near the CPPA) and Royal Enfield Rifles and Woodland at Vicarage Farm, would be elevated. The overall impact would be negative, moderate but ongoing. Dog walking is likely to be the most popular pursuit. Dog faeces and urine will lead to soil eutrophication and the growth of vigorous nitrophilous / phosphophilous plants to the detriment of slower growing species. The increase in use of the site by people, dogs and cats (from surrounding properties) would, without doubt, result in the disturbance of wild birds, mammals and some invertebrates. This would be particularly disruptive during the breeding season (spring-early summer). The proximity of housing, improved access and increased footfall would be highly likely to result in significant trampling, giving rise to soil compaction and vegetation erosion. Consequently, less vigorous species of plant would likely give way to trample resistant types (generally of lower conservation value). Occasional fire-setting is likely to take place in more vulnerable areas of grassland and scrub. Such habitats may recover relatively quickly although the fauna they support may not. A certain degree of vandalism could be expected with respects open space infrastructure such as fencing, signage and heritage interpretation.

# 6.0 Recommendations

## 6.1 GENERAL

- If the biodiversity value of Vicarage Farm is confirmed by the phase 2 surveys recommended in this report, designation as Site of Borough Importance for Nature Conservation should be considered.
- Vicarage Farm's high potential for biodiversity enhancement should be exploited by restoring and managing native hedgerows and hay meadows (Habitats of Principal Importance in England), which are habitats compatible with current farmland / grassland fauna.

## 6.2 RECOMMENDED PHASE 2 SURVEYS

a) The following surveys for protected species and species of conservation concern are recommended to inform future site management:

b) A full botanical survey of the site should be undertaken employing UK Habitat methodology (Butcher, *et al*, 2023). Additionally, the condition of the g4 grassland should be monitored using a bespoke rapid assessment method based on that devised by English Nature (Robertson & Jefferson, 2000).

c) A breeding bird assemblage survey is advised, based on Common Birds Census and Breeding Birds Survey methods set out by the BTO, JNCC and RSPB for use in national annual survey of widespread and common species. Here it is recommended the site is visited, shortly after dawn, on eight to ten occasions from the 15th of March to 15th of July (and preferably repeated the following year). The location, species and behaviour of birds encountered is recorded and mapped using standard symbols. The information gathered can be used to estimate the number of individual territories. Bird species that do not hold territories can be approximated from the peak numbers recorded on each visit. Results of the survey should be interpreted with reference to BTO Bird Track data for this location.

d) Following the Bat Conservation Trust's Good Practice Guidelines (Collins J, (ed.), 2023). Presence / absence surveys watching for bats emerging and returning to any potential roosts should be undertaken. The surveys should compile information on species, numbers, access points and roosting locations. Bat surveys should be undertaken between April and October.

e) Bat activity transect surveys should be considered to observe, listen and record bats in flight away from their roosts using handheld bat detectors and recorders. Automated / static activity surveys can be used in combination with manual activity transect surveys.

Surveys should be undertaken between April and October (weather dependent in April, September and October).

f) A badger survey should be undertaken to establish to what extent badgers are using the site; if a sett is found its age and type should be ascertained, and whether or not it is in use; badger paths should be mapped, and territorial boundaries estimated. Badger surveys are best carried out in autumn and spring (avoiding the coldest months) when vegetation has died-back, and setts are more easily visible.

g) Other species recommended for survey include hedgehog and small mammals, amphibians and reptiles.

## 6.3 RECOMMENDATIONS FOR BIODIVERSTY

a) Gapping up hedgerows at field edges should be undertaken. Species used should be native and appropriate to the locality e.g., hawthorn, hazel, blackthorn, dog-rose, field maple and young pedunculate oak.

b) The fields lie in a Farm Wildlife Package Area (which have been developed through a partnership approach, with Natural England working with NGO's, the farming industry, farmers and national pollinator scientists). Field edges can be sown with pollen and nectar mixes e.g. Grass Free Pollen and Nectar Mix K100[12] and wild bird seed mixes e.g. Basic Wild Bird Seed Mix K63 [13] and the mowing regime modified accordingly to increase overall floral biodiversity and attractiveness to appropriate fauna. One different (alternate) side of each field can be left uncut each year for the benefit of invertebrates.

c) Grasslands should be managed as near to hay meadows as possible. For example, grassland should be mowed between late July and early September (depending on species composition[14]) to a sward height $\prec 10$cm. Then arisings ideally laid in rows to dry for 3 to 5 days and 'tedded' (turned) each day to facilitate drying, then collected and baled.

[12] https://www.kingscrops.co.uk/products/conservation-crops/pollen-and-nectar/product/17-grass-free-nectar-mix

[13] https://www.kingscrops.co.uk/products/product/21-basic-wild-bird-seed-mix

[14] A botanical survey of field vegetation should be undertaken late spring / early summer to assess the plant composition of fields. This will help determine the optimum time for mowing.

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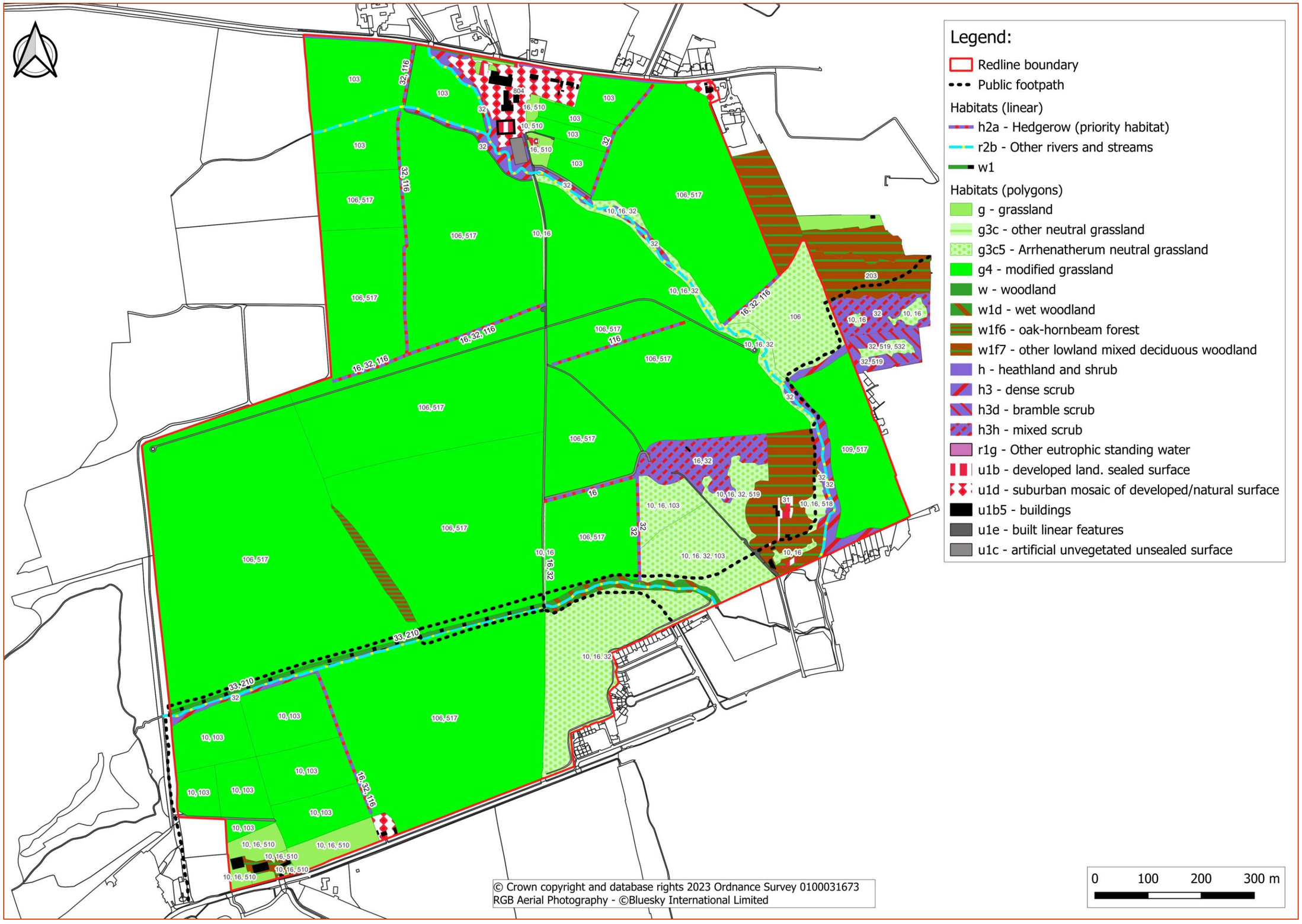
# Appendix 1: Habitat map of site

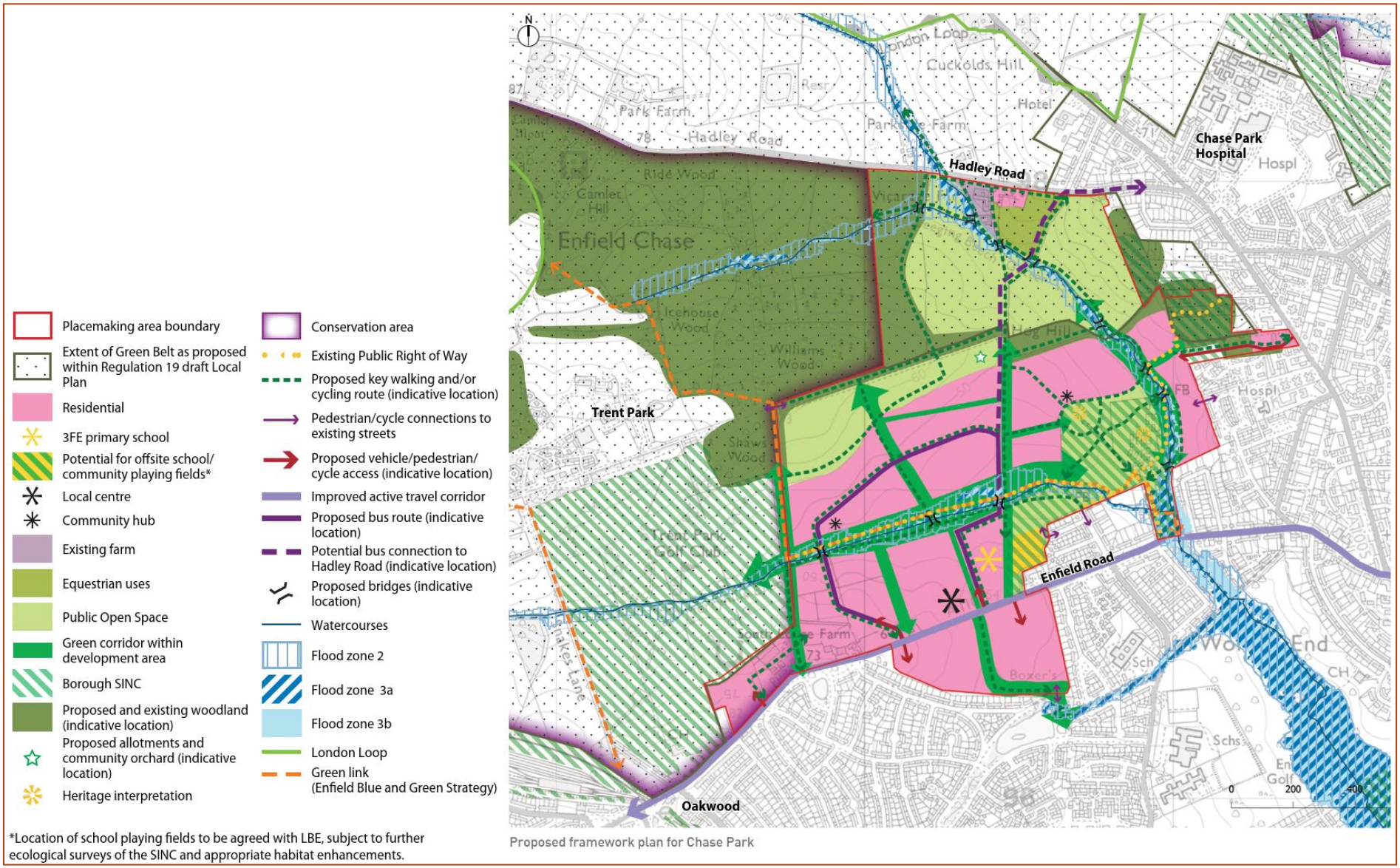
**Habitat map Secondary Codes:**

| Secodary code (V2.0)) | Category type | Habitat name |
|---|---|---|
| 10 | Grasslands & Heathlands Essentials | Scattered scrub |
| 16 | | Tall forbs |
| 31 | Woodland & Trees Essentials | Secondary woodland |
| 32 | | Scattered trees |
| 103 | Grasslands & Heathlands Additional | Horse grazed |
| 106 | | Mown |
| 109 | | Hay |
| 116 | | Flailed hedgerow |
| 210 | Woodland & Trees Additional | Coppice |
| 510 | All Habitats | Bare ground |
| 517 | | Recent management |
| 518 | | Neglected |
| 519 | | Abandoned |
| 532 | | Scattered grass |
| 804 | Built Environment | Car park |


Legend:
Redline boundary
Public footpath
Habitats (linear)
h2a - Hedgerow (priority habitat)
r2b - Other rivers and streams
w1
Habitats (polygons)
g - grassland
g3c - other neutral grassland
g3c5 - Arrhenatherum neutral grassland
g4 - modified grassland
w - woodland
w1d - wet woodland
w1f6 - oak-hornbeam forest
w1f7 - other lowland mixed deciduous woodland
h - heathland and shrub
h3 - dense scrub
h3d - bramble scrub
h3h - mixed scrub
r1g - Other eutrophic standing water
u1b - developed land. sealed surface
u1d - suburban mosaic of developed/natural surface
u1b5 - buildings
u1e - built linear features
u1c - artificial unvegetated unsealed surface
© Crown copyright and database rights 2023 Ordnance Survey 0100031673
RGB Aerial Photography - ©Bluesky International Limited
0 100 200 300 m

# Appendix 2: Chase Park Placemaking Area (CPPA) - illustrative framework plan

Enfield Council (2023)




Proposed framework plan for Chase Park

# Appendix 3: Vascular plant species list

This list was compiled from the habitat field survey carried out on the 26th of September 2023 with a secondary visit being carried out 31st of October 2023.

Vicarage Farm-not SINC refers to most of the proposed development site i.e., not part of the Royal Enfield Rifles Site and Woodland at Vicarage Farm SBINC. The Enfield Rifles site refers to the SBINC, part of which extends beyond the proposed development site.

Scientific nomenclature follows Stace (2019). Plant common names follow the Botanical Society of the British Isles 2007 list, published on its web site, www.bsbi.org.uk. Please note that this plant species list gathered from a habitat survey does not constitute a full botanical survey and should be read in conjunction with the associated Preliminary Ecological Appraisal report.

**Abbreviations:**

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare; Qualifiers: s=Seedling / sapling, y=Young tree, t=Tree (mature), m=shrub (mature), c=Clumped, e=Edge, w=Wet, d=Dry, g=Garden escape, ?=likely identity

| Area: | | Vicarage Farm-not SINC | | | | | Enfield Rifles SINC | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common name** | **Scientific name** | **DAFOR** | **Qualifiers** | | | **Notes** | **DAFOR** | **Qualifiers** | | | **Notes** |
| | | | **1** | **2** | **3** | | | **1** | **2** | **3** | |
| Maple | *Acer* | | | | | | | | | | |
| Field Maple | *Acer campestre* | O | | | | | O | | | | |
| Norway Maple | *Acer platanoides* | | | | | | R | y | e | w | Aside Salmons Brook |
| Yarrow | *Achillea millefolium* | O | | | | Grassland areas | O | | | | Grassland areas |
| Common Bent | *Agrostis capillaris* | | | | | | F | | | | |
| Creeping Bent | *Agrostis stolonifera* | F | | | | Damp grassland | O | | | | Damp grassland |
| Alder | *Alnus glutinosa* | | | | | | O | w | | | Aside Salmons Brook |
| Cow Parsley | *Anthriscus sylvestris* | R | e | | | Generally edges of fields | R | | | | Rough grassland and tall forb areas |
| False Oat-grass | *Arrhenatherum elatius* | A | | | | Fields (dominant in g3c5 grasslands) | A | | | | Fields (dominant in g3c5 grasslands) |
| Mugwort | *Artemisia vulgaris* | O | e | | | Generally edges of fields | O | | | | Rough grassland and tall forb areas |
| Silver Birch | *Betula pendula* | R | y | t | e | Hedges | F | y | t | | Wooded areas |
| Large Bindweed | *Calystegia silvatica* | R | e | | | Hedges | | | | | |
| Pendulous Sedge | *Carex pendula* | O | e | w | | Next to Merryhills Brook | O | w | | | Merryhills and Salmons Brook |
| Hornbeam | *Carpinus betulus* | A | c | e | | Woodland (w1f6), aside Merryhills Brook | F | c | | | Particularly w1f7 woodland east of site |
| Common Mouse-ear | *Cerastium fontanum* | R | | | | Grassland | | | | | |
| Fat-hen | *Chenopodium album* | O | | | | Grassland | | | | | |
| Creeping Thistle | *Cirsium arvense* | F | | | | Grassland and field edges | F | | | | Rough grassland and tall forb areas |
| Spear Thistle | *Cirsium vulgare* | R | | | | Grassland and field edges | R | | | | Rough grassland |
| Hawthorn | *Crataegus monogyna* | A | e | | | Hedges | A | | | | Hedges and areas of scrub |

| Area: | | Vicarage Farm-not SINC | | | | | Enfield Rifles SINC | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common name** | **Scientific name** | **DAFOR** | **Qualifiers** | | | **Notes** | **DAFOR** | **Qualifiers** | | | **Notes** |
| | | | **1** | **2** | **3** | | | **1** | **2** | **3** | |
| | | | | | | | | | | | (h3 & h3h) |
| Hybrid midland hawthorn | *Crataegus monogyna* x *laevigata* = *C. x media* | | | | | | R | | | | Dense scrub (h3) by the site's eastern edge |
| Smooth Hawk's-beard | *Crepis capillaris* | R | | | | Grassland (g4) | | | | | |
| Cock's-foot | *Dactylis glomerata* | O | | | | Grasslands | O | | | | Grasslands |
| Broad Buckler-fern | *Dryopteris dilatata* | | | | | | R | | | | Wooded areas near Salmons Brook |
| Male-fern | *Dryopteris filix-mas* | | | | | | R | | | | |
| Common Couch | *Elymus repens* | O | | | | Grasslands | O | | | | |
| Red Fescue | *Festuca rubra* | | | | | | F | | | | |
| Ash | *Fraxinus excelsior* | O | y | t | e | Hedges and woodland (w1f6) | A | s | y | t | Areas of scrub and woodland |
| Herb-Robert | *Geranium robertianum* | O | e | | | Mostly field edges | O | e | | | Edges of paths |
| Wood Avens | *Geum urbanum* | | | | | | O | | | | Woodland and scrub |
| Ivy | *Hedera helix* | O | e | | | Hedges and woodland (w1f6) | A | | | | Cheifly wooded areas |
| Hogweed | *Heracleum sphondylium* | O | e | | | Grasslands | F | e | | | Tall forb areas e.g. aside Salmons Brook |
| Yorkshire-fog | *Holcus lanatus* | O | | | | Grasslands | O | | | | Grasslands |
| Cat's-ear | *Hypochaeris radicata* | R | | | | Grasslands | | | | | |
| Holly | *Ilex aquifolium* | O | y | t | e | Hedges and woodland (w1f6) | O | y | t | | Areas of scrub and woodland |
| Yellow Iris | *Iris pseudacorus* | | | | | | O | w | | | Aside Salmons Brook |
| Common Ragwort | *Jacobaea vulgaris* | O | | | | Grasslands | O | | | | Rough grassland and tall forb |

| Area: | | Vicarage Farm-not SINC | | | | | Enfield Rifles SINC | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Common name | Scientific name | DAFOR | Qualifiers | | | Notes | DAFOR | Qualifiers | | | Notes |
| | | | 1 | 2 | 3 | | | 1 | 2 | 3 | |
| | | | | | | | | | | | areas |
| Red Dead-nettle | *Lamium purpureum* | R | | | | Grassland | | | | | |
| Perennial Rye-grass | *Lolium perenne* | A | | | | Grassland | A | | | | Grasslands |
| Common Bird's-foot-trefoil | *Lotus corniculatus* | | | | | | F | c | | | In g3c grassland |
| Apple | *Malus domestica* | | | | | | F | t | | | Wooded areas |
| Crab Apple | *Malus sylvestris* | | | | | | R | t | e | ? | Aside Merryhills Brook |
| Pineappleweed | *Matricaria discoidea* | R | f | | | Tracks | | | | | |
| Scented Mayweed | *Matricaria recutita* | R | | | | Grasslands | | | | | |
| Water Mint | *Mentha aquatica* | R | w | | | Merryhills Brook | R | w | | | Merryhills Brook & Salmons Brook |
| Virginia-creeper | *Parthenocissus quinquefolia* | | | | | | R | e | | | Edge of site |
| Smaller Cat's-tail | *Phleum bertolonii* | | | | | | R | | | | g3c grassland |
| Fox and Cubs | *Pilosella aurantiaca* | R | | | | Grasslands | | | | | |
| Ribwort Plantain | *Plantago lanceolata* | O | | | | Grasslands | O | | | | Mostly g3c grassland |
| Greater Plantain | *Plantago major* | F | f | | | Tracks | O | f | | | Tracks |
| Annual Meadow-grass | *Poa annua* | O | | | | Grasslands | O | | | | |
| Knotgrass | *Polygonum aviculare* | F | f | | | Tracks | O | f | | | Tracks |
| Black-poplar | *Populus nigra*'Italica' | | | | | | R | t | | | |
| Creeping Cinquefoil | *Potentilla reptans* | O | | | | Grasslands | O | | | | Grasslands |
| Wild Cherry | *Prunus avium* | | | | | | R | t | | | Wooded areas |
| Cherry Laurel | *Prunus laurocerasus* | | | | | | A | c | | | w1f7 woodland aside eastern edge of site |
| Blackthorn | *Prunus spinosa* | O | s | y | e | Hedges | A | s | y | | Areas of woodland and scrub |
| Bracken | *Pteridium aquilinum* | | | | | | O | | | | Rough grassland and tall forb |

| Area: | | Vicarage Farm-not SINC | | | | | Enfield Rifles SINC | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common name** | **Scientific name** | **DAFOR** | **Qualifiers** | | | **Notes** | **DAFOR** | **Qualifiers** | | | **Notes** |
| | | | **1** | **2** | **3** | | | **1** | **2** | **3** | |
| | | | | | | | | | | | areas |
| Common Fleabane | *Pulicaria dysenterica* | | | | | | R | w | | | Near Merryhills Brook |
| Turkey Oak | *Quercus cerris* | R | s | | | w1f6 woodland | | | | | |
| Pedunculate Oak | *Quercus robur* | F | y | t | e | Field boundaries (trees), w1f6 woodland | A | s | y | t | |
| Creeping Buttercup | *Ranunculus repens* | F | | | | Grasslands | O | | | | Grasslands |
| Japanese Knotweed | *Reynoutria japonica* | R | | | | TQ2996796461 | R | | | | TQ3074297199 |
| Rhododendron | *Rhododendron ponticum* | | | | | | O | c | | | w1f7 woodland aside eastern edge of site |
| Dog-rose | *Rosa canina* | R | e | | | Field boundaries | O | | | | Cheifly areas of scrub |
| Bramble | *Rubus fruticosus* agg. | F | e | | | Field boundaries | A | | | | Areas of scrub |
| Curled Dock | *Rumex crispus* | R | | | | Grasslands | | | | | |
| Broad-leaved Dock | *Rumex obtusifolius* | O | | | | Grasslands | O | | | | Grasslands |
| White Willow | *Salix alba* | | | | | | A | t | e | w | Aside Merryhills Brook |
| Grey Willow | *Salix cinerea* | O | | | | Aside Merryhills Brook | O | w | | | Aside Merryhills & Salmons Brooks |
| Crack Willow | *Salix × fragilis* | | | | | | O | t | e | w | Aside Merryhills & Salmons Brooks |
| Elder | *Sambucus nigra* | O | e | | | Field boundaries & w1f6 woodland | O | | | | Scrub |
| Tall Fescue | *Schedonorus arundinacea* | | | | | | R | e | | | Aside Salmons Brook |
| Hedge Mustard | *Sisymbrium officinale* | | | | | | R | e | | | |
| Prickly Sow-thistle | *Sonchus asper* | R | | | | Grasslands | R | e | | | |
| Common Chickweed | *Stellaria media* | | | | | | R | | | | |

| **Area:** | | **Vicarage Farm-not SINC** | | | | | **Enfield Rifles SINC** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common name** | **Scientific name** | **DAFOR** | **Qualifiers** | | | **Notes** | **DAFOR** | **Qualifiers** | | | **Notes** |
| | | | **1** | **2** | **3** | | | **1** | **2** | **3** | |
| Russian Comfrey | *Symphytum officinale* x *asperum* = *S.* x *uplandicum* | | | | | | O | c | w | | Aside Merryhills Brook |
| Yew | *Taxus baccata* | O | c | | | w1f6 woodland | O | y | | | w1f7 woodland aside eastern edge of site |
| Red Clover | *Trifolium pratense* | O | | | | Grasslands | R | | | | g3c grassland |
| White Clover | *Trifolium repens* | F | | | | Grasslands | F | | | | Grasslands |
| English Elm | *Ulmus procera* | | | | | | R | | | | |
| Common Nettle | *Urtica dioica* | A | e | | | Field edges & Merryhills Brook | D | e | | | Woodland edges, scrub & tall forb areas |
| Germander Speedwell | *Veronica chamaedrys* | O | | | | Grasslands | | | | | |
| Common Vetch | *Vicia sativa* | F | | | | Hedges | | | | | |

# Appendix 4: List of birds previously identified at Vicarage Farm

A total of 151 taxa of birds were identified via records supplied by BTO / GIGL. The list comprised common species (including several non-natives), rarities, visitors and vagrants. The list also included a range of species likely / known to breed on site.

An analysis of these records suggested 104 species of bird were associated (to a greater or lesser degree) with farmland / grassland. Of these, 64 species were identified as Birds of Conservation Concern (Stanbury, 2021). Farmland / grassland habitats were clearly of value to many of these species. Analysis of land use data for farmland and pasture (Cole *et al*, 2015) indicated that in Enfield these habitats occupied 1.11% of the surface area of Greater London. The figure for the same habitats for all London boroughs was 12.46%. Thus, it is logical to assume that some of these bird species occur in appropriate habitats elsewhere in London. However, the population in Enfield is of likely significance in the context of the borough itself.

**Abbreviations:**

*BoCC=Birds of Conservation Concern, Stanbury A. et al (2021)*:

BRed = Red Listed; BAmb = Amber Listed

*Habitats:*

xxx = Associated with a relatively narrower range of habitats including farmland / grassland

xx = Associated with a wider range of habitats including farmland / grassland

Indicator = UK Farmland indicator species (see Appendix 5)

| Scientific Name | Species | BoCC5 | Grassland |
|---|---|---|---|
| *Larus fuscus fuscus* | Baltic Gull | | |
| *Tyto alba* | Barn Owl | | xxx |
| *Branta leucopsis* | Barnacle Goose | BAmb | xxx |
| *Limosa lapponica* | Bar-tailed Godwit | BAmb | xx |
| *Phoenicurus ochruros* | Black Redstart | BAmb | xx |
| *Turdus merula* | Blackbird | | xx |
| *Sylvia atricapilla* | Blackcap | | xx |
| *Chroicocephalus ridibundus* | Black-headed Gull | BAmb | |
| *Limosa limosa* | Black-tailed Godwit | BRed | xx |
| *Cyanistes caeruleus* | Blue Tit | | xx |
| *Motacilla flava flava* | Blue-headed Wagtail | | |
| *Fringilla montifringilla* | Brambling | | xx |
| *Branta bernicla bernicla* | Brent Goose (Dark-bellied - bernicla) | BAmb | xxx |
| *Pyrrhula pyrrhula* | Bullfinch | BAmb | xx |
| *Buteo buteo* | Buzzard | | xxx |
| *Branta canadensis* | Canada Goose | | xxx |
| *Corvus corone* | Carrion Crow | | xxx |
| *Fringilla coelebs* | Chaffinch | | xxx |
| *Phylloscopus collybita* | Chiffchaff | | xx |
| *Periparus ater* | Coal Tit | | |
| *Streptopelia decaocto* | Collared Dove | | xx |
| *Loxia curvirostra* | Common Crossbill | | |
| *Larus canus* | Common Gull | BAmb | xxx |
| *Acanthis flammea* | Common Redpoll | | xx |
| *Acanthis flammea flammea* | Common Redpoll (Mealy - flammea) | | |
| *Actitis hypoleucos* | Common Sandpiper | BAmb | xx |
| *Sterna hirundo* | Common Tern | BAmb | |
| *Acanthis flammea/cabaret* | Common/Lesser Redpoll | | |
| *Phalacrocorax carbo* | Cormorant | | |
| *Emberiza calandra* | Corn Bunting | BRed | Indicator |
| *Cuculus canorus* | Cuckoo | BRed | xx |
| *Numenius arquata* | Curlew | BRed | xxx |
| *Calidris alpina* | Dunlin | BRed | xxx |
| *Prunella modularis* | Dunnock | BAmb | xx |
| *Alopochen aegyptiaca* | Egyptian Goose | | |
| *Columba livia f. domestica* | Feral Pigeon | | |
| *Turdus pilaris* | Fieldfare | BRed | xxx |
| *Regulus ignicapilla* | Firecrest | | |
| *Mareca strepera* | Gadwall | BAmb | xx |
| *Sylvia borin* | Garden Warbler | | xx |
| *Regulus regulus* | Goldcrest | | |

| Scientific Name | Species | BoCC5 | Grassland |
|---|---|---|---|
| *Pluvialis apricaria* | Golden Plover | | xxx |
| *Bucephala clangula* | Goldeneye | | |
| *Carduelis carduelis* | Goldfinch | | Indicator |
| *Mergus merganser* | Goosander | | |
| *Locustella naevia* | Grasshopper Warbler | BRed | xx |
| *Larus marinus* | Great Black-backed Gull | BAmb | xx |
| *Dendrocopos major* | Great Spotted Woodpecker | | |
| *Parus major* | Great Tit | | xx |
| *Tringa ochropus* | Green Sandpiper | BAmb | |
| *Picus viridis* | Green Woodpecker | | xxx |
| *Chloris chloris* | Greenfinch | BRed | Indicator |
| *Tringa nebularia* | Greenshank | BAmb | |
| *Ardea cinerea* | Grey Heron | | |
| *Perdix perdix* | Grey Partridge | BRed | Indicator |
| *Motacilla cinerea* | Grey Wagtail | BAmb | |
| *Anser anser* | Greylag Goose | BAmb | xxx |
| *Coccothraustes coccothraustes* | Hawfinch | BRed | |
| *Circus cyaneus* | Hen Harrier | BRed | xxx |
| *Larus argentatus* | Herring Gull | BRed | xx |
| *Falco subbuteo* | Hobby | | xxx |
| *Pernis apivorus* | Honey-buzzard | | |
| *Upupa epops* | Hoopoe | | xxx |
| *Delichon urbicum* | House Martin | BRed | xx |
| *Passer domesticus* | House Sparrow | BRed | xx |
| *Lymnocryptes minimus* | Jack Snipe | | xx |
| *Coloeus monedula* | Jackdaw | | Indicator |
| *Garrulus glandarius* | Jay | | xx |
| *Falco tinnunculus* | Kestrel | BAmb | Indicator |
| *Alcedo atthis* | Kingfisher | | xx |
| *Vanellus vanellus* | Lapwing | BRed | Indicator |
| *Larus fuscus* | Lesser Black-backed Gull | BAmb | xxx |
| *Acanthis cabaret* | Lesser Redpoll | | |
| *Dryobates minor* | Lesser Spotted Woodpecker | BRed | |
| *Curruca curruca* | Lesser Whitethroat | | xxx |
| *Linaria cannabina* | Linnet | BRed | Indicator |
| *Egretta garzetta* | Little Egret | | |
| *Athene noctua* | Little Owl | | xxx |
| *Aegithalos caudatus* | Long-tailed Tit | | xx |
| *Pica pica* | Magpie | | xxx |
| *Anas platyrhynchos* | Mallard | BAmb | xx |
| *Aix galericulata* | Mandarin Duck | | |
| *Circus aeruginosus* | Marsh Harrier | BRed | xx |
| *Anthus pratensis* | Meadow Pipit | BAmb | xxx |
| *Ichthyaetus melanocephalus* | Mediterranean Gull | BAmb | |

| Scientific Name | Species | BoCC5 | Grassland |
|---|---|---|---|
| *Falco columbarius* | Merlin | BRed | xxx |
| *Turdus viscivorus* | Mistle Thrush | BRed | |
| *Gallinula chloropus* | Moorhen | BAmb | xxx |
| *Cygnus olor* | Mute Swan | | |
| *Sitta europaea* | Nuthatch | | |
| *Pandion haliaetus* | Osprey | BAmb | |
| *Falco peregrinus* | Peregrine | | |
| *Phasianus colchicus* | Pheasant | | xxx |
| *Ficedula hypoleuca* | Pied Flycatcher | | |
| *Motacilla alba yarrellii* | Pied Wagtail (yarrellii) | | |
| *Motacilla alba* | Pied/White Wagtail | | xxx |
| *Aythya ferina* | Pochard | BRed | |
| *Coturnix coturnix* | Quail | BAmb | xxx |
| *Corvus corax* | Raven | | xx |
| *Milvus milvus* | Red Kite | | xx |
| *Alectoris rufa* | Red-legged Partridge | | xx |
| *Phoenicurus phoenicurus* | Redstart | | |
| *Turdus iliacus* | Redwing | BAmb | xxx |
| *Emberiza schoeniclus* | Reed Bunting | BAmb | Indicator |
| *Acrocephalus scirpaceus* | Reed Warbler | | |
| *Turdus torquatus* | Ring Ouzel | BRed | xxx |
| *Charadrius hiaticula* | Ringed Plover | BRed | xx |
| *Psittacula krameri* | Ring-necked Parakeet | | |
| *Erithacus rubecula* | Robin | | xx |
| *Corvus frugilegus* | Rook | BAmb | Indicator |
| *Riparia riparia* | Sand Martin | | xx |
| *Acrocephalus schoenobaenus* | Sedge Warbler | BAmb | xx |
| *Tadorna tadorna* | Shelduck | BAmb | xxx |
| *Asio flammeus* | Short-eared Owl | BAmb | xxx |
| *Calandrella brachydactyla* | Short-toed Lark | | |
| *Spinus spinus* | Siskin | | |
| *Alauda arvensis* | Skylark | BRed | Indicator |
| *Gallinago gallinago* | Snipe | BAmb | xxx |
| *Turdus philomelos* | Song Thrush | BAmb | xx |
| *Accipiter nisus* | Sparrowhawk | BAmb | xxx |
| *Muscicapa striata* | Spotted Flycatcher | BRed | xx |
| *Sturnus vulgaris* | Starling | BRed | Indicator |
| *Columba oenas* | Stock Dove | BAmb | Indicator |
| *Saxicola rubicola* | Stonechat | | xxx |
| *Burhinus oedicnemus* | Stone-curlew | BAmb | xxx |
| *Hirundo rustica* | Swallow | | xxx |
| *Apus apus* | Swift | BRed | xxx |
| *Strix aluco* | Tawny Owl | BAmb | xx |
| *Anas crecca* | Teal | BAmb | xx |

| Scientific Name | Species | BoCC5 | Grassland |
|---|---|---|---|
| *Anthus trivialis* | Tree Pipit | BRed | xx |
| *Passer montanus* | Tree Sparrow | BRed | Indicator |
| *Certhia familiaris* | Treecreeper | | xx |
| *Aythya fuligula* | Tufted Duck | | |
| *Streptopelia turtur* | Turtle Dove | BRed | Indicator |
| *Bombycilla garrulus* | Waxwing | | xx |
| *Oenanthe oenanthe* | Wheatear | BAmb | xxx |
| *Oenanthe oenanthe leucorhoa* | Wheatear (Greenland - leucorhoa) | | |
| *Numenius phaeopus* | Whimbrel | BRed | |
| *Saxicola rubetra* | Whinchat | BRed | xxx |
| *Motacilla alba alba* | White Wagtail (alba) | | |
| *Curruca communis* | Whitethroat | BAmb | Indicator |
| *Phylloscopus trochilus* | Willow Warbler | BAmb | xx |
| *Tringa glareola* | Wood Sandpiper | BAmb | |
| *Phylloscopus sibilatrix* | Wood Warbler | BRed | |
| *Scolopax rusticola* | Woodcock | BRed | xx |
| *Columba palumbus* | Woodpigeon | BAmb | Indicator |
| *Troglodytes troglodytes* | Wren | BAmb | xx |
| *Jynx torquilla* | Wryneck | | xx |
| *Motacilla flava* | Yellow Wagtail | BRed | Indicator |
| *Motacilla flava flavissima* | Yellow Wagtail (British - flavissima) | | |
| *Emberiza citrinella* | Yellowhammer | BRed | Indicator |

# Appendix 5: Analysis of BTO (Bird Track) species records

In 2022, 19 indicator species of birds (comprising seven farmland generalists and 12 farmland specialists) were used to establish trends in the UK population of native breeding farmland birds for the period 1970 to 2022. The overall performance of the19 indicator species was used as a basis to formulate a farmland bird index. This was found to be 60% below its 1970 value indicating that bird populations in this category had declined to a greater extent than birds in any other habitat category in the UK. Further information is available from the following website: National statistics Wild bird populations in the UK, 1970 to 2022 (Updated 7 November 2023) https://www.gov.uk/government/statistics/wild-bird-populations-in-the-uk/wild-bird-populations-in-the-uk-1970-to-2021

The same farmland indicator species used to establish national trends in farmland bird populations were used to assess the value of Vicarage Farm for farmland birds.

BTO (Bird Track) supplied over 25,000 species records, not including multiple occurrences, for Vicarage Farm (grid square TQ3097), for the period 2004-2022. This comprised 129 species and sub-species. The records included data for 18 of the 19 farmland indicator species (tree sparrow was not recorded). The table below gives an analysis of the BTO data for each of these indicators. Explanation of terms / abbreviations are as follows:

**Cell colour:** = generalist species; = specialist species

**No. of visits**: the sum of the total number of recording days per species, for the periods 2004-2022 and 2017-2022 (unless otherwise stated under comments)

**Sum of counts**: Total number of counts per species over the periods 2004-2022 and 2017-2022 (unless otherwise stated under comments)

**Ave. counts/visit**: Sum of counts/No. of visits

**Breeding:** ** = confirmed breeding; * = possibly/probably breeding (derived from BTO data)

**BoCC5**: Birds of Conservation Concern (Stanbury *et al*, 2021) BRed = Red List; BAmb = Amber List

**UK Long-term trend** – an assessment of change since the earliest date for which data are available; this varies among indicators and among individual species.

**UK Short-term trend** – an assessment of change over the latest 5 years for which data are available (2017-2022).

- strong increase: population increase of 100% or more
- weak increase: more than 33% but less than 100% increase
- little change: between a 25% decrease and a 33% increase
- weak decline: less than 50% but greater than 25% decrease
- strong decline: population decrease of 50% or more

| Common name | Scientific name | Grid reference | Tetrad | Date range | No. of visits | Sum of counts | Ave. Counts/visit | Breeding | BoCC5 | Comments | UK Long-term trend | UK Short-term trend |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Greenfinch | *Chloris chloris* | TQ3097 | D | 2004-2022 | 551 | 1416 | 2.57 | ** | BRed | | weak decline | strong decline |
| | | | | 2017-2022 | 341 | 794 | 2.33 | ** | | | | |
| Jackdaw | *Coloeus monedula* | TQ3097 | D | 2004-2022 | 187 | 6306 | 33.72 | ** | | | weak increase | weak increase |
| | | | | 2017-2022 | 100 | 3075 | 30.75 | ** | | | | |
| Kestrel | *Falco tinnunculus* | TQ3097 | D | 2004-2022 | 1059 | 1433 | 1.35 | * | BAmb | 2005-2022 | weak decline | strong decline |
| | | | | 2017-2022 | 545 | 788 | 1.44 | * | | | | |
| Reed Bunting | *Emberiza schoeniclus* | TQ3097 | D | 2004-2022 | 197 | 450 | 2.28 | ** | BAmb | | little change | weak decline |
| | | | | 2017-2022 | 3 | 4 | 1.33 | | | Last recorded 2017 | | |
| Rook | *Corvus frugilegus* | TQ3097 | D | 2004-2022 | 73 | 396 | 5.42 | | BAmb | First recorded 2012 | little change | little change |
| | | | | 2017-2022 | 49 | 291 | 5.93 | | | | | |
| Woodpigeon | *Columba palumbus* | TQ3097 | D | 2004-2022 | 73 | 396 | 5.42 | ** | BAmb | First recorded 2016 | weak increase | little change |
| | | | | 2017-2022 | 49 | 291 | 5.94 | ** | | | | |
| Yellow Wagtail | *Motacilla flava* | TQ3097 | D | 2004-2022 | 119 | 226 | 1.90 | * | BRed | | weak decline | little change |
| | | | | 2017-2022 | 23 | 50 | 2.17 | * | | | | |
| Corn Bunting | *Emberiza calandra* | TQ3097 | D | 2004-2022 | 6 | 6 | 1.00 | | BRed | Recorded between 2014 and 2015 | strong decline | strong increase |
| | | | | 2017-2022 | 0 | 0 | 0.00 | | | | | |
| Goldfinch | *Carduelis carduelis* | TQ3097 | D | 2004-2022 | 881 | 5279 | 5.99 | ** | | | weak increase | weak increase |
| | | | | 2017-2022 | 518 | 2750 | 5.31 | ** | | | | |
| Grey Partridge | *Perdix perdix* | TQ3097 | D | 2004-2022 | 7 | 8 | 1.14 | * | BRed | Recorded between 2005 and 2018 | strong decline | little change |
| | | | | 2017-2022 | 1 | 1 | 1.00 | | | | | |
| Lapwing | *Vanellus vanellus* | TQ3097 | D | 2004-2022 | 45 | 351 | 7.80 | * | BRed | Recorded between 2004 and 2020 | weak decline | weak decline |
| | | | | 2017-2022 | 4 | 6 | 1.50 | | | | | |
| Linnet | *Linaria cannabina* | TQ3097 | D | 2004-2022 | 980 | 9814 | 10.01 | ** | BRed | | weak decline | little change |
| | | | | 2017-2022 | 374 | 1780 | 4.76 | ** | | | | |
| Skylark | *Alauda arvensis* | TQ3097 | D | 2004-2022 | 1273 | 5216 | 4.09 | ** | BRed | | weak decline | weak increase |
| | | | | 2017-2022 | 533 | 1520 | 2.85 | ** | | | | |
| Starling | *Sturnus vulgaris* | TQ3097 | D | 2004-2022 | 134 | 3482 | 25.99 | ** | BRed | | strong decline | weak decline |
| | | | | 2017-2022 | 91 | 2407 | 26.45 | ** | | | | |
| Stock Dove | *Columba oenas* | TQ3097 | D | 2004-2022 | 452 | 3088 | 6.83 | ** | BAmb | First recorded 2005 | weak increase | strong increase |
| | | | | 2017-2022 | 224 | 1176 | 5.25 | ** | | | | |
| Tree Sparrow | *Passer montanus* | TQ3097 | D | 2004-2022 | 0 | 0 | 0.00 | | BRed | Not recorded | strong decline | strong decline |
| | | | | 2017-2022 | 0 | 0 | 0.00 | | | | | |
| Turtle Dove | *Streptopelia turtur* | TQ3097 | D | 2004-2022 | 2 | 2 | 1.00 | * | BRed | Two recordings, 2004 and 2010 | strong decline | strong decline |
| | | | | 2017-2022 | 0 | 0 | 0.00 | | | | | |
| Whitethroat | *Curruca communis* | TQ3097 | D | 2004-2022 | 1009 | 2963 | 2.94 | ** | BAmb | | little change | little change |
| | | | | 2017-2022 | 398 | 872 | 2.19 | ** | | | | |
| Yellowhammer | *Emberiza citrinella* | TQ3097 | D | 2004-2022 | 1085 | 3104 | 2.86 | ** | BRed | | weak decline | waek decline |
| | | | | 2017-2022 | 166 | 304 | 1.83 | ** | | | | |

# Appendix 6: Legislation, planning policy and Biodiversity Action Plans

***Important notice:*** *This section contains details of legislation and planning policy appropriate in England only (i.e., it may not be relevant to the other home nations, Isle of Man, or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.*

## Appendix 6a: National Legislation

The most pertinent points and excerpts in the policy section regarding Glebe Fields, Enfield Road are highlighted in red (below).

Wildlife in Britain receives protection under various legislation including:

- Wildlife and Countryside Act 1981 (as amended)
- The Protection of Badgers Act (1992)
- The Countryside and Rights of Way Act 2000
- Conservation of Habitats and Species Regulations 2010
- Natural Environment and Rural Communities Act 2006
- The Eels (England and Wales) Regulations 2009
- Environment Act 2021

Habitats of regional or national importance are designated as statutory Sites of Special Scientific Interest (SSSIs).

Other statutory designations applied for sites of international importance include Special Protection Areas (SPAs), Wetlands of International Importance (Ramsar sites) and Special Areas of Conservation (SACs). Such sites are by definition also designated as SSSIs.

In addition to statutorily protected sites, there are ranges of non-statutory designations applied at a local level by local planning authorities. These are called Sites of Biological Importance (SBIs), Sites of Nature of Importance for Nature Conservation (SINCs) or similar.

Species that are protected or otherwise regulated under this legislation include:

- bats
- hazel dormouse
- badger
- breeding birds
- amphibians and reptiles
- great crested newt
- stag beetle
- European eel
- bluebell (native)
- plants: invasive plant species

***Bats***

All species of bat are fully protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion in Schedule 5. All bats are also included in Schedule 2 of the Conservation of Habitats and Species Regulations 2010. The Act and Regulations make it illegal to:

- intentionally or deliberately kill, injure or capture (take) bats;
- deliberately disturb bats (whether in a roost or not);
- damage, destroy or obstruct access to bat roosts;
- possess or transport a bat or any other part of a bat, unless acquired legally; or
- sell, barter or exchange bats or parts of bats.

If a bat roost is to be affected by development activities, a licence from the Department for the Environment, Food and Rural Affairs (DEFRA) will need to be obtained to mitigate any detrimental effects.

***Hazel dormouse***

Is protected under both the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended).

Dormice and their breeding sites and resting places are fully protected. Without a licence it is an offence for anyone to deliberately disturb, capture, injure or kill them. It is also an offence to damage or destroy their breeding or resting places, to disturb or obstruct access to any place used by them for shelter. It is also an offence to possess or sell a wild dormouse.

***Eurasian badger***

Badgers and their setts are protected under the Protection of Badgers Act 1992 (as amended). This makes it an offence to:

- Intentionally kill, injure or take these species;
- Possess or control live or dead these species or derivatives;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place
- used for shelter or protection;
- Intentionally or recklessly disturb these species whilst occupying a structure or place used for that purpose;
- Sell these species or offer or expose for sale or transport for sale; and
- Publish or cause to be published any advertisement which conveys the buying or selling of these species.

***West European hedgehog***

Hedgehogs are protected, in England, Scotland and Wales, under the Wildlife and Countryside Act 1981, Schedule 6 and in Northern Ireland under the Wildlife (NI) Order 1985, Schedules 6&7. What this means is they are:

“protected from being killed or taken by certain methods under Section 11(1) of the Wildlife and Countryside Act 1981. The methods listed are: self-locking snares, bows, crossbows, explosives (other than ammunition for a firearm), or live decoys. The species listed are also

protected from the following activities: trap, snare or net, electrical device for killing or stunning, poisonous, poisoned or stupefying substances or any other gas or smoke, automatic or semi-automatic weapon, device for illuminating a target or sighting device for night shooting, artificial light, mirror or other dazzling device, sound recording, and mechanically propelled vehicle in immediate pursuit."

Hedgehogs are also listed under Section 41 of the NERC Act 2006 – see below.

***Birds***

All birds, their eggs and nests are protected by law under the Wildlife and Countryside Act 1981 (as amended). It is an offence to kill, injure or take any wild bird, or to take or destroy their eggs. It is also an offence to take damage or destroy the nest of any wild bird while it is in use or being built. Certain species including black redstart receive additional special protection under Schedule 1 of the Act and under Annex 1 of the European Community Directive on the conservation of Wild Birds (79/409/EEC).

***Amphibians and Reptiles***

All native herpetofauna are listed on Schedule 5 of the Wildlife and Countryside Act, 1981 and receive some degree of protection. The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Bufo calamita* and great crested newt *Triturus cristatus* receive full protection under the Act and are also protected under Part 3 of the Conservation of Habitats and Species Regulations 2010. This prohibits the intentional killing, injuring or taking of animals; intentional disturbance whilst occupying a place used for shelter; the destruction of these places; and the sale of animals. The adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Lacerta vivipara* and slow-worm *Anguis fragilis* receive protection against deliberate killing, injuring and sale under subsections 9(1) and 9(5) of the act, whilst common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *T. helveticus* are protected from sale only.

Licences are only required for works affecting fully protected species of amphibian and reptile, but mitigation measures may be required to prevent the deliberate killing or injury of adder, grass snake, common lizard and slow worm.

***Great crested newt***

Great crested newts receive full legal protection under The Conservation of Species and Habitats Regulations 2010 and the Wildlife and Countryside Act 1981 (as amended). It is illegal to deliberately injure, kill, capture or disturb a great crested newt, or to damage, destroy or obstruct any places used for shelter and protection.

***European eel***

The Eels (England and Wales) Regulations 2009 provide measures for the recovery of the stock of European eel.

The regulations particularly apply to:

- Licensed abstractors of water: companies or individuals abstracting and/or discharging water for a wide range of industrial, agricultural and other purposes

- Impounding works: any dam, weir, or other works by which water may be impounded
- Anyone constructing, altering or maintaining a dam, or any other structure in or near water, liable to cause an obstruction to the passage of eels.

The requirements of the regulations are:

- The requirement to notify the Environment Agency of the construction, alteration or maintenance of any structure likely to affect the passage of eels
- Where any such structure exists, the requirement to construct and operate an eel pass to allow the free passage of eels
- The removal of any obstruction, if deemed necessary
- The use of eel screens to exclude eels from water abstraction and discharge points
- If necessary, the use of a by-wash to return excluded eels to the waters they came from.

It is an offence to:

- fail to comply with the regulations
- to obstruct any person acting in the execution of the regulations
- to withhold any assistance or information reasonably required by any such person
- to supply false or misleading information to any such person.

***Stag Beetle***

The stag beetle is listed on Schedule 5 of the Wildlife and Countryside Act (1981, as amended) but only to prevent trade. A major threat to stag beetles, especially in Europe, has been from private collectors and the legislation aims to stop the species from being collected for sale at entomological fairs. It is also listed on Appendix 111 of the Bern Convention on the Conservation of European Wildlife and Natural Habitats, 1979 and Appendix 2 of the Habitats Directive. The latter requires the UK to designate Special Areas of Conservation (SAC) specifically to protect the stag beetle.

**Section 41 of the Natural Environment and Rural Communities (NERC) Act 200**

Provides a list of Habitats and Species of Principal Importance in England (S41 list). This list was compiled to act as a guide to decision-makers such as public bodies in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006 “to have regard” to the conservation of biodiversity in England, when carrying out their normal functions. In particular Local Planning Authorities will use it to identify the species and habitats that require specific consideration in dealing with planning and development control. There are 56 habitats and 943 species included on the S41 list. These are all habitats and species that have been identified as requiring action in the UK BAP.

***Birds of Conservation Concern (BoCC)***

The BoCC lists provide the status of the birds that occur regularly in the UK. They are produced by the UK’s leading bird conservation organisations:

- BAmb: Bird Population Status – Amber

Amber list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.

- BRed: Bird Population Status - Red

Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.

***Plants: Invasive plant species (WCA9ii)***

Certain species of plant, including Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum*, are included in Section 14 and Part II of Schedule 9 of the Wildlife and Countryside Act 1981 making it an offence for them to be planted in the wild or otherwise caused to grow or spread in the wild.

**Biodiversity Net Gain (BNG) and the Environment Act 2021**

The Government announced it would mandate net gains for biodiversity in the Environment Bill in the 2019 Spring Statement. This followed a consultation on net gain from December 2018. Defra's response to the consultation was published in July 2019. An impact assessment on biodiversity net gain and Local Nature Recovery Strategies (LNRS) was published in late 2019.

The Environment Bill received Royal Assent on 9 November 2021 becoming the Environment Act (2021) which is applicable to England only.

The Environment Act 2021 introduced a strengthened 'Biodiversity Duty' that requires local planning authorities to consider what they can do to conserve and enhance biodiversity, agree policies and specific objectives based on this consideration and to deliver policies to achieve these objectives.

Specifically, the Environment Act requires all planning permissions granted in England, except for small sites and a few other exemptions to deliver a minimum of 10% biodiversity net gain (BNG) using agreed metrics. This requirement is due to come into effect on the 12th of February 2024 (delayed from October 2023).

Moreover, the Act states that LNRS must be prepared and published by the responsible authority. The responsible authority will be the GLA but the Council will need to contribute to the London region's LNRS. The findings of the ecology study will inform the development of an Enfield LNRS. Defra (The Department for Environment, Food and Rural Affairs) published a blog post in July 2023, emphasising how work to prepare for BNG should consider how it can support other local policy priorities, including LNRS.

The key components to mandatory BNG are as follows:

- Minimum 10% gain required calculated using Biodiversity Metric & approval of net gain plan
- Habitat secured for at least 30 years via obligations/ conservation covenant

- Habitat can be delivered on-site, off-site or via statutory biodiversity credits
- There will be a national register for net gain delivery sites
- The mitigation hierarchy still applies of avoidance, mitigation and compensation for biodiversity loss
- Will also apply to Nationally Significant Infrastructure Projects (NSIPs)
- Does not apply to marine development
- Does not change existing legal environmental and wildlife protection

**Tree Preservation Orders The Town and Country Planning (Tree Preservation) (England) Regulations 2012**

Trees are protected if they are covered by:

- a conservation area
- a Tree Preservation Order (TPO)
- specific planning conditions

It is a criminal offence to prune, fell, damage or harm a protected tree, unless the works are exempt. You must get our permission before carrying out any works to a protected tree or receive an unlimited fine or criminal conviction.

**Trees in a conservation area**

We choose conservation areas of special architectural or historical interest, which are often centred around listed buildings. All trees within a conservation area are protected, except where there are exemptions (see below), and consent is required from us for doing any works.

**Trees under a TPO**

We provide TPOs for the protection of trees or woodlands to stop them:

- being cut down
- being wilfully damaged or destroyed
- being uprooted
- cutting roots
- lopping (includes roots)
- topping

## Appendix 6b: National Planning Policy

Chapter 15 paragraphs 174 to 188 of the National Planning Policy Framework (NPPF) (2023) deals with Conserving and enhancing the natural environment. The paragraphs most pertinent here are reproduced below with most appropriate section highlighted in red:

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

(a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)

(b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

(c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

(d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

(f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

**175.** Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

**Habitats and biodiversity**

**179.** To protect and enhance biodiversity and geodiversity, plans should:

(a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

(b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

Appendix 9c: Regional Planning Policy

A Sites of Importance for Nature Conservation (SINCs) should be protected.

B Boroughs, in developing Development Plans, should:

1) use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks

2) identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them

3) support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans

4) seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context.

## Appendix 6c: Regional Planning Policy

**London Plan 2021[15]:**

The paragraphs most pertinent here are reproduced below with most appropriate section highlighted in red.

**Policy G2 London's Green Belt**

A The Green Belt should be protected from inappropriate development:

1) development proposals that would harm the Green Belt should be refused except where very special circumstances exist,

2) subject to national planning policy tests, the enhancement of the Green Belt to provide appropriate multi-functional beneficial uses for Londoners should be supported.

B Exceptional circumstances are required to justify either the extension or de-designation of the Green Belt through the preparation or review of a Local Plan.

**Policy G6 Biodiversity and access to nature**

A Sites of Importance for Nature Conservation (SINCs) should be protected.

B Boroughs, in developing Development Plans, should:

1) use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks

2) identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them

3) support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans

4) seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context**Appendix 9d: Local Planning Policy**

## Appendix 6d: Local Planning Policy

**New Enfield Local Plan[16]:**

The paragraphs most pertinent here are reproduced below with most appropriate section highlighted in red.

**BG2: Protecting Nature Conservation Sites**

[15] https://www.london.gov.uk/programmes-strategies/planning/london-plan/the-london-plan-2021-online/chapter-8-green-infrastructure

[16] https://www.enfield.gov.uk/__data/assets/pdf_file/0023/49217/8-Ch-6-Blue-and-Green-Part1-Planning.pdf

Development affecting the integrity of a Site of Importance for Nature Conservation (as designated on the Policies Map), priority habitats/species, non-designated sites or features of biodiversity interest (directly or indirectly) will only be supported where:

a. the mitigation hierarchy has been applied in line with the London Plan to offset the loss of habitats and species;

b. it will protect, restore, enhance and provide appropriate buffers around wildlife and geological features as well as links to the wider ecological network; and

c. the benefits of the proposed development would clearly outweigh the adverse impact on the biodiversity and geodiversity value of the site

**BG4: Biodiversity Net Gain, Landscape Restoration and Offsetting**

1. All development proposals shall be considered in light of the mitigation hierarchy (avoid, mitigate and compensate) to protect most valuable ecological features of the site and minimise harm to nature. Measures will also be sought to increase or improve biodiversity through the restoration and re-creation of priority habitats and ecological networks and the protection and recovery of protected wildlife populations, especially where there are gaps across existing corridors.

2. Applicants must submit an action plan setting out how biodiversity will be improved as a result of the development to offset the loss or degradation of natural habitat on site (using the latest DEFRA metric model). The action plan will need to provide evidence of how the development will achieve a minimum of 20% net gain, including habitat creation, preferably on site. DEFRA has now confirmed a draft list of eight irreplaceable priority habitats which cannot form part of the net gain calculations and where bespoke mitigation must be agreed where harm is identified.

3. Where the 20% minimum requirement cannot be met on site, or would be better served elsewhere, adequate off-site compensation provision must be provided to an equivalent of better standard to offset the loss of habitats arising from the proposed development.

4. All proposals for biodiversity net gain in Enfield will be required to have regard to emerging Enfield Chase Landscape Recovery Strategy and subsequent London Local Nature Recovery Strategy. The Blue and Green Infrastructure Strategy sets out the evidence demonstrating that there are clear ecological benefits to investing in biodiversity net gain within Enfield. For the purposes of the Biodiversity Metric Calculation, the Enfield Chase Landscape Recovery Area is defined as having High Strategic Significance. Proposals which could lead to losses of biodiversity within the Enfield Chase Landscape Recovery Area will be resisted, even where compensatory credits can be provided elsewhere as this could compromise the area's strategic significance. Particular priority will be given towards contributions to native tree planting, river naturalisation and other habitat creation schemes in this area which compliment public accessibility

**Biodiversity Action Plans:**

BAP-2007: The UK Biodiversity Action Plan (UK BAP), published in 1994 sets out a programme for conserving biodiversity in the UK. The UK BAP has published lists of species

and habitats that are conservation priorities which are under threat because of their rarity and rate of decline.

*The role of local biodiversity action plans*

Local Biodiversity Action Plans (LBAPs) identify priorities for biodiversity conservation at a local level e.g., London Biodiversity Action Plan habitats and species and London Species of Conservation Concern. They work to deliver agreed actions and targets for priority habitats and species and can focus on locally important wildlife and sites. They aim to reflect the values of local people and provide a focus for local initiatives hope to further the wellbeing of their local areas. LBAPs are delivered through wide local partnerships that involve wildlife organisations, local authorities, businesses and other interested parties.

The functions of LBAPs are:

- To translate national and regional targets for species and habitats into effective action at the local level,
- To identify targets for species and habitats important to the local area, reflecting the values of local people,
- To stimulate effective local partnerships to ensure programmes for biodiversity conservation are developed and maintained in the long term,
- To raise awareness of the need for biodiversity conservation and enhancement in the local context,
- To ensure opportunities for conservation and enhancement of biodiversity are promoted, understood and rooted in policies and decisions at the local level,
- To provide a basis for monitoring and evaluating local action for biodiversity priorities, at both national and local levels.

*The Enfield Biodiversity Action Plan (EBAP):*

The EBAP is a framework that describes the borough's biodiversity - the overall aim is to:

'Ensure that the conservation and enhancement of biodiversity is integral to the actions of BAP partners, organisations and individuals; to promote the recognition of the value of biodiversity, both in its own right and for the natural services it provides to all of the borough's residents, both current and future; and to promote equitable access to nature.'

The BAP identifies the need for preparation of a number of individual action plans for priority habitats and species within the borough, the following are pertinent to Vicarage Farm:

- Grassland
- Hedgerows
- Veteran trees
- Waterways
- Woodlands
- Bats; and
- Amphibians and Reptiles.

The BAP also identifies a number of 'Cross-cutting Themes', which relates habitats and species to other policy drivers and sets appropriate objectives. Those specific to the Proposed Development. Include:

- Objective 7 - To take a coordinated approach to the protection and management of trees in Enfield. Includes: 'To protect important tree stock from the adverse impact of development and to continue to review and protect trees with Tree Preservation Orders'
- Objective 9 – To ensure that new developments result in a net biodiversity gain;
- Objective 10 – To screen all planning applications for the need for an ecological assessment, not determining them until the likely ecological impact has been fully understood; and
- Objective 24 – To control invasive species where practicable and to take a coordinated partnership led approach to their management.
- The mitigation hierarchy still applies of avoidance, mitigation and compensation for biodiversity loss
- Will also apply to Nationally Significant Infrastructure Projects (NSIPs)
- Does not apply to marine development
- Does not change existing legal environmental and wildlife protection

**London Invasive Species Initiative (LISI):**

LISI brings together organisations from a range of sectors to deliver practical action to prevent, control and, where feasible, eradicate invasive non-native species in London.

Through its action plan, LISI aims to provide a coordinated approach to address invasive non-native species. It aims to collate best practice management principles to provide a coherent direction for all land managers to work together to manage invasive non-native species within the Greater London area.

(LISI) category descriptions are as follows:

- Category 1: Species not currently present in London but present nearby or of concern because of the high risk of negative impacts should they arrive.
- Category 2: Species of high impact or concern present at specific sites that require attention (control, management, eradication etc).
- Category 3: Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control/eradicate.
- Category 4: Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required.
- Category 5: Species for which insufficient data or evidence was available from those present to be able to priorities.
- Category 6: Species that were not currently considered to pose a threat or have the potential to cause problems in London.

# Appendix 7: Trent Country Park - assessment of Visitor Impact

The list and map below refers to the seven parcels[17] of land within Trent Country Park close to the proposed CPPA development which were used in the assessment of visitor impact:

- 32001/07 – Camlet Hill
- 32001/08 – Williams Wood (South-west)
- 32001/20 – Williams Wood (North-east)
- 32001/25 - Ride Wood
- 32001/26 – Shaws Wood
- 32001/53 – Dog Field
- 32849/01 - Bridleway

Key:

High: Likelihood of occurrence – ongoing with easily noticeable effect- detrimental to nature conservation value – difficult to reverse.

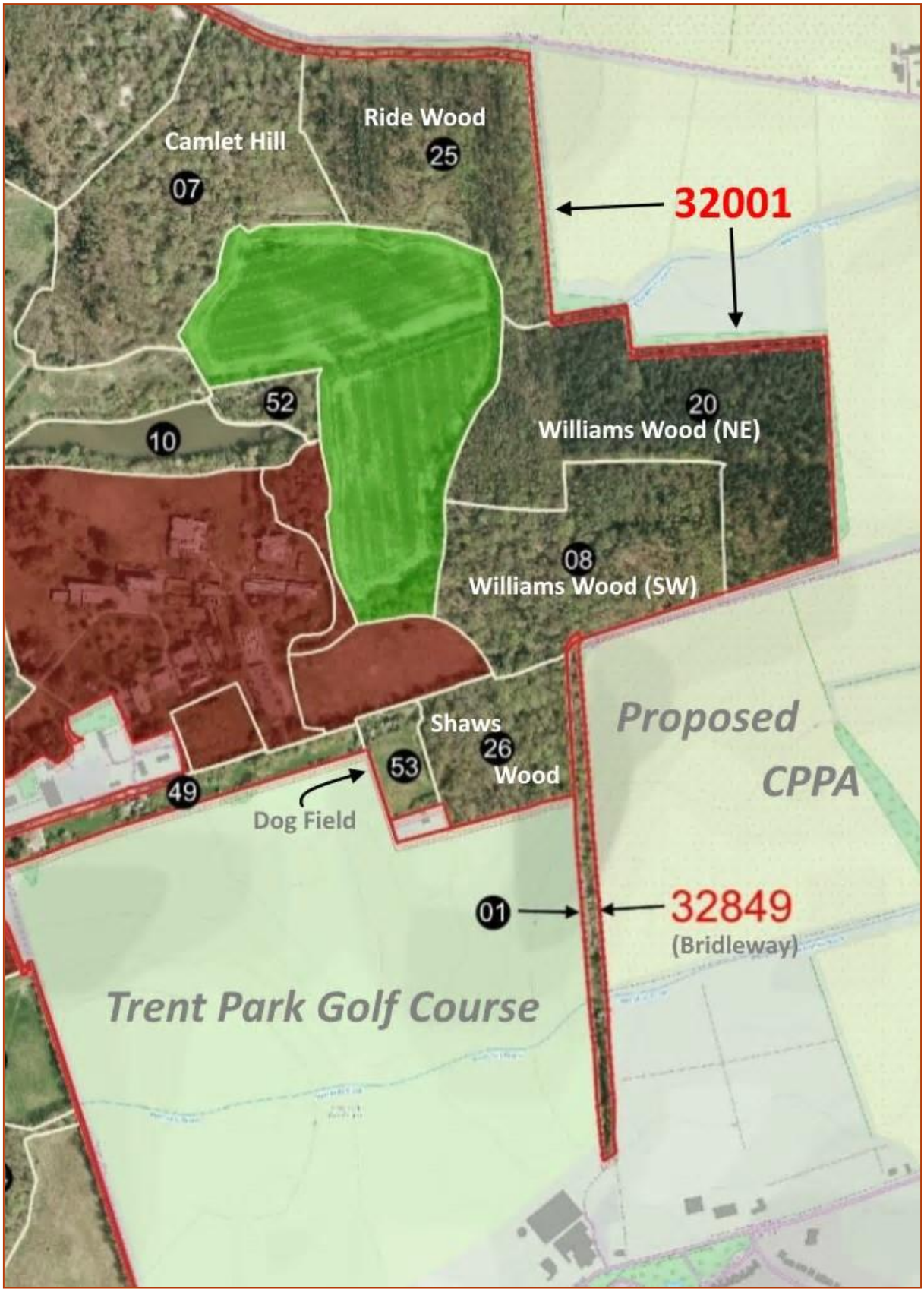
Medium: Likelihood of occurrence - ongoing at a low level / will happen from time-to-time – impact noticeable, detrimental to nature conservation value.

Low: Likelihood of occurrence - will happen occasionally - impact minor, not always instantly noticeable / may be manageable.

AWI = Ancient Woodland Indicator species

[17] These are the same parcels and parcel references were used by the GLA for previous habitat surveys.

## Visitor impact assessment parcels:




Base map abstracted from the Habitat Survey of Trent Country Park (Vickers, 2017)

**Camlet Hill** **Site/Parcel number: 32001/07**

Centroid: TQ2913297880 Area: 10.90 ha

Habitats:

| | |
|---|---|
| Native broadleaved woodland | 64% |
| Coniferous woodland | 30% |
| Scrub | 1% |
| Semi-improved Neutral Grassland | 5% |

Brief description: This area is listed in the Inventory of Ancient Woodland (Magic.gov.uk) as comprising nearly all ASNW with an enclave of PAWS to the south-west. Mature pedunculate oak is abundant in this as is hornbeam of all age classes. Downy birch, sweet chestnut and sycamore *Acer pseudoplatanus* are frequent. Other trees include planted conifers, occasional silver birch and ash. The shrub layer includes abundant holly and various young trees. Woodland ground flora principally comprises abundant bramble and frequent bracken. At the south-east edge of the parcel is a small area of seasonally wet semi-improved neutral grassland. Creeping bent and hairy sedge *Carex hirta* are abundant. A variety of other grassland components are present e.g. frequent Yorkshire fog *Holcus lanatus*, bird's-foot trefoil *Lotus corniculatus*, creeping cinquefoil *Potentilla reptans*, common ragwort *Senecio jacobaea* and creeping thistle *Cirsium arvense*; occasional sweet vernal-grass *Anthoxanthum odoratum*, tufted hair-grass *Deschampsia cespitosa* and selfheal *Prunella vulgaris*.

***Camlet Hill - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | Could lead to a loss of AWIs if present and a proliferation of nettle and other nitrophiles | Medium |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | All age classes of trees present including seedlings and saplings (vulnerable to trampling) | Medium |
| Increased fire risk | Includes small area of PAWS which is relatively flammable | Low |
| Direct damage to veteran trees, for example from climbing on them | | Low |
| Gathering fungi | | Low |
| Disturbance to birds, invertebrates and other wildlife | Many smaller birds are low nesters and vulnerable to increased disturbance from people, dogs and cats | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | Rhododendron from Williams Wood (South-West) | Medium |
| Direct damage and vandalism. | | Low |

**Williams Wood (South-West)** **Site/Parcel number: 32001/08**Centroid: TQ2970997399 Area: 8.60 ha

Habitats:
Native broadleaved woodland 90%
Coniferous woodland 10%

Brief description: This area is chiefly covered in secondary native broadleaved woodland. Pedunculate oak is abundant including mature and younger trees. Specimens of mature and younger silver birch, downy birch and hornbeam are frequent. Lesser numbers of European larch, holly and rowan *Sorbus aucuparia* are present. The ground flora is characterised by abundant bramble and bracken. A line of ancient, coppiced hornbeam trees run west-east and mark the northern edge of the parcel. This was once a boundary between two now wooded fields.

***Williams Wood (South-West) - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | Adjacent to CPPA, footpaths and bridleway present. A proliferation nitrophiles expected | High |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | Ground flora is generally not highly sensitive to trampling but close to CPPA | Medium |
| Increased fire risk | | Low |
| Direct damage to veteran trees, for example from climbing on them | Includes a line of ancient hornbeam trees | Medium |
| Gathering fungi | | Low |
| Disturbance to birds, invertebrates and other wildlife | Many smaller birds are low nesters and vulnerable to increased disturbance from people, dogs and cats | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | Rhododendron in parcel | High |
| Direct damage and vandalism. | | Low |

**Williams Wood (North-East)** **Site/Parcel number: 32001/20**
Centroid: TQ2981597576 Area: 11.77 ha

Habitats:
Coniferous woodland 75%
Native broadleaved woodland 25%

Brief description: This area is chiefly covered in coniferous plantation woodland dominated by Austrian pine and Scots pine. Frequent broadleaved trees include hornbeam, sweet chestnut and pedunculate oak. Where it exists, the understorey includes the occasional young sycamore, beech, holly, silver birch and downy birch. Bramble dominates the ground flora and bracken is abundant. There are two ancient hornbeams (most likely relicts of a previously laid hedge) at the eastern edge of the wood. These trees were part of a boundary between two fields prior to the woodland planting and recolonisation of this area. There is a line of old (not ancient) hornbeams transversing north-south across the parcel. This represents an earlier field boundary both areas of which are now wooded. There is frequent Rhododendron aside the main north-south track to the west of the parcel.

***Williams Wood (South-West) - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | Adjacent to CPPA, footpaths and bridleway present. Proliferation of nitrophiles expected | High |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | Most ground flora is generally not particularly sensitive to trampling but includes a patch of bluebells | Medium |
| Increased fire risk | Sizeable proportion of coniferous woodland present which is quite combustible | High |
| Direct damage to veteran trees, for example from climbing on them | Two ancient (previously laid) hornbeams which may invite climbing activity | Medium |
| Gathering fungi | Fungi noted in parcel | Medium |
| Disturbance to birds, invertebrates and other wildlife | Few suitable niches available for low nesting bird but greater disturbance from people & their animals expected | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | Rhododendron in parcel | High |
| Direct damage and vandalism. | | Low |

**Ride Wood** **Site/Parcel number: 32001/25**

Centroid: TQ2948997953 Area: 8.39 ha

Habitats:
Native broadleaved woodland 30%
Coniferous woodland 64%
Scrub 1%
Semi-improved Neutral Grassland 5%

Brief description: This area is listed in the Inventory of Ancient Woodland (Magic.defra.gov.uk) as comprising nearly all PAWS with a fringe of ASNW to the north and east. Mature pedunculate oak is frequent in this parcel. Other trees include abundant downy birch and frequent silver birch, beech and hornbeam. Large areas have been planted with conifers e.g. abundant black pine *Pinus nigra* and Scots pine *P. sylvestris*. Clumps of abundant rhododendron occur at the eastern edge of the parcel (Photo 11). In places, these are joined by the occasional specimens of grey willow *Salix cinerea*, hazel *Corylus avellana* and blackthorn *Prunus spinosa*. Where it exists the shrub layer chiefly comprises holly and the ground flora bramble. There is an area of semi-improved neutral grassland to the south of the area. Creeping bent is dominant, creeping buttercup *Ranunculus repens* is abundant, red fescue *Festuca rubra*, Yorkshire fog and white clover *Trifolium repens* are frequent. Note: several clumps of AWIs native bluebell, butcher's-broom present also wild strawberry. Odd specimens of giant hogweed at path edges.

***Ride Wood - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | Could lead to a proliferation of nettle and other nitrophiles, possible loss of AWIs | Medium |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | Close to CPPA , number of paths & bridleway present. Ground flora includes AWIs | High |
| Increased fire risk | Sizeable proportion of coniferous woodland present which is relatively combustible | High |
| Direct damage to veteran trees, for example from climbing on them | | Low |
| Gathering fungi | | Low |
| Disturbance to birds, invertebrates and other wildlife | Fewer suitable niches for low nesting birds but high level of disturbance likely | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | Rhododendron and giant hogweed in parcel | High |
| Direct damage and vandalism. | | Low |

**Shaws Wood** **Site/Parcel number: 32001/26**
Centroid: TQ2959997138 Area: 3.96 ha

Habitats:
Native broadleaved woodland 95%
Coniferous woodland 5%

Brief description: Fragments of this woodland are likely to be ancient in origin although most is probably not. The canopy is dominated by pedunculate oak and hornbeam some of which are large and quite old. Sweet chestnut is abundant. A few other tree species are also present including Scots pine, ash *Fraxinus excelsior*, rowan, silver birch and downy birch. Understorey and scrub species include frequent holly, and occasional hawthorn and elder. Part of the woodland floor has been cleared of vegetation and mounded into a BMX track [not known if this is still relevant]. This seems well established; construction work must have been carried out several years ago.

***Shaws Wood - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | Adjacent to CPPA but habitats present not particularly sensitive | Medium |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | Ground flora is not considered particularly sensitive to trampling | Low |
| Increased fire risk | | Low |
| Direct damage to veteran trees, for example from climbing on them | | Low |
| Gathering fungi | | Low |
| Disturbance to birds, invertebrates and other wildlife | Few suitable niches for low nesting birds but close to CPPA | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | | Low |
| Direct damage and vandalism. | A large part of parcel was used as a BMX track may well be revived with use from nearby housing. | Medium |

**Dog Field** **Site/Parcel number: 32001/53**

Centroid: TQ2945997111 Area: 1.28 ha

Habitats:

| | |
|---|---|
| Scattered trees | 13% |
| Scrub | 2% |
| Bare artificial habitat | 5% |
| Semi-improved neutral grassland | 70% |
| Amenity grassland | 3% |
| Tall herbs | 7% |

Brief description: Field chiefly covered in semi-improved neutral grassland. Common bent dominates and Yorkshire fog abundant. Other species include frequent cock's-foot, perennial rye-grass and creeping bent. There are also the occasional specimens of false oat-grass, smaller cat's-tail and timothy *Phleum pratense*. There is a hard-surfaced track at the western and southern edges of the field. The boundary with the golf course flanks the western side of the track. A number of trees and shrubs are present here including mature hornbeam, hawthorn, ash, holly, wild cherry, blackthorn and pedunculate oak. Ivy is abundant on the ground and reaching up the trees. A mown path covered in amenity grassland crosses the field diagonally from west to east. To the north, next to the boundary with Shaw Cottages is a zone of tall herbs and bramble. There is a clump of young crack willows in the south-eastern corner of the field.

***Dog Field - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | Close to CPPA, heavily used by people & their dogs. Eutrophication expected to increase which will lead to a dominance of nitrophiles | High |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | Ground flora is not considered particularly sensitive to trampling | Low |
| Increased fire risk | Hot summer droughts | High |
| Direct damage to veteran trees, for example from climbing on them | | Low |
| Gathering fungi | | Low |
| Disturbance to birds, invertebrates and other wildlife | Fewer suitable niches for low nesting birds, butterflies & bees likely in grassland | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | | Low |
| Direct damage and vandalism. | Fire setting – but grassland generally recovers quickly | Medium |

**Bridleway** **Site/Parcel number: 32849/01**

Centroid: TQ2973096914 Area: 1.56 ha

Habitats:

| | |
|---|---|
| Native broadleaved woodland | 55% |
| Scrub | 20% |
| Bare artificial habitat | 20% |
| Tall herbs | 5% |

Brief description: This strip of mostly tree and scrub covered land separates the riding school fields and the golf course. Along the eastern edge is a relict hedge of coppiced /previously laid hornbeam and tree line of veteran pedunculate oaks, several with girths of 4 to 5 m (Photo 23). However, this feature is not continuous, presumably trees have been lost over the years. Aligned parallel with the hedge is a mostly wet ditch. Located towards the east of the parcel is a north-south footpath from which there are good views of the old oaks and hornbeams. Running longitudinally west of centre is the bridleway itself and further west still, the golf course. Between these features are strips of mostly young native trees and shrubs. Some have been planted and others more obviously self-sown including abundant field maple *Acer campestre*, ash and holly, frequent hornbeam and blackthorn *Prunus spinosa* and occasional hazel, beech, aspen *Populus tremula* and wild cherry. Bramble is abundant and ivy *Hedera helix* frequent as ground cover between trees. Strips of tall herbs lie at the bases of young trees the most prominent constituents of which are abundant common nettle and garlic mustard *Alliaria petiolata*, frequent cow parsley *Anthriscus sylvestris* and enchanter's-nightshade *Circaea lutetiana*.

***Bridleway - possible visitor and other impacts***

| Impacts | Notes | Perceived degree of impact |
|---|---|---|
| Eutrophication from dog fouling | CPPA main walking route & cycleway proposed – degree of nitrophile coverage likely to increase | High |
| Trampling / wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots | Ground flora is not considered particularly sensitive to trampling but will be part of a main walking and cycle route | Medium |
| Increased fire risk | Hot summer droughts | Low |
| Direct damage to veteran trees, for example from climbing on them | Some large (climbable) veterans present | Medium |
| Gathering fungi | | Low |
| Disturbance to birds, invertebrates and other wildlife | Few suitable niches for low nesting birds | Medium |
| Spread of plant diseases | | Low |
| Spread of invasive non-native species (INNS) | | Low |
| Direct damage and vandalism. | Damage to fencing and associated infrastructure, attempts at fire setting | Medium |

# Appendix 8: Site photographs



***Photo 1:*** *g3h5 – Arrhenatherum neutral grassland, Field north of eastern end of Merryhills Brook*



***Photo 2:*** *g3h5 – Arrhenatherum neutral grassland, Field on other side of the track east of that above*

| | |
|---|---|
| ***Photo 3:*** *g4 – modified grassland. West of site looking northwards over Merryhills Brook Valley* |  |
| ***Photo 4:*** *g4 – modified grassland. Trent Park Equestrian Centre* |  |



***Photo 5:*** *g4 – modified grassland. West of site, looking northwards towards Williams Wood*

***Photo 6:*** *g4 modified grassland, south-eastern corner of site looking southwards*





***Photo 7:*** *w1c – Wet woodland aside eastern end of the Merryhills Brook*



***Photo 8:*** *w1f6 – Oak-hornbeam Forest, north of centre of Merryhills Brook*

| | |
|---|---|
| ***Photo 9:*** *w1f7 – Other lowland mixed deciduous forest, western side, southern end of Salmons Brook* |  |
| ***Photo 10:*** *w1f7 – Other lowland mixed deciduous forest, just east of Redline boundary aside Public Right of Way. Note large hornbeams present* |  |



***Photo 11:*** *w1 -* Broadleaved and mixed woodland, line of coppiced hornbeam trees northern side of western end of Merryhills Brook

***Photo 12:*** *h2a – Native hedge (priority habitat) with tree line*





***Photo 13:*** *h2a – Native hedge (priority habitat) with large (possibly notable) pedunculate oaks*

***Photo 14:*** *h3 –Dense scrub aside southern end of Salmons Brook*





***Photo 15:*** *h3h – Mixed scrub either side of track north of Link Side*

***Photo 16:*** *r2b – Other rivers & streams, western end of Merryhills Brook*





***Photo 17:*** *r2b – Other rivers & streams, eastern end of Merryhills Brook*

***Photo 18:*** *r2b – Other rivers & streams, Salmons Brook from Merryhills Way bridge*

