







## QA

### Totteridge Farm – Preliminary Ecological Appraisal

Issue/Revision:	Draft	Final
Date:	October 2019	October 2019
Comments:		
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File Reference:	551328ltOct19DV01_PEA.docx	551328ltOct19FV01_PEA.docx

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## CONTENTS

<b>1.0 EXECUTIVE SUMMARY</b>	<b>1</b>
<b>2.0 INTRODUCTION</b>	<b>3</b>
<b>SITE DESCRIPTION</b>	<b>3</b>
<b>3.0 METHODOLOGY</b>	<b>4</b>
<b>DESK TOP REVIEW</b>	<b>4</b>
<b>ON SITE SURVEYS</b>	<b>4</b>
<b>SURVEYORS</b>	<b>7</b>
<b>CONSTRAINTS</b>	<b>8</b>
<b>4.0 RESULTS</b>	<b>9</b>
<b>DESK TOP REVIEW</b>	<b>9</b>
<b>5.0 EVALUATION AND DISCUSSION</b>	<b>17</b>
<b>BASELINE SUMMARY</b>	<b>17</b>
<b>DISCUSSION AND RECOMMENDATIONS</b>	<b>18</b>
<b>ECOLOGICAL ENHANCEMENT RECOMMENDATIONS</b>	<b>20</b>
<b>6.0 SUMMARY &amp; CONCLUSION</b>	<b>22</b>
<b>FIGURE 1 SITE PLAN AND HABITAT MAP</b>	
<b>APPENDIX 1 SITE PHOTOGRAPHS</b>	
<b>APPENDIX 2 RELEVANT LEGISLATION AND POLICY</b>	
<b>REFERENCES</b>	

## 1.0 EXECUTIVE SUMMARY

- 1.1 Greengage Environmental Ltd was commissioned to undertake a Preliminary Ecological Appraisal by GROW of land to the north of Totteridge Academy in the London Borough of Barnet.
- 1.2 This document is a report of this survey and has been produced to support a planning submission for the site which seeks to develop a city farm to include large scale vegetable patches, polytunnels, wildflower meadow areas and develop kitchen, toilets a barn.
- 1.3 This survey aimed to establish the ecological value of this site and the presence/likely-absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.
- 1.4 The survey area extends to 2.2ha and comprises grazed, semi improved grassland enclosed by hedgerow with trees on the east, south and western perimeters with security fencing running along the northern boundary.
- 1.5 There is high value habitat for nesting birds associated with the hedgerow and trees. It is understood that this habitat is due to be retained and therefore, no further surveys are necessary.
- 1.6 There is low value habitat for reptiles associated with the peripheries of the site which do not stand to be impacted by vegetation clearance. No further surveys are necessary however a precautionary phased clearance of any grassland habitat is recommended in the direction of suitable habitat that is to be retained.
- 1.7 The site is within a dark landscape and the hedgerow and trees would provide value for commuting bats. A sensitive lighting strategy should be incorporated into the scheme to minimise any potential impacts of increased lighting levels on foraging and commuting bats.
- 1.8 The site contains small areas of habitat of potential value for hedgehogs, a Biodiversity Action Plan (BAP) species. Suitable ground floor landscaping should provide corridors for movement and locations for foraging.
- 1.9 The potential for the other protected species on site is considered to be low to negligible.
- 1.10 Ecological enhancement recommendations for the scheme have been made in line with local conservation objectives and include:
  - Wildlife friendly landscaping;
  - Bird and bat boxes;
  - Log piles for reptiles and invertebrates; and
  - Invertebrate features such as bug hotels.

- 1.11 Should any appropriate mitigation actions be implemented alongside the enhancements described in this report, the proposals stand to result in an increase of biodiversity at the site.

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## 2.0 INTRODUCTION

- 2.1 Greengage was commissioned to undertake a Preliminary Ecological Appraisal by GROW of land to the north of Totteridge Academy in the London Borough of Barnet.
- 2.2 This document is a report of this survey and has been produced to support a planning submission for the site which seeks to develop a city farm.
- 2.3 This survey aimed to establish the ecological value of this site and the presence/likely-absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

### SITE DESCRIPTION

- 2.4 The survey area extends to approximately 2.2 hectares and is centred on National Grid Reference TQ245949, OS Co-ordinates 524586, 194988.
- 2.5 The site comprises predominantly of semi improved grassland grazed by sheep. The site is bounded by hedgerow with trees to the east, south and west. Security fencing runs in front of the hedgerow on the east and west and across the northern perimeter of the site. The semi improved grassland continues to the north of the site.
- 2.6 The site is located within a greenbelt with greenspace including farmland, playing fields and a golf course. Directly to the south of the site is The Totteridge Academy. The wider context comprises of the residential districts of the Barnet.

### 3.0 METHODOLOGY

3.1 The PEA (which included an Extended Ecological Phase 1 Survey) was undertaken in accordance with guidance in the Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 Habitat Survey<sup>1</sup> and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal<sup>2</sup>, in accordance with BS42020:2013: Biodiversity<sup>3</sup>. The overall assessment consisted of:

- Site specific biological information gained from statutory and non-statutory consultation; and
- A site walkover, protected species scoping assessment and phase 1 habitat survey.

3.2 The site-specific consultation provided the ecological context for the site survey carried out on the 20<sup>th</sup> August 2019.

3.3 The survey boundary and existing site is shown at Figure 1.

3.4 Greengage undertook the site walkover during dry and sunny weather conditions. Features within the site boundary and accessible features immediately bordering it were evaluated and the extent and distribution of habitats and plant communities were recorded, and supplemented with target notes on areas or species requiring further commentary. Fauna using the area were recorded and areas of habitat suitable for statutorily protected species were identified where present, with an active search carried out for evidence of such use.

#### DESK TOP REVIEW

3.5 A review of readily available ecological information and other relevant environmental databases (included Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) website<sup>4</sup>) was undertaken for the site and its vicinity. In addition, a biological records search from Greenspace Information for Greater London (GiGL) were reviewed to identify the location and citations of local non-statutory designated sites and presence of records for notable and protected species. This provided the overall ecological context for the site, to better inform the Phase 1 Survey.

#### ON SITE SURVEYS

##### Flora

3.6 The extent and distribution of different habitats on site were identified and mapped according to the standard Phase 1 Survey methodologies, supplemented with target notes describing the dominant botanical species and any features of interest. Any present protected plant species and invasive/non-natives were also noted. A habitat map has been produced to illustrate the results, as shown at Figure 1.

## Fauna

- 3.7 The Phase 1 Survey specifically included assessments to identify the potential value for notable, rare and protected species at site. This involved identifying potential habitats in terms of refugia, breeding sites and foraging areas in the context of species known to be present locally and regionally.
- 3.8 The likelihood of occurrence is ranked as follows:
- Negligible - While presence cannot be absolutely discounted, the site includes very limited or poor-quality habitat for a particular species. The site may also be outside the known national range for a species;
  - Low - On-site habitat is poor to moderate quality for a given species, with few or no information about their presence from desk top study. However, presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats;
  - Moderate - The on-site habitats are of moderate quality, providing most or all of the key requirements for a species. Several factors may limit the likelihood of occurrence, habitat severance, habitat disturbance and small habitat area;
  - High - On-site habitat of high quality for given species. Site is within a regional or national stronghold for that particular species with good quality surroundings and good connectivity; and
  - Present - Presence confirmed for the survey itself or recent, confirmed records from information gathered through desk top study.
- 3.9 The species surveyed for included:

### ***Badger (Meles meles)***

- 3.10 The potential for badger to inhabit or forage within the study area was assessed. Evidence of badger activity includes the identification of setts (a system of underground tunnels and nesting chambers), grubbed up grassland (caused by the animals digging for earthworms, slugs, beetles etc.), badger hairs, paths, latrines and paw prints.

### ***Bat Species (Chiroptera)***

- 3.11 The site visit was undertaken in daylight and the evaluation of bat potential comprised an assessment of natural features on site that aimed to identify characteristics suitable for bat roosts, foraging and commuting. In accordance with Bat Conservation Trust's *Good Practice Guidelines*<sup>5</sup> and methods given in English Nature's (now Natural England) *Bat Mitigation Guidelines*<sup>6</sup> consideration was given to:
- The availability of access to roosts for bats;
  - The presence and suitability of crevices and other places as roosts; and



- Signs of bat activity or presence.

3.12 Definite signs of bat activity were taken to be:

- The bats themselves;
- Droppings;
- Grease marks;
- Scratch marks; and
- Urine spatter.

3.13 Signs of possible bat presence were taken to be:

- Stains; and
- Moth and butterfly wings.

3.14 Features with potential as roost sites include mature trees with holes, crevices or splits (the most utilised trees being oak, ash, beech, willow and Scots pine), caves, bridges, tunnels and buildings with cracks or gaps serving as possible access points to voids or crevices.

3.15 Additionally, linear natural features such as tree lines, hedgerows and river corridors are often considered valuable for commuting and semi-natural habitats such as woodland, meadows and waterbodies can provide important foraging resources. Consideration was given to the presence of these features both immediately within and adjacent to the assessment area.

#### ***Great Crested Newt (*Triturus cristatus*)***

3.16 An assessment was carried out to identify any potential habitats that may support great crested newt (GCN) and other native amphibians. The aquatic and terrestrial habitats required generally include small, still ponds or water bodies suitable for breeding; and woodland or grassland areas where there is optimal invertebrate prey potential.

#### ***Reptiles***

3.17 The potential for reptile species on site was assessed during the walkover survey. Possible species include grass snake (*Natrix natrix*), smooth snake (*Coronella austriaca*), adder (*Vipera berus*), common and sand lizard (*Lacerta vivipara* and *L. agilis*) and slow worm (*Anguis fragilis*). These native reptile species generally require open areas with low, mixed-height vegetation, such as heathland, rough grassland, and open scrub or,

in the case of grass snake, waterbody margins. Suitable well drained and frost-free areas are needed so they can survive the winter.

***Dormouse (Muscardinus avellanarius)***

- 3.18 During the walkover survey the potential for dormouse to be present on site was assessed. This included observations for suitable habitat such as well-layered woodland, scrub and linking hedgerows, particularly those comprised of species offering suitable food sources such as honeysuckle and hazel, in addition to direct evidence such as characteristically gnawed hazelnuts, chewed ash keys and honeysuckle flowers, or nests.

***Water Vole (Arvicola terrestris)***

- 3.19 Water vole potential was assessed during the walkover survey. The potential is identified by the presence of ditches, rivers, dykes and lakes with holes and runs along the banks. Latrines, footprints or piles of food can also be noted.

***Otter (Lutra lutra)***

- 3.20 Where desktop review or consultation indicates the presence of otter in a river catchment, the presence of water bodies with good cover and potential holt (den) sites would be noted. Spraint, footprints or food remains can also be noted.

***Birds***

- 3.21 During the walkover survey, the potential for breeding, wintering and migratory birds was assessed. In particular, this includes areas of trees, scrub, heathland and wetlands that could support nests for common or notable species.

***Invertebrates***

- 3.22 As part of the walkover survey the quality of invertebrate habitat and the potential for notable terrestrial and aquatic invertebrate species was considered. There is a wide variety of habitats suitable for invertebrates including wetland areas, heathland, areas of bare sandy soil, ephemeral brownfield vegetation and meadows.

***Biodiversity Action Plan priority species/ Species of Principal Importance***

- 3.23 Where consultation and desk-study indicates the presence of BAP priority species (Species of Principal Importance) not protected by statute, effort was made to establish the potential for the site to support these species.

**SURVEYORS**

- 3.24 Mitch Cooke has a degree in Ecology (Hons), an MSc in Environmental Assessment and Management, and is a Full member of CIEEM with over 35 years' experience in ecological

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survey and assessment. Mitch has set up and developed ecological and environmental teams for nearly 20 years and has undertaken and managed numerous ecological surveys and assessments. He is the Director at Greengage and manages the team.

3.25 Laura Thomas has an undergraduate degree in Biology (BSc Hons) and a Master's degree in Evolutionary and Behavioural Ecology and is a Graduate member of CIEEM. Laura has over 3 years' experience in the commercial sector.

3.26 This report was written by Laura Thomas and reviewed and verified by Mitch Cooke who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased and exaggerated statements.

### **CONSTRAINTS**

3.27 The PEA was undertaken during an optimal time of year during ideal conditions by a suitably qualified ecologist.

3.28 There were areas of hedgerow with tree behind security fencing and therefore inspection of these areas were done at a distance. This is not thought to be a significant constraint as it is understood that these areas are due to be retained.

## 4.0 RESULTS

### DESK TOP REVIEW

#### Designations

- 4.1 Consultations with the local biological record centres (GiGL) and the MAGIC dataset have confirmed that there are no statutory designations of national or international importance within the boundary of the site or within a 2km radius of the site.
- 4.2 Records from GiGL also identified 13 non-statutory Sites of Importance for Nature Conservation (SINC) within 2km of the site boundary. SINC's are recognised by LPAs as important wildlife sites.
- 4.3 Table 4.1 below gives the locations and descriptions of a selection of the nearest/most relevant local designations.

**Table 4.1 Statutory and Non-Statutory Designated Sites within Search Radius**

Site Name	Approximate Location	Description
Upper Dollis Brook (SINC)	0.1km north	<p>The Dollis Brook winds its way through farmland and playing fields for about 6 kilometres between Arkley and Woodside Park. This includes a section within the Totteridge Fields Site of Metropolitan Importance.</p> <p>For much of its course it meanders between natural banks, with clear water and a clay or gravel bed, though some sections are restrained by concrete cladding or wooden toe-boards. The stream is largely fringed with a narrow strip of woodland, making it too shady for aquatic plants. Where there is sufficient sunlight, water-starwort (<i>Callitriche</i> sp.), Canadian waterweed (<i>Elodea canadensis</i>) and broad-leaved pondweed (<i>Potamogeton natans</i>) grow beneath the water, with yellow iris (<i>Iris pseudacorus</i>), water-pepper (<i>Persicaria hydropiper</i>), fool's watercress (<i>Apium nodiflorum</i>), great reedmace (<i>Typha latifolia</i>), marsh woundwort (<i>Stachys palustris</i>) and branched bur-reed (<i>Sparganium erectum</i>) in the margins. Kingfishers, grey wagtails and moorhens can be seen along the stream. The surrounding countryside of Duck's Island, Wyatt's Open Space, Brook Farm Open Space and Whetstone Stray includes some quite herb-rich meadows, some of them damp, with plants such as sneezewort (<i>Achillea ptarmica</i>), oval sedge (<i>Carex ovalis</i>), devil's-bit scabious (<i>Succisa pratensis</i>), cuckooflower (<i>Cardamine pratensis</i>), meadow crane's-bill (<i>Geranium pratense</i>) and meadowsweet (<i>Filipendula ulmaria</i>). There are also some fine old hedges, which include uncommon shrubs such as spindle (<i>Euonymus europaeus</i>) and buckthorn (<i>Rhamnus cathartica</i>) and small areas of woodland and scrub.</p> <p>The Dollis Valley Greenwalk follows most of the Dollis Brook through this section, and the London LOOP follows a large part of it.</p>

Site Name	Approximate Location	Description
Folly Brook and Darland's Lake Nature Reserve (SINC)	1km south west	<p>The Folly Brook flows mostly through farmland on its 3.6 kilometre course from Belmont School to Woodside Park, with occasional playing fields, and parkland at the eastern end. The brook is lined for most of its length by narrow strips of woodland and scrub, with a good variety of trees and shrubs. The water quality is fairly good, especially in the upper reaches, allowing invertebrates of clean water to thrive. The caddis flies (<i>Plectonemia conspersa</i>) and (<i>Micropterna sequax</i>) and the stonefly (<i>Nemoura cinerea</i>) occur here at their only location in the Brent catchment.</p> <p>Darland's Lake was originally an ornamental lake, created by damming the Folly Brook. It is now managed as a nature reserve by the Herts &amp; Middlesex Wildlife Trust. The lake is very shallow, with an extensive reed bed at the western end and a fringe of marginal vegetation, including brooklime (<i>Veronica beccabunga</i>) and marsh marigold (<i>Caltha palustris</i>). This grades into carr of willows (<i>Salix</i> spp.) and alder (<i>Alnus glutinosa</i>). This is a scarce habitat in London, and it is even rarer to find wet woodland which is actively managed by coppicing. The carr grades into drier woodland of oak (<i>Quercus</i> sp.), hornbeam (<i>Carpinus betulus</i>) and horse chestnut (<i>Aesculus hippocastanum</i>). Several indicators of ancient woodland can be found here, including wild service-tree (<i>Sorbus torminalis</i>), yellow archangel (<i>Lamium galeobdolon</i>), wood anemone (<i>Anemone nemorosa</i>), goldilocks buttercup (<i>Ranunculus auricomus</i>) and greater burnet-saxifrage (<i>Pimpinella major</i>), the latter very rare in London. It is possible that some or all of these were originally planted, as documentary evidence suggests that this is not, in fact, ancient woodland. In damp grassland beside the woodland, a population of the nationally rare fritillary (<i>Fritillaria meleagris</i>) can be found. The site was formerly notified as a Site of Special Scientific Interest because of these rare plants, but they are now known to have been introduced, and the site is no longer a Site of Special Scientific Interest.</p> <p>The nature reserve has a diverse range of breeding birds, including reed bunting (<i>Emberiza schoeniclus</i>), hobby (<i>Falco subbuteo</i>), sparrowhawk (<i>Accipiter nisus</i>), jackdaw (<i>Corvus monedula</i>), stock dove (<i>Columba oenas</i>), mandarin duck (<i>Aix galericulata</i>) and a variety of common waterfowl. 18 species of mammals, including stoat (<i>Mustela erminea</i>) and weasel (<i>Mustela nivalis</i>), have been recorded. The site is also of value for grass snakes, amphibians, fungi and invertebrates.</p>
Northern line Embankment, High Barnet	1.1km east	<p>The railway embankment between Totteridge &amp; Whetstone and High Barnet is vegetated with woodland, interspersed with bramble (<i>Rubus fruticosus</i> agg.) scrub, rough grassland and tall herbs. The woodland is mostly composed of sycamore (<i>Acer pseudoplatanus</i>), silver birch (<i>Betula pendula</i>) and ash (<i>Fraxinus excelsior</i>). Grassland patches are dominated by false oat-grass (<i>Arrhenatherum elatius</i>), and tall herbs include rosebay willowherb (<i>Chamerion angustifolium</i>), mugwort (<i>Artemisia vulgaris</i>), hogweed (<i>Heracleum sphondylium</i>) and cow parley (<i>Anthriscus sylvestris</i>). The more open habitats support one of the few known colonies of common lizards in the borough of Barnet, and slow-worms are also present.</p>

Site Name	Approximate Location	Description
Totteridge Green	1.2km south	<p>This typical English village green comprises open grassland with scattered trees, small pockets of scrubby woodland and a pond.</p> <p>Much of the grassland is dominated by perennial rye-grass (<i>Lolium perenne</i>) and other coarse meadow species, and contains a reasonable diversity of common wild flowers. There are areas of dry acid grassland, dominated by bents (<i>Agrostis</i> spp.) and red fescue (<i>Festuca rubra</i>), where burnet saxifrage (<i>Pimpinella saxifraga</i>), tormentil (<i>Potentilla erecta</i>) and bird's-foot-trefoil (<i>Lotus corniculatus</i>) grow. Several damp hollows, probably former ponds, contain tussocky grassland of tufted hair-grass (<i>Deschampsia cespitosa</i>), with uncommon wild flowers such as great burnet (<i>Sanguisorba officinalis</i>), bog stitchwort (<i>Stellaria uliginosa</i>) and common marsh-bedstraw (<i>Galium palustre</i>). The one surviving pond (of 14 shown on a map from the 1840s) is Laurel Farm Pond. This is frequented by large numbers of geese and mallards, and hence has rather limited aquatic vegetation.</p> <p>Scattered trees include pedunculate oak (<i>Quercus robur</i>), beech (<i>Fagus sylvatica</i>), horse chestnut (<i>Aesculus hippocastanum</i>) and willows (<i>Salix</i> spp.), with one particularly fine veteran oak near the school. The woodlands contain these species, along with sycamore (<i>Acer pseudoplatanus</i>), hawthorn (<i>Crataegus monogyna</i>), field maple (<i>Acer campestre</i>), silver birch (<i>Betula pendula</i>) and hazel (<i>Corylus avellana</i>). There are dense thickets of blackthorn (<i>Prunus spinosa</i>) and regenerating elm (<i>Ulmus</i> sp.). The woodland ground flora includes bluebell (<i>Hyacinthoides non-scripta</i>), ramsons (<i>Allium ursinum</i>), lords-and-ladies (<i>Arum maculatum</i>) and the locally-rare soft shield-fern (<i>Polystichum setiferum</i>).</p>
Totteridge Common (SINC)	1.7km south west	<p>This is an attractive wayside common, with scattered trees, overgrown hedgerows and several pockets of scrubby woodland. Its most interesting feature ecologically is a chain of old ponds.</p> <p>The scrub and woodland is composed mainly of sycamore (<i>Acer pseudoplatanus</i>) and elm (<i>Ulmus</i> sp.), with other trees and shrubs including two young native black poplars (<i>Populus nigra</i> ssp. <i>betulifolia</i>) near the southern margin of the common. This latter tree is scarce in Britain, and is a priority species in the London Biodiversity Action Plan. There are some fine mature oaks (<i>Quercus</i> sp.) and horse chestnuts (<i>Aesculus hippocastanum</i>) and a number of old coppiced hornbeams (<i>Carpinus betulus</i>) scattered throughout the common.</p> <p>The grassland is dominated by bents (<i>Agrostis</i> spp.) and Yorkshire-fog (<i>Holcus lanatus</i>), with a fairly good range of wild flowers, including burnet saxifrage (<i>Pimpinella saxifraga</i>), common knapweed (<i>Centaurea nigra</i>) and oxeye daisy (<i>Leucanthemum vulgare</i>). Damp areas near some of the ponds contain much tufted hair-grass, along with marsh thistle (<i>Cirsium palustre</i>), oval sedge (<i>Carex ovalis</i>), jointed rush (<i>Juncus articulatus</i>) and hedge bedstraw (<i>Galium mollugo</i>).</p> <p>There are five ponds on the common: Long Pond, Ellern Mede Pond, Pink Cottage Pond, Warren Pond and Burnham's Pond. These vary in character due to size, shading, disturbance and management, but all have an interesting wetland flora and most are valuable for dragonflies, other invertebrates and amphibians. Long Pond is used for angling, so presumably</p>

Site Name	Approximate Location	Description
		contains a good population of fish, which may reduce its value for amphibians. Marginal and emergent plants to be found around the edges of the ponds include lesser spearwort ( <i>Ranunculus flammula</i> ), trifold bur-marigold ( <i>Bidens tripartita</i> ), fool's watercress ( <i>Apium nodiflorum</i> ), common and narrow-leaved water-plantains ( <i>Alisma plantago-aquatica</i> and <i>A. lanceolata</i> ), sharp-flowered rush ( <i>Juncus acutiflorus</i> ), marsh woundwort ( <i>Stachys palustris</i> ), yellow iris ( <i>Iris pseudacorus</i> ) and false fox-sedge ( <i>Carex otrubae</i> ). In deeper water, white water-lily ( <i>Nymphaea alba</i> ), curled and broad-leaved pondweeds ( <i>Potamogeton crispus</i> and <i>P. natans</i> ) and Canadian and Nuttall's waterweeds ( <i>Elodea canadensis</i> and <i>E. nuttallii</i> ) can all be found.
Totteridge Fields and Highwood Hill (SINC)	2km west	One of the finest areas of traditional countryside remaining in outer London. Large areas of mostly unimproved grassland support a very rich flora, including numerous locally uncommon plants. Sneezewort ( <i>Achillea ptarmica</i> ) is common, while other interesting species include harebell ( <i>Campanula rotundifolia</i> ), devil's-bit scabious ( <i>Succisa pratensis</i> ), saw-wort ( <i>Serratula tinctoria</i> ), pepper-saxifrage ( <i>Silaum silaus</i> ), greater burnet-saxifrage ( <i>Pimpinella major</i> ), square-stemmed St John's-wort ( <i>Hypericum tetrapterum</i> ) and at least seven species of sedge, including carnation sedge ( <i>Carex panicea</i> ). The network of old hedgerows contain a wide diversity of woody species, including guelder-rose ( <i>Viburnum opulus</i> ) and wild service-tree ( <i>Sorbus torminalis</i> ). The site also supports a varied breeding avifauna, and an important invertebrate fauna, which includes several nationally rare and scarce beetles and spiders. Part of the site is managed as a London Wildlife Trust nature reserve.

### **Biodiversity Action Plans**

- 4.4 UK Biodiversity Action Plans (BAPs) have been developed which set priorities for nationally important habitats and species. To support the BAPs, Species/Habitat Statements (otherwise known as Species/Habitat Action Plans) were produced that provide an overview of the status of the species and set out the broad policies that can be developed to conserve them. A list of priority species of conservation importance was also developed.
- 4.5 The UK BAP was succeeded in 2012 by the *UK-Post 2012 Biodiversity Framework* which informed the creation of the *Biodiversity 2020* strategy; England's contribution towards the UK's commitments under the *United Nations Convention of Biological Diversity*.
- 4.6 Despite this, the UK BAP priority species lists and conservation objectives still remain valid through integration with local BAPs (which remain valid), and in the form of the Habitats and Species of Principle Importance list (as required under section 41 of the Natural Environment and Rural Communities (NERC) Act).
- 4.7 The only UK BAP priority habitat present at site or in the immediate vicinity was 'Hedgerows'.

- 4.8 Local Biodiversity Action Plans (LBAPs) ensure that national action plans (the UK BAP/Biodiversity 2020) are translated into effective action at the local level and establish targets and actions for locally characteristic species and habitats.

London BAP

- 4.9 London BAP contains Species Action Plans (SAPs) and Habitat Action Plans (HAPs) with targets for conservation of specific species and habitats in Greater London. Aspects of the BAP relevance to the report include:

- Bat SAP;
- House sparrow (*Passer domesticus*)SAP;
- Stag beetle (*Lucanus cervus*) SAP; and
- Parks and Urban Greenspaces HAP.

**Species Record**

- 4.10 The information provided in the biological data search from GiGL identified records of a number of protected and BAP priority species within 2km search radius of the site. Among others, these include the following species of relevance to the site:

- Stag beetle;
- Slow-worm (*Anguis fragilis*);
- Great crested newt (*Triturus cristatus*);
- Grass Snake (*Natrix Helvetica*);
- Common Lizard (*Zootoca vivipara*);
- Swift (*Apus apus*);
- Swallow (*Hirundo rustica*);
- House Sparrow;
- Starling (*Sturnus vulgaris*);
- Song Thrush (*Turdus philomelos*);
- Bats including common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*P. pygmaeus*), Nathusius' pipistrelle (*P.nathusii*), serotine (*Eptesicus serotinus*), Daubenton's (*Myotis daubentonii*), Brandts (*M. brandtii*), Natterer's (*M. nattereri*), Leisler's (*Nyctalus leisleri*) and noctule (*N. noctule*)

- 4.11 The species listed above are primarily those known to be in the area that may be impacted by any proposals at the site, or that stand to benefit as a consequence of potential ecological enhancements at the site and inform site-specific mitigation and enhancement recommendations described in the following section.



## Detailed Description of Site: Habitats

4.12 The habitats presented across the assessment site consist of the following Joint Nature Conservation Committee (JNCC) Phase 1 Habitat categories, as mapped at Figure 1:

- Scattered scrub (A2.2);
- Semi improved grassland (B6);
- Hedgerow with trees (J2.3);
- Fence (J2.4); and
- Bare ground (J4).

4.13 The site consisted predominantly of poor semi improved grassland grazed by sheep (see Figure 4.1). Species included false oat grass (*Arrhenatherum elatius*), yorkshire fog (*Holcus lanatus*), spear thistle (*Cirsium vulgare*), birds-foot trefoil (*Lotus corniculatus*), meadow buttercup (*Ranunculus acris*), nettles (*Urtica dioica*) and hedge bindweed (*Calystegia sepium*). In some areas the peripheries of the site were more overgrown with bramble (*Rubus fruticosus*) scattered scrub habitat.

4.14 Within the centre of the semi improved grassland was an area keeping bee-hives and a plot where the grassland has been ploughed.

4.15 Security fencing runs along the north, east and western perimeters. Behind the eastern and western fencing is a hedgerow, there is also a hedgerow with trees running along the southern perimeter. Species include blackthorn (*Prunus spinosa*), oak (*Quercus robur*), ash (*Fraxinus sp.*), apple (*Malus domestica*), plum (*Prunus sp.*) willow (*Salix sp.*), beech (*Fagus sylvatica*), hornbeam (*Carpinus betulus*) and silver birch (*Betula pendula*).

4.16 Directly north of the site in a connected field is the similar semi improved grassland habitat that has been allowed to become much more overgrown.

**Figure 4.1 Grazed semi-improved grassland**



## Detailed description of Site: Species

### ***Badger***

- 4.17 The site itself has some value for badgers associated with the tree and scrub habitat along the site peripheries, however no mammal holes were observed. The site also has valuable foraging habitat for badgers in the semi improved grassland however no signs of digging was observed.
- 4.18 There was a mammal path dug underneath the fencing on the northern perimeter. At the time of surveying the path was blocked with red-bricks. This mammal path could be attributed to either badger or fox.
- 4.19 Therefore, despite suitable habitat, the site to be currently supporting badgers is considered **low**.

### ***Bats***

#### *Commuting and Foraging*

- 4.20 There is likely to be some value for foraging bats as the semi-improved grassland and hedgerow with trees is likely to support common invertebrate prey assemblages. In addition, the site is within a relatively dark landscape increasing the habitat value for light sensitive bat species that may be present.
- 4.21 The hedgerow with trees, which forms the east, western and southern perimeter of the site is likely to be of moderate value as a linear corridor for commuting bats and is relatively well connected to agricultural land that make up the wider countryside.
- 4.22 Therefore, the site is considered to have **moderate** value for foraging bats.

#### *Roosting*

- 4.23 There are no opportunities within the assessment site for roosting bats. There were no buildings on site and the trees along the southern perimeter were in good condition with no suitable holes, cracks or crevices that could support roosting bats.
- 4.24 The trees within the hedgerow on the east and western perimeters could only be inspected from a distance. The eastern perimeter was mainly blackthorn hedgerow and therefore unsuitable for bats and whilst there were some semi-mature trees within the western hedgerow, they looked to be in good condition.
- 4.25 Furthermore, it is understood that these trees are to be retained and therefore, no further surveys would be necessary.
- 4.26 Overall, the potential for roosting bats was considered to be **negligible**.

### ***Great Crested Newt***

- 4.27 Despite grassland and scrub habitat on site providing suitable terrestrial habitat for GCN, there are no suitable waterbodies on site or within 500m that would support breeding populations of GCN.
- 4.28 Therefore, the site to support GCN is considered to be **negligible**.

### ***Reptiles***

- 4.29 The areas suitable to support reptiles is limited to small overgrown areas of semi improved grassland associated with the peripheries. The majority of semi improved grassland on site is grazed low reducing its suitability for reptiles. Furthermore, there is more valuable habitat in the adjacent field to the north.
- 4.30 Therefore, the site is considered to have **low** value to support reptiles in the small areas of longer grass on site.

### ***Dormouse***

- 4.31 The site is isolated from habitats known to support dormice and no suitable habitat was identified during the site visit. As such, the potential for the site to support dormice is considered **negligible**.

### ***Water Vole and Otter***

- 4.32 There are no suitable waterbodies on site to support water vole and otter. The site is considered to have **negligible** potential to support riparian mammals.

### ***Birds***

- 4.33 There is good value nesting habitat associated with the trees and hedgerow peripheries on site. Therefore, the potential for the site to support nesting birds is considered **high**.

### ***Invertebrates***

- 4.34 The available habitat on site is common and likely to be of value for common invertebrate species. The scrub habitat with some areas of deadwood may stand to support stag beetle, the BAP priority species of which there are records for within 2km. The site to support notable invertebrate species is considered **low**.

### ***Other BAP Species***

- 4.35 Whilst potential for the majority of BAP priority species is limited, the site contains areas of foraging and hibernation habitat of potential value for hedgehogs.

## 5.0 EVALUATION AND DISCUSSION

### BASELINE SUMMARY

5.1 The assessment site and its surroundings have potential to support the following ecological receptors of note, which could therefore be impacted upon by any future prospective development proposals, as indicated in Table 5.2 below. Comment on further recommendations for each receptor is provided; further detail and discussion can be found at paragraph 5.2 onward:

**Table 5.2 Baseline Summary**

Receptor	Presence/Potential Presence	Comments
Designated Sites: Non-Statutory	Several present within 2km of the site	Due to the scale and nature of the works, no impacts from the proposed development are predicted to impact non-statutory designated sites.
Notable/Rare Habitats	Hedgerows	It is understood that the areas of hedgerow are to be retained.
Badger	Low	<p>No evidence of badger setts or holes were observed during the site walkover and no further surveys are required.</p> <p>There is value for foraging on site for badger and there was a mammal path dug underneath the security fencing on the northern perimeter. However, this hole was blocked and the security fencing provides a barrier for badgers to freely use the site for foraging.</p> <p>Proposals are understood to retain approximately 0.81 hectares of the the semi improved grassland and also enhance the site with areas of wildflower meadows. Therefore, habitat of value for foraging will still be present.</p>
Foraging bats	Low	<p>Proposals could impact habitats potentially used by foraging and commuting bats through vegetation clearance and changes to the lighting regime. However, further surveys are not recommended as the hedgerow and trees is proposed to be retained and a sensitive lighting strategy should be implemented.</p> <p>Proposals seek to incorporate wildflower areas and orchards which would improve the floral diversity on site and provide increased foraging resources for bats on site.</p>
Reptiles	Low	Proposals could impact reptiles through clearance of the semi improved grassland on site.

Receptor	Presence/Potential Presence	Comments
		<p>The area to be cleared currently stands as low grazed semi improved grassland which is of lower suitability for reptiles than other areas with longer grassland.</p> <p>It is understood that 0.81 hectares of semi improved grassland due to be retained and some of the current grassland will be seeded with a wildflower mix.</p> <p>No further surveys are necessary, but a precautionary phased clearance of any suitable habitat is recommended. Grass should be strimmed to ankle height, if it is not already this height, in the direction of the areas to be retained.</p> <p>The areas proposed to be retained as well as the areas proposed for wildflower meadows should be enhanced for reptiles with log piles.</p>
Birds	High	<p>Nesting opportunities are present within the hedgerows and trees on site.</p> <p>It is understood this habitat is to be retained and therefore, no further surveys are needed.</p>
Invertebrates	Low	<p>There is value for invertebrates associated with the semi-improved grassland and hedgerow however only common species are likely to be present.</p> <p>Loss of semi improved grassland habitat may result in a loss of foraging resource, shelter and nesting opportunities.</p> <p>Proposals seek to incorporate areas of wildflower and orchards which would improve the site for BAP priority species.</p> <p>No further surveys are recommended however enhancements such as log piles and bug hotels are recommended.</p>
Other BAP species	Moderate	<p>The site is likely to be of value for BAP species such as western European hedgehog. Proposals will result in some loss of suitable habitats for these species. No further surveys are required, however appropriate enhancements for these species include gaps in any fencing and wildlife friendly landscaping.</p>

## DISCUSSION AND RECOMMENDATIONS

- 5.2 Discussion is provided below on the key ecological receptors that stand to be impacted/benefit from proposed works; high level commentary on appropriate mitigation, compensation and enhancement actions is also provided.

- 5.3 An Ecological Management Plan (EMP) should be produced and implemented for the site providing greater detail on the below, which should be secured through planning condition in accordance with BS 42020: 2013 Biodiversity.

### **Bats**

- 5.4 Proposals could disturb foraging and commuting bats with additional artificial lighting on site. Bat-sensitive lighting should be incorporated into the scheme to minimise any potential impacts of increased lighting levels on foraging, commuting and socialising bats.
- 5.5 Lighting should follow guidance provided by the Institute of Lighting Professionals and Bat Conservation Trust<sup>7</sup>. This involves the use of low-UV warm-white LED bulbs with directional, downward facing and shielded lights which point away from green features such as tree lines or areas of planting. External lights should be subject to curfew controls where possible with lights on movement sensors to reduce light pollution when not needed. Open green space such as the wildflower meadow areas and semi improved grassland should remain unlit, particularly between April and October, inclusive. Measures should be taken in internal light placement to reduce risk of light spill from windows, as per guidelines. Lighting at site should be modelled to confirm predicted intensity and spill.

### **Reptiles**

- 5.6 Suitable habitat for reptiles exists immediately north of the site and within small areas of longer grass along the peripheries of the site. It is understood that these areas of longer vegetation are due to be retained or seeded with a wildflower mix.
- 5.7 The area to be cleared to make way for the associated buildings and vegetable patches is currently low grazed semi improved grassland of reduced value for reptiles. However, a precautionary phased clearance is recommended where vegetation is cleared in the direction of suitable neighbouring habitat that is to be retained after 1000hrs on a warm day.
- 5.8 As reptiles are potentially present in the wider area, it would be prudent to enhance any retained or newly created habitat on-site to target reptile species. Enhancement actions have been embedded into the wider development scheme that may provide opportunities for local reptile populations. These include wildlife friendly planting, introduction and log piles.

### **BAP Species**

- 5.9 Whilst potential for the majority of BAP priority species is limited, the site contains small areas of habitat of potential value for hedgehogs.

- 5.10 Connectivity for species such as hedgehog should be provided through provision of 13cmx13cm gaps in fencing throughout the site. Suitable ground floor landscaping should provide corridors for movement and locations for foraging for species such as hedgehog.

### **ECOLOGICAL ENHANCEMENT RECOMMENDATIONS**

- 5.11 There are opportunities to enhance the ecological value of the site through the development proposals. Habitat should be created to provide value for priority species in line with local conservation objectives, such as the London BAP.
- 5.12 Specifically, the following enhancement features are recommended:
- Wildlife friendly landscaping across the site. Any trees removed should be compensated for with additional native trees and shrubs. In addition, any lawn/amenity grassland provided should incorporate wildlife turf (see Figure 5.1), or products which provide higher provision of wildflowers and nectar sources for pollinators.

**Figure 5.1 Wildflower turf providing recreation, amenity and biodiversity value**



- Provision of artificial bird nest boxes and bat boxes. House sparrow and all bat species are a London and UK BAP priority species and provision of nest boxes/bat boxes within trees and new buildings on site would align with national conservation objectives.
- Log piles comprising dead and decomposing wood will provide a source of invertebrate prey for amphibians and reptiles, along with providing hibernation and refuge habitat for reptiles and amphibians.

- Invertebrate habitat features (see figure 5.2). Within public landscaped areas, invertebrate habitat features should be incorporated to provide features of interest as well as ecological function. Stag beetle loggeries, solitary beehives and habitat panels should be placed in suitable locations. Stag beetles are a London BAP species and their loggeries should be placed in shady areas amongst trees to provide forage and shelter for saproxylic invertebrates in larval stage, whereas beehives and habitat panels should be located in sunny areas.

**Figure 5.2 Invertebrate habitat features**



5.13 Incorporation of the aforementioned features would stand to result in potential improvements for biodiversity at site level.



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## 6.0 SUMMARY & CONCLUSION

- 6.1 Greengage was commissioned by GROW to undertake a PEA of land to the north of Totteridge Academy in the London Borough of Barnet in order to establish the ecological value of this site and its potential to support notable and/or legally protected species.
- 6.2 The PEA identified value for a number of notable and protected species and habitats.
- 6.3 Key mitigation, compensation and enhancement actions are described to enable legislative and policy compliance (see context at Appendix 2), aiming to an increase in biodiversity for the site.
- 6.4 Key actions should be included within EMP documents for the site which could be secured through planning condition.

**FIGURE 1 SITE PLAN AND HABITAT MAP**

# Totteridge Farm

- Red Line
- Scattered scrub
- Poor semi-improved grassland
- Hedge with trees - native species-rich
- Fence
- Ploughed bare ground
- Bee hives

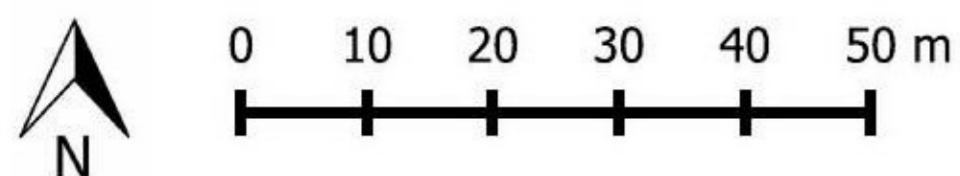


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**Figure 1.0 Site Plan and Habitat Map**

Project Number 551328  
October 2019  
1 to 900 at A3  
[Map data: Google Satellite]



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## APPENDIX 1 SITE PHOTOGRAPHS

Photograph 1 – Low grazed semi improved grassland



Photograph 2- Plot of ploughed land



Photograph 4- Scrub habitat in front of the hedgerow



Photograph 4- The semi improved grassland continuing off site to the north



Photograph 5- bee hives



Photograph 6- Hedgerow with trees and scrub peripheries



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## APPENDIX 2 RELEVANT LEGISLATION AND POLICY

### LEGISLATION

Current key legislation relating to ecology includes the Wildlife and Countryside Act 1981 (as amended)<sup>8</sup>; The Conservation of Habitats and Species Regulations 2017 ('Habitats & Species Regulations')<sup>9</sup>, The Countryside and Rights of Way Act 2000 (CRoW Act)<sup>10</sup>, and The Natural Environment and Rural Communities Act, 2006<sup>11</sup>.

#### **The Conservation of Habitats and Species Regulations 2017**

The Conservation of Habitats & Species Regulations replace The Conservation (Natural Habitats, etc.) Regulations 1994 (as amended)<sup>12</sup>, and transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive')<sup>13</sup>, and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive')<sup>14</sup> into UK law (in conjunction with the Wildlife and Countryside Act).

Regulation 43 and 47 respectively of the Conservation of Habitats & Species Regulations makes it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2 (European protected species of animals), or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5 (European protected species of plant). Development that would contravene the protection afforded to European protected species requires a derogation (in the form of a licence) from the provisions of the Habitats Directive.

Regulation 63 (1) states: 'A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which —

- (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and
- (b) is not directly connected with or necessary to the management of that site;

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.'

#### **Wildlife and Countryside Act 1981 (as amended)**

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats<sup>15</sup> (the 'Bern Convention') and the Birds Directive and EU Habitats Directive are implemented in Great Britain.

#### **The Countryside and Rights of Way Act 2000**

The Wildlife and Countryside Act has been updated by the CRoW Act. The CRoW Act amends the law relating to nature conservation and protection of wildlife. In relation to

threatened species it strengthens the legal protection and adds the word 'reckless' to the offences of damaging, disturbing, or obstructing access to any structure or place a protected species uses for shelter or protection, and disturbing any protected species whilst it is occupying a structure or place it uses for shelter or protection.

### **The Natural Environment and Rural Communities Act 2006**

The Natural Environment and Rural Communities Act 2006 states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Biodiversity Action Plans provide a framework for prioritising conservation actions for biodiversity.

Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. The list, a result of the most comprehensive analysis ever undertaken in the UK, currently contains 1,149 species, including for example, hedgehog (*Erinaceus europaeus*), and 65 habitats that were listed as priorities for conservation action under the now defunct UK Biodiversity Action Plan<sup>16</sup> (UK BAP). Despite the devolution of the UK BAP and succession of the UK Post-2010 Biodiversity Framework<sup>17</sup> (and Biodiversity 2020 strategy<sup>18</sup> in England), as a response to the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020<sup>19</sup> and EU Biodiversity Strategy (EUBS)<sup>20</sup>, this list (now referred to as the list of Species and Habitats of Principal Importance in England) will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 41 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.

### **Biodiversity Action Plans**

Non-statutory Biodiversity Action Plans (BAPs) have been prepared on a local and regional scale throughout the UK over the past 15 years. Such plans provide a mechanism for implementing the government's broad strategy for conserving and enhancing the most endangered ('priority') habitats and species in the UK for the next 20 years. As described above the UK BAP was succeeded in England by Biodiversity 2020 although the list of priority habitats and species remains valid as the list of *Species of Principal Importance for Nature Conservation*.

Regional and local BAPs are still valid however and continue to be updated and produced.

Detail on the relevant BAPs for this site are provided in the main text of this report.

### **Legislation Relating to Nesting Birds**

Nesting birds, with certain exceptions, are protected from intentional killing, destruction of nests and destruction/taking of eggs under the Wildlife and Countryside Act 1981 (as amended) and the CROW Act. Any clearance of dense vegetation should therefore be undertaken outside of the nesting bird season, taken to run conservatively from March



to August (inclusive), unless an ecologist confirms the absence of active nests prior to clearance.

### **Legislation Relating to Bats**

All UK bats and their roosts are protected by law. Since the first legislation was introduced in 1981, which gave strong legal protection to all bat species and their roosts in England, Scotland and Wales, additional legislation and amendments have been implemented throughout the UK.

Six of the 18 British species of bat have Biodiversity Action Plans (BAPs) assigned to them, which highlights the importance of specific habitats to species, details of the threats they face and proposes measures to aid in the reduction of population declines.

Although habitats that are important for bats are not legally protected, care should be taken when dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

The Wildlife & Countryside Act 1981 (WCA) was the first legislation to provide protection for all bats and their roosts in England, Scotland and Wales (earlier legislation gave protection to horseshoe bats only.)

All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annex IV of the Habitats Directive, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 43 of the Conservation of Habitats and Species Regulations 2017, which transposes the Habitats Directive into UK law. Consequently, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

This legislation applies to all bat life stages.

The implications of the above in relation to the proposals are that where it is necessary during construction to remove trees, buildings or structures in which bats roost, it must first be determined that work is compulsory and if so, appropriate licenses must be obtained from Natural England.

### **Legislation Relating to Reptiles**

All species of reptile native to the UK are protected to some degree under national and/or international legislation, which provides mechanisms to protect the species, their habitats and sites occupied by the species.

Sand lizards and smooth snakes are European protected species and are afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 and Regulation 43 of the Conservation of Habitats and Species Regulations 2017. However, these species are rare and highly localised. Their occurrence is not considered as relevant in this instance, as the ranges and specialist habitats of these species do not occur at this site.

The remaining widespread species of native reptiles (adder, grass snake, slow worm and viviparous lizard) are protected under part of Section 9(1) and all of Section 9(5) of the Wildlife and Countryside Act 1981. They are protected against intentional killing and injury and against sale, transporting for sale etc. The habitat of these species is not protected. However, in terms of development, disturbing or destroying reptile habitat during the course of development activities while reptiles are present is likely to lead to an offence under the Wildlife and Countryside Act 1981. It is therefore important to identify the presence of these species within a potential development site. If any of these species are confirmed, all reasonable measures must then be taken to ensure the species are removed to avoid the threat of injury or death associated with development activities.

Each species of native reptile has specific habitat requirements but general shared features include a structurally diverse habitat that provides for shelter, basking, foraging and hibernating.

All reptiles are BAP species and as such are also of material consideration in the planning process due to the NPPF.

### **Legislation Relating to Dormice**

Dormice are given full protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. Protection to the species is also afforded by Regulation 43 of the Conservation of Habitats and Species Regulations 2017, making the hazel dormouse a European Protected Species. These two pieces of legislation operate in parallel, although there are some small differences in scope and wording. Under the provisions of Section 9 of the Wildlife & Countryside Act, it is an offence to:

- Intentionally kill, injure or take a dormouse;
- Possess or control and live or dead specimen or anything derived from a dormouse (unless it can be shown to have been legally acquired);
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse; and

- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place which it uses for that purpose.

Regulation 43 of the Conservation of Habitats and Species Regulations 2017 makes it an offence to:

- Deliberately capture or kill a dormouse;
- Deliberately disturb a dormouse;
- Damage or destroy a breeding site or resting place of a dormouse; and
- Keep transport, sell or exchange, or offer for sale or exchange a live or dead dormouse or any part of a dormouse.

### **Legislation Relating to Great Crested Newts**

#### **Legislation Relating to Natura 2000 Sites and Habitats Directive Annex I/II Species**

European Commission Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive'), and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive') form the cornerstones of nature conservation legislation across EU member states. Priority species requiring protection across Europe are listed in the Annexes of these Directives. Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 and Offshore Marine Conservation Regulations, 2007 (as amended) transpose these directives into UK law and set the basis for the designations of protected sites (known as Natura 2000 sites; Special Areas of Conservation under the Habitat Directive and Special Areas of Protection under the Birds Directive) that are of importance for habitats, species or assemblages listed on the directive Annexes. In the UK Ramsar sites are also offered the same level of protection as SPAs and SACs however the qualifying species for the designation may differ; Ramsar sites being designated specifically as important wetland habitats.

Under article 6(3) of the Habitats Directive, where projects stand to have likely significant effect (in accordance with the European Court of Justice ruling of C-127/02 Waddenzee cockle fishing) upon the integrity of conservation objectives (i.e. conservation status of the qualifying species or habitats) within the designated sites then the Competent Authority must undertake an Appropriate Assessment.

### **PLANNING POLICY**

#### **National**

##### ***National Planning Policy Framework***

The National Planning Policy Framework (NPPF) 2019<sup>21</sup> sets out the Government's planning policies for England, including how plans and decisions are expected to apply a presumption in favour of sustainable development. Chapter 15 of the NPPF focuses on conservation and enhancement of the natural environment, stating plans should 'identify and pursue opportunities for securing measurable net gains for biodiversity'.

It goes on to state: 'if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused'. Alongside this, it acknowledges that planning should be refused where irreplaceable habitats such as ancient woodland are lost.

## **Regional**

### ***The London Plan: Spatial Development Strategy for Greater London*<sup>22</sup> –**

The London Plan is comprised of separate chapters relating to a number of areas, including London's Places, People, Economy and Transport. The following policies have been identified within the London Plan, which relate specifically to ecology and this development.

#### *Policy 2.18 Green Infrastructure*

Policy 2.18 aims to protect, promote, expand and manage the extent and quality of, and access to, London's network of open and green spaces.

#### *Policy 5.10 Urban Greening*

This policy encourages the 'greening of London's buildings and spaces and specifically those in central London by including a target for increasing the area of green space (including green roofs etc) within the Central Activities Zone'.

#### *Policy 5.11 Green Roofs and Development Site Environs*

Policy 5.11 specifically supports the inclusion of planting within developments and encourages boroughs to support the inclusion of green roofs.

#### *Policy 5.13 Sustainable Drainage*

Policy 5.13 promotes the inclusion of sustainable urban drainage systems in developments and sets out a drainage hierarchy that developers should follow when designing their schemes.

#### *Policy 7.19 Biodiversity and Access to Nature*

'The Mayor will work with all the relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayors Biodiversity Strategy.'

### ***The Draft New London Plan (emerging)***

#### *Policy G1 Green infrastructure*

- A. London's network of green and open spaces, and green features in the built environment such as green roofs and street trees, should be protected, planned, designed and managed as integrated features of green infrastructure.
- B. Boroughs should prepare green infrastructure strategies that integrate objectives relating to open space provision, biodiversity conservation, flood management, health and wellbeing, sport and recreation.
- C. Development Plans and Opportunity Area Planning Frameworks should:
  - 1. identify key green infrastructure assets, their function and their potential function
  - 2. identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.

#### *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
  - 2. the enhancement of the Green Belt to provide appropriate multi-functional uses for Londoners should be supported.

#### *Policy G5 Urban greening*

- A. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.
- B. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development.

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Policy G6 Biodiversity and access to nature

- C. Where harm to a SINC (other than a European (International) designated site) is unavoidable, the following approach should be applied to minimise development impacts:
1. avoid adverse impact to the special biodiversity interest of the site
  2. minimise the spatial impact and mitigate it by improving the quality or management of the rest of the site
  3. seek appropriate off-site compensation only in exceptional cases where the benefits of the development proposal clearly outweigh the biodiversity impacts.
- D. Biodiversity enhancement should be considered from the start of the development process.
- E. Proposals which create new or improved habitats that result in positive gains for biodiversity should be considered positively, as should measures to reduce deficiencies in access to wildlife sites.

Policy G7 Trees and woodlands

- C. Development proposals should ensure that, wherever possible, existing trees of quality are retained [Category A and B]. If it is imperative that trees have to be removed, there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

***Supplementary Planning Guidance (SPG): Sustainable Design and Construction 2014***

As part of the London Plan 2011 implementation framework, the SPG, relating to sustainable design and construction, was adopted in April 2014 and includes the following sections detailing Mayoral priorities in relation to biodiversity of relevance to The Site.

Nature conservation and biodiversity

The Mayor's priorities include ensuring 'developers make a contribution to biodiversity on their development Site'.

Overheating

Where priorities include the inclusions of 'measures, in the design of schemes, in line with the cooling hierarchy set out in London Plan policy 5.9 to prevent overheating over the scheme's lifetime'

#### Urban greening

A Priority is for developers to 'integrate green infrastructure into development schemes, including by creating links with wider green infrastructure network'.

#### Use less energy

'The design of developments should prioritise passive measures' which can include 'green roofs, green walls and other green infrastructure which can keep buildings warm or cool and improve biodiversity and contribute to sustainable urban drainage'.

### **London Environment Strategy 2018<sup>23</sup>**

The Mayor's Environment Strategy was published in May 2018. This document sets out the strategic vision for the environment throughout London. Although not primarily a planning guidance document, it does set strategic objectives, policies and proposals that are of relevance to the delivery of new development in a planning context, including:

#### Objective 5.1 Make more than half of London green by 2050

*Policy 5.1.1 Protect, enhance and increase green areas in the city, to provide green infrastructure services and benefits that London needs now.*

This policy states:

*"New development proposals should avoid reducing the overall amount of green cover and, where possible, seek to enhance the wider green infrastructure network to increase the benefits this provides. [...] New developments should aim to avoid fragmentation of existing green space, reduce storm water run-off rates by using sustainable drainage, and include new tree planting, wildlife-friendly landscaping, or features such as green roofs to mitigate any unavoidable loss".*

This supports the 'environmental net gain' approach promoted by government in the 25 Year Environment Plan.

Proposal 5.1.1.d The London Plan includes policies to green streets and buildings, including increasing the extent of green roofs, green walls and sustainable drainage.

#### Objective 5.2 conserving and enhancement wildlife and natural habitats

*Policy 5.2.1 Protect a core network of nature conservation sites and ensure a net gain in biodiversity*

This policy requires new development to include new wildlife habitat, nesting and roosting sites, and ecologically appropriate landscaping will provide more resources for wildlife and help to strengthen ecological corridors. It states:

*“Opportunities should be sought to create or restore priority habitats (previously known as UK Biodiversity Action Plan habitats) that have been identified as conservation priorities in London [and] all land managers and landowners should take BAP priority species into account”.*

## **Local**

### ***Barnet’s Local Plan (Core Strategy) <sup>24</sup>***

#### *Policy CS7: Enhancing and protecting Barnet’s open spaces*

In order to maximise the benefits that open spaces can deliver and create a greener Barnet we will work with our partners to improve Barnet’s Green Infrastructure.

We will create a greener Barnet by:

protecting open spaces, including Green Belt and Metropolitan Open Land;

enhancing open spaces, ensuring positive management of Green Belt and Metropolitan Open Land to provide improvements in overall quality and accessibility;

ensuring that the character of green spaces of historic significance is protected;

meeting increased demand for access to open space and opportunities for physical activity, by tackling deficiencies and under provision through:

- securing additional on-site open space or other open space improvements in the identified growth areas including 8 ha of new provision at Brent Cross – Cricklewood, 5.5 ha of new provision at Mill Hill East and 5 ha at Colindale
- improving access to open spaces particularly in North and East Finchley and other areas of public open space deficiency identified by Map 10. We will seek to improve provision in these areas of deficiency with the objective of increasing the area of the borough that has access to district and local parks in accordance with the London Plan criteria
- securing improvements to open spaces including provision for children’s play, sports facilities and better access arrangements, where opportunities arise, from all developments that create an additional demand for open space. Standards for new provision are set out in DM15 – Green Belt and Open Spaces
- maintaining and improving the greening of the environment through the protection of incidental greenspace, trees, hedgerows and watercourses enabling green corridors to link Barnet’s rural, urban fringe and urban green spaces



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- protecting existing Sites of Importance for Nature Conservation and working with our partners including the London Wildlife Trust to improve protection and enhancement of biodiversity in Barnet
  - ensuring that development protects existing site ecology and makes the fullest contributions to enhancing biodiversity, both through on-site measures and by contribution to local biodiversity improvements; and
  - enhancing local food production through the protection of allotments and support for community food growing including the Mayor's Capital Growth Initiative. In supporting new Green Infrastructure we will:
    - set out an approach to improving the network of green spaces within the Green Infrastructure SPD
    - as part of the All London Green Grid work with neighbouring authorities to establish Area Frameworks as the basis for identification, creation and management of new green spaces as part of:
      - Lea Valley and Finchley Ridge Green Grid Area
      - Brent Valley and Barnet Plateau Green Grid Area
  - reflect the policies and objectives in the Watling Chase Forest Plan when assessing development proposals in the area covered by the Community Forest.

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