



Far Field, Highgate School, London

Preliminary Ecological Appraisal

Produced for Highgate School

By Applied Ecology Ltd

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Contents

1	Introduction	1
	Background	1
	Purpose of this report	1
2	Methodology	5
	Pre-existing Data Records	5
	Habitats and Plants	5
	Fauna	5
3	Results	7
	Pre-existing Data Records	7
	Habitats	8
	Fauna	9
4	Conclusions and Recommendations	13
	Conclusions	13
	Recommendations	13
	Appendix A	15
	Development Layout	15
	Appendix B	17
	Plant Species Lists	17

Figures

Figure 1.1: Site location.	4
Figure 3.1: Designated sites and ancient woodland.	10
Figure 3.2: Phase 1 habitat map.	11
Figure 3.3: Selection of habitat survey photographs.	12



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1 Introduction

Background

- 1.1 In September 2022, Applied Ecology Ltd (AEL) was commissioned by Highgate School to carry out a Preliminary Ecological Appraisal (PEA) of land at Far Field, Highgate School, Highgate, London, N6 4LL ("the Site"). A plan showing the location of the Site is provided in **Figure 1.1**.
- 1.2 The study was required in order to determine the likely ecological constraints associated with a proposal for the installation of two artificial-surface hockey pitches ("the Development"), and to establish the potential scope of further, more detailed ecological surveys which may be needed to support any future planning application(s). This study updates a previous PEA completed by AEL in 2019¹.
- 1.3 The proposed Development layout is provided in **Appendix A**.

Purpose of this report

- 1.4 This report details of the PEA completed in September 2022. It includes details of the Site's habitat features and protected species interest, and a summary of its biodiversity opportunities and constraints. Recommendations for further survey are also described, where these are considered relevant.

Legislation

- 1.5 The Wildlife and Countryside Act 1981 (as amended) provides the main legal framework for nature conservation and species protection in the UK. The Site of Special Scientific Interest (SSSI) is the main statutory nature conservation designation in the UK. Such sites are notable for their plants, or animals, or habitats, their geology or landforms, or a combination of these. Natural England is the key statutory agency in England for advising Government, and for acting as the Government's agent in the delivery of statutory nature conservation designations.
- 1.6 Designation of a SSSI is a legal process, by which sites are notified under the Wildlife and Countryside Act 1981. The 1981 Act makes provision for the protection of sites from the effects of changes in land management, and owners and occupiers receive formal notification specifying why the land is of special scientific interest, and listing any operations likely to damage the special interest.
- 1.7 The Countryside and Rights of Way Act 2000, and The Natural Environment and Rural Communities (NERC) Act 2006, provide supplementary protected species legislation. Specific protection for badgers *Meles meles* is provided by the Protection of Badgers Act 1992.

¹ Applied Ecology Ltd (2021) *Far Field, Highgate School, London – Preliminary Ecological Appraisal*. Unpublished report to Highgate School.



Habitats and Species of Principal Importance in England

- 1.8 The Natural Environment and Rural Communities (NERC) Act came into force on 1 October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The list has been drawn up in consultation with Natural England, as required by the Act.
- 1.9 The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, 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.

Habitats of Principal Importance

- 1.10 Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that 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. They include terrestrial habitats such as upland hay meadows to lowland mixed deciduous woodland, and freshwater and marine habitats such as ponds and sub-tidal sands and gravels.

Species of Principal Importance

- 1.11 There are 943 species of principal importance included on the S41 list. These are the species found in England which were identified as requiring action under the UK BAP and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework. In addition, the hen harrier *Circus cyaneus* has also been included on the list because without continued conservation action it is unlikely that the hen harrier population will increase from its current very low levels in England.
- 1.12 In accordance with Section 41(4) the Secretary of State will, in consultation with Natural England, keep this list under review and will publish a revised list if necessary.

National Planning Policy Framework

- 1.13 The National Planning Policy Framework (NPPF) was published in March 2012 (and replaced previous planning policy guidance (PPS 9) on biodiversity. The NPPF was updated in July 2018, February 2019, and in July 2021, and states the following in relation to biodiversity and planning:

“When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely*



impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

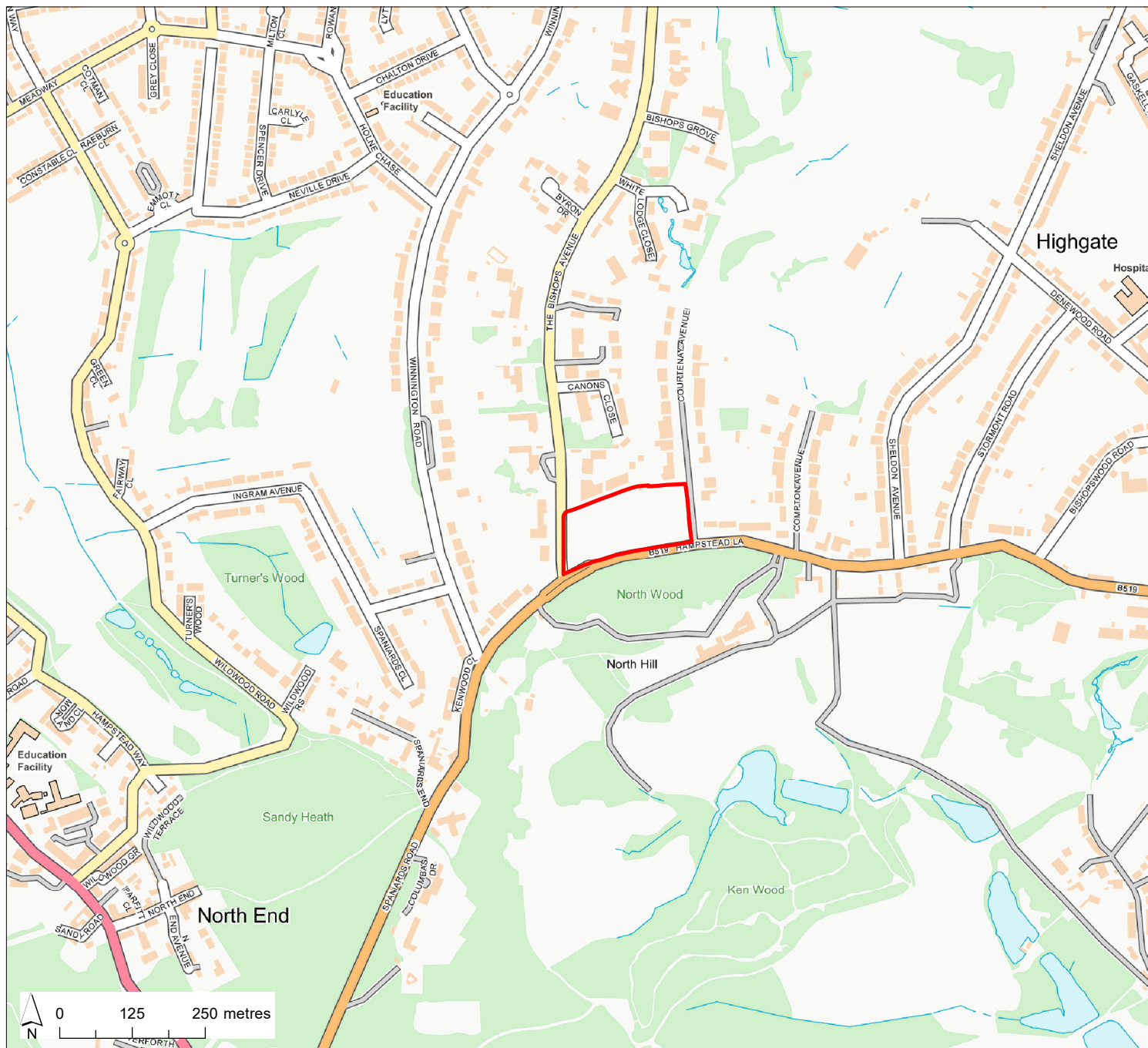
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*

The following should be given the same protection as habitats sites:

- *potential Special Protection Areas and possible Special Areas of Conservation;*
- *listed or proposed Ramsar sites; and*
- *sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

- 1.14 *The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”*





Far Field, Highgate School, London

Site location

 Site boundary

Figure 1.1

Map Scale @ A4: 1:10,000

Surveyed by: n/a

Survey date: n/a

Drawn by: RD

Checked by: DP

Status: Final



2 Methodology

Pre-existing Data Records

- 2.1 Greenspace Information for Greater London (GIGL) was commissioned by AEL to complete a search of its database for existing biological records. This included a search for records of statutory and non-statutory wildlife sites, ancient woodland, and protected and notable species both within the Site and within 2 km of the Site's central point.
- 2.2 In addition, information of statutory wildlife sites and ancient woodland was obtained from the government's MAGIC² online mapping tool

Habitats and Plants

- 2.3 An extended Phase 1 habitat survey was undertaken for the Site on 13 September 2022 by AEL ecologist Richard Dale MCIEEM³ in dry and bright conditions. The methodology adopted followed the standard JNCC approach to Phase 1 habitat survey (JNCC, 1993⁴) by which all habitats present within the Site were classified and mapped according to standard categories. Target notes were used to describe areas of both typical and unique botanical character. Habitat patches were mapped as polygon features, and if sufficient space on the map linear features (such as walls and fences) as lines where this provided added value. Point features were recorded where there were notable isolated trees or scrub. Plant species abundance was noted using the DAFOR⁵ system.
- 2.4 The habitat map was subsequently digitised using a Geographical Information System (ArcGIS).
- 2.5 The survey was completed within the accepted season for completing Phase 1 habitat survey (which runs from late March until mid-October in southern England).

Fauna

- 2.6 The standard Phase 1 habitat survey was "extended" to include a search for evidence of or potential for the presence of protected species or species of nature conservation interest within and close to the site. This was not a detailed survey for such species, but included noting the presence of habitats suitable to support specific protected species, and where seen, any evidence of presence such as droppings, mammal tracks and footprints, shelters (or nests/roosts), hair caught on fence-wire, foraging signs, and so on.
- 2.7 In advance of the survey the 1: 25,000 scale Ordnance Survey map was checked and online aerial photos inspected to identify any ponds within 250 m of the Site that could

² <http://www.magic.defra.gov.uk/MagicMap.aspx> accessed 08/11/2022.

³ Level 4 Botanical Society of Britain and Ireland (BSBI) Field Identification Skills Certificate.

⁴ JNCC (1993) *Handbook for Phase 1 Habitat Survey – A technique for Environmental Audit*. JNCC, Peterborough.

⁵ DAFOR: whereby species occurrence may be classified as being **d**ominant, **a**bundant, **f**requent, **o**ccasional or **r**are. Rare in the context of a DAFOR score should not be confused with species rarity in the more widely accepted meaning of general scarcity.



potentially support breeding populations of the legally protected amphibian great crested newt *Triturus cristatus* (GCN).



3 Results

Pre-existing Data Records

Designated wildlife sites

- 3.1 The Site itself carries no statutory or non-statutory wildlife designation. A single nationally important statutory wildlife site was located within the search area, namely **Hampstead Heath Woods Site of Special Scientific Interest (SSSI)** which is located 15 m to the south of the Site. Two locally important statutory sites, **Parkland Walk Local Nature Reserve (LNR)**, and **Queen's Wood LNR** are also located within the search area, to the east of the Site.
- 3.2 **Hampstead Heath Woods SSSI** are examples of long-established high forest woodlands, comprising an abundance of old and over-mature trees providing dead wood habitat for a range of invertebrate species. The canopy is heavily dominated by sessile oak *Quercus petraea* and beech *Fagus sylvatica*.
- 3.3 The location of the statutory designated wildlife sites in proximity to the Site are shown in **Figure 3.1**.
- 3.4 A number of non-statutory Sites of Importance for Nature Conservation (SINC) occur within the search area:
- **Hampstead Heath SINC (M072)** (site of Metropolitan Importance) located 200 m to the south.
 - **Highgate Golf Course SINC (HgBII08)** (site of Borough Grade II importance) located 275 m to the north-west.
 - **Highgate Cemetery SINC (M088)** (site of Metropolitan Importance) located 1.3 km to the north.
- 3.5 A number of other non-statutory SINC occur at least partly within the search area but a greater proximity from the Site, including Parkland Walk, Queen's Wood and Highgate Wood SINC (Metropolitan), Waterlow Park SINC (Borough Grade I), Holly Lodge Gardens SINC (Local), Harrington Site, Southwood Lane Wood and Yeatman Road Allotments SINC (Local).

Protected and notable species

- 3.6 A wide range of records of protected species and species of conservation concern were provided by GIGL. The majority of the records, including those of higher plants, birds and invertebrates, relate to areas with known ecological importance such as Hampstead Heath and Highgate Wood, and are not considered relevant to the Site given the lack of suitable habitat.
- 3.7 The GIGL records can be summarised as follows:
- A range of notable higher plants (21 species in total), mainly associated with woodland, and damp heathland and grassland habitats such as lemon-scented fern *Oreopteris limbosperma*, snake's-head fritillary *Fritillaria meleagris* and round-leaved mint *Mentha suaveolens*.



- A wide range of invertebrates (44 species in total), mainly beetles (including stag beetle *Lucanus cervus*) and moths recorded from Highgate Wood.
- Records of three amphibian and one reptile species, namely common toad *Bufo bufo*, palmate newt *Lissotriton helveticus*, common frog *Rana temporaria*, and common lizard *Zootoca vivipara*.
- A range of birds (31 species in total), including rapidly declining species such as nightingale *Luscinia megarhynchos* (last recorded in 1986), spotted flycatcher *Muscicapa striata* (last recorded 2009) and lesser spotted woodpecker *Dendrocopos minor* (last recorded 2011), with all records appearing to coincide with designated wildlife sites. The closest record to the Site was of house sparrow *Passer domestica* (a more widely distributed species of urban areas).
- Records of hedgehog *Erinaceus europaeus* with the closest 300 m to the north in 2007.
- A range of bat records (all appearing to be non-roosting records), mainly associated with woodland areas, including common pipistrelle *Pipistrellus pipistrellus*, Nathusius's pipistrelle *P. nathusii*, soprano pipistrelle *P. pygmaeus*, serotine *Eptesicus serotinus*, Daubenton's bat *Myotis daubentonii*, Natterer's bat *M. nattereri*, Leisler's bat *Nyctalus leisleri*, noctule *N. noctula* and brown long-eared bat *Plecotus auritus*.

Habitats

- 3.8 The Phase 1 habitat map is shown in **Figure 3.2**. Plant species lists can be found in **Appendix A**. A selection of habitat survey photographs can be found in **Figure 3.3**.
- 3.9 In summary, the Site comprised an amenity grassland football pitch bounded by individual mature deciduous trees. A narrow off-site woodland strip / line of trees of marked the northern Site boundary.

Amenity grassland

- 3.10 The grassland habitat on Site was characterized as amenity grassland, managed through regular mowing and in regular use as football pitches. The dominant species in the sward was perennial rye-grass *Lolium perenne*, with abundant red fescue *Festuca rubra*. Species diversity was very low, with large areas supporting no more than 3–4 species/m². Less abundant species present included daisy *bellis perennis*, dandelion *Taraxacum officinale*, yarrow *Achillea millefolium*, with shaded areas outside of the playing surfaces supporting a few other species such as lesser celandine *Ficaria verna*, common ragwort *Senecio jacobaea* and creeping buttercup *Ranunculus repens*.

Buildings and hard-standing

- 3.11 The single structure on Site consisted of a small brick changing rooms building with a flat bitumen felt roof.
- 3.12 Small areas of hard-standing were present in the north of the Site, mostly associated with the building.
- 3.13 A strip of artificial grass (an artificial cricket pitch) was present in the centre of the playing field.



Trees

- 3.14 Groups of mature trees were present on embankments forming the eastern, southern and western boundaries of the Site. These included sycamore *Acer pseudoplatanus*, sessile oak *Quercus petraea*, common lime *Tilia x europaea*, silver birch *Betula pendula* and crack willow *Salix fragilis*.

Fauna

Bats

Bat roosts

- 3.15 All trees on Site were subject to a ground level inspection using binoculars to assess for features of potential value to tree roosting bats.
- 3.16 Although the majority of trees on Site were large and mature, they were all well maintained and did not have any obvious holes, gaps or splits feature of potential value for roosting bats. They were therefore assessed, in line with best practice guidance (Collins, 2016⁶), as having of **negligible** suitability for roosting bats.

Bat activity

- 3.17 The boundary trees around the amenity grassland sports pitches were assessed in line with Collins, 2016 as being of **low value** to foraging or commuting bats, but otherwise the Site was of minimal value in this respect.

Herpetofauna

- 3.18 There were no waterbodies suitable for breeding great crested newt within 250 m of the Site. Given this, it can be considered highly likely that this species is absent from the Site. The grassland on Site was too short, regularly managed and isolated to be of value to reptiles.

Birds

- 3.19 A small number of common bird species were recorded during the survey. These included carrion crow *Corvus corone*, magpie *Pica pica*, woodpigeon *Columba palumbus* and ring-necked parakeet *Psittacula kramera*.

Other species

- 3.20 No evidence of badger was found during the survey, and no suitable habitats were present for otter *Lutra lutra* or water vole *Arvicola amphibius*.

⁶ Collins, J. (2016) *Bat Surveys for Professional Ecologists – Good Practice Guidelines – 3rd Edition*. Bat Conservation Trust, London



Far Field, Highgate School, London

Designated sites and ancient woodland

-  Site boundary
-  Hampstead Heath Woods SSSI
-  Parkland Walk LNR
-  Queen's Wood LNR
-  ancient woodland

Figure 3.1

Map Scale @ A4: 1:20,000

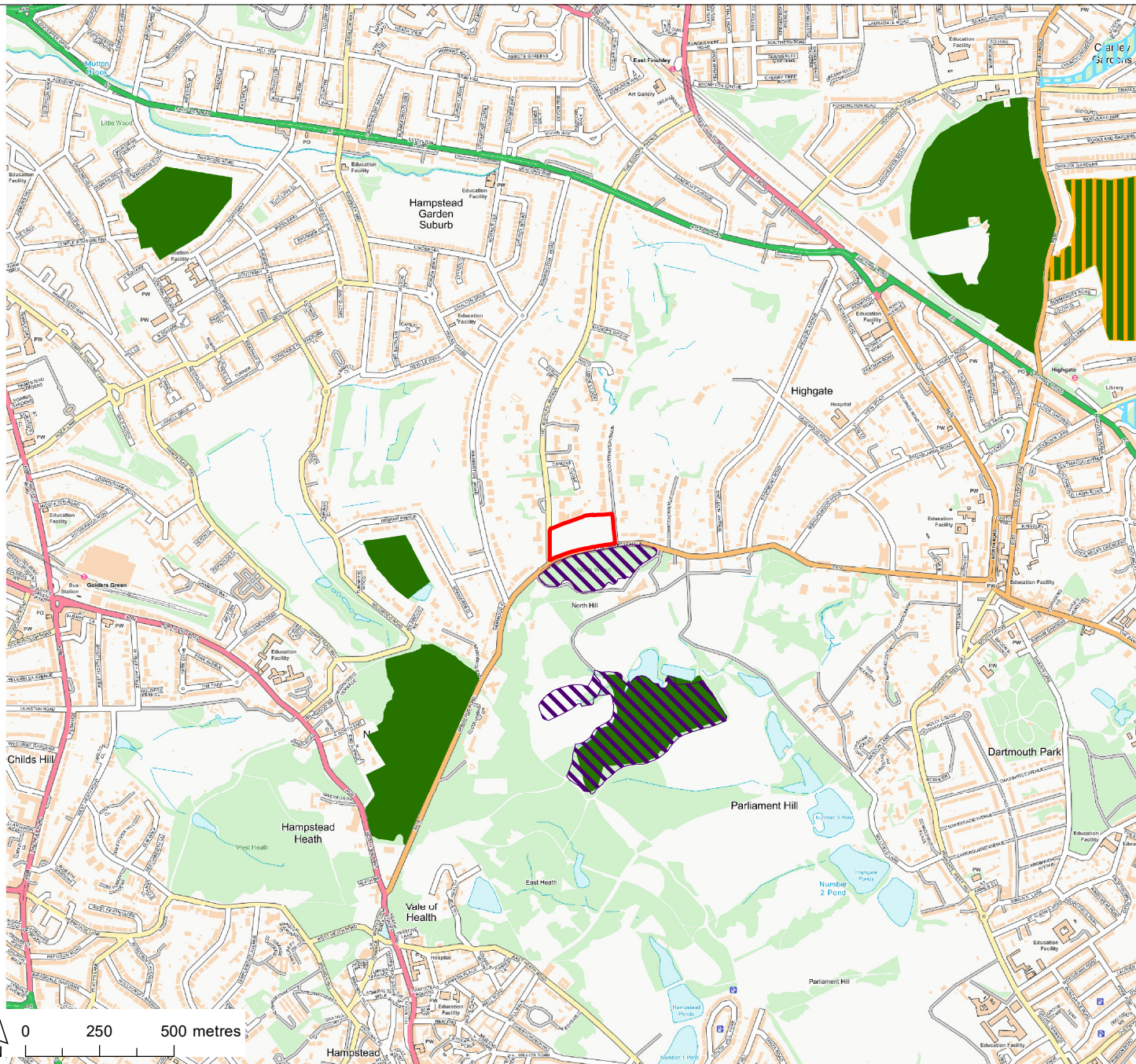
Surveyed by: n/a

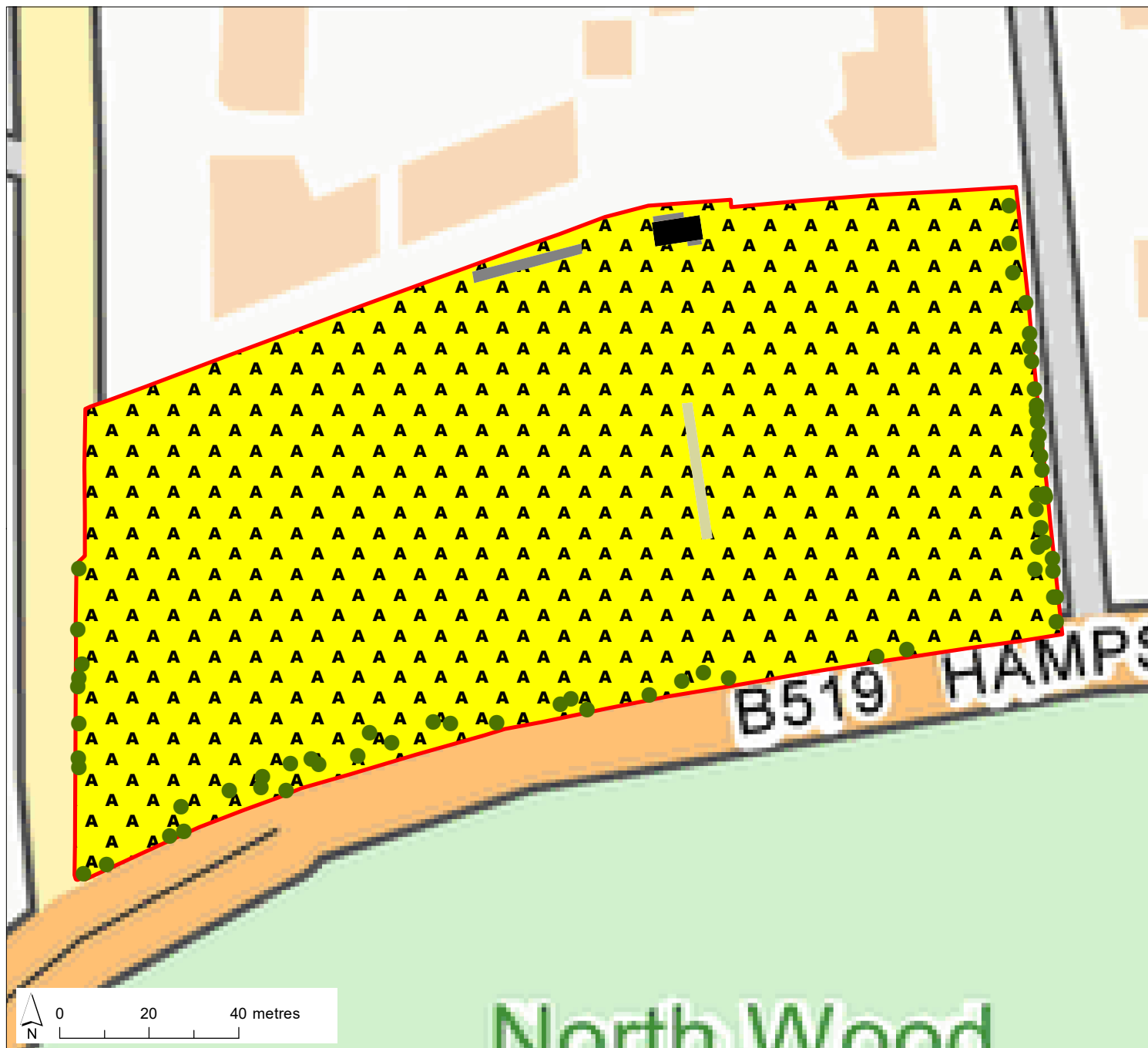
Survey date: n/a

Drawn by: RD

Checked by: DP

Status: Final





Far Field, Highgate School, London

Phase 1 habitat map

- Site boundary
- amenity grassland
- artificial grass surface
- hard-standing
- building
- individual tree (indicative location)

Figure 3.2

Map Scale @ A4: 1:1,300

Surveyed by: RD

Survey date: 13 Sept 2022

Drawn by: RD

Checked by: DP

Status: Final



Figure 3.3: Selection of habitat survey photographs.



(a) Amenity grassland that dominated the Site.



(b) Embankment and mature trees along southern boundary.



(c) Northern boundary and existing changing rooms.



(d) Hard-standing and off-site woodland strip along northern boundary



4 Conclusions and Recommendations

Conclusions

Protected Sites

- 4.1 The Site is not covered by any statutory or non-statutory wildlife site designation, but it does occur close to the northern edge of Hampstead Heath Woods SSSI, and occurs within Natural England's impact risk zone for the SSSI. The canopies of mature trees growing along the southern boundary of the Site occur very close to the canopies that form the northern boundary of the SSSI woodland, but a main road (that is partly illuminated with streetlights) forms a barrier between the two lines of trees and will prevent the construction of the artificial sports pitches from having any direct or indirect impact on the SSSI.
- 4.2 Given that the existing sports pitch land use within the Site will not change as a result of the proposed Development, and reflecting that the SSSI is reported by Natural England to be in favourable condition, the proposed Development is unlikely to result in any significant indirect harm to the SSSI as there is no proposed sports pitch floodlighting around the new pitches (see para 4.5 below).

Habitats

- 4.3 The Site was dominated by amenity grassland of negligible ecological and biodiversity value which does not represent a significant development constraint. Mature trees bound the Site and had relatively high individual value as habitats in their own right and collective value as potential wildlife corridors.

Fauna

- 4.4 The boundary trees are likely to be of local value to bats that may use the trees as flight lines and as foraging areas after dark. The boundary trees may also be of value to nesting birds, but are unlikely to support a breeding bird assemblage of any particular ornithological significance.

Recommendations

Initial Development Guidance

- 4.5 We understand that the new pitches will not be floodlit and significant adverse impacts on nocturnal wildlife at the Site or within Hampstead Heath Woods SSSI are not therefore predicted to occur.
- 4.6 The inclusion of total of approximately 340 m of new hedgerow planting is proposed. In order to maximize the ecological benefit of these hedges, they should comprise a range of native species such as hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, blackthorn *Prunus spinosa*, holly *Ilex aquifolium*, guelder rose *Viburnum opulus* and field maple *Acer campestre*. The hedgerows will reinforce the ecological value and wildlife corridor function of the existing lines of trees and represent a meaningful ecological enhancement.



- 4.7 The following high-level advice should be considered at this early stage in order to protect and enhance biodiversity interests in line with the NPPF:
- Existing boundary trees should be retained, protected, enhanced, and kept free of artificial lighting after dark.
 - Bat and/or bird boxes could be attached to boundary trees as an enhancement feature.
- 4.8 Any clearance of cover vegetation (trees and/or shrubs) should take place outside the bird breeding season, in the period September–February, or immediately after a check by an experienced ornithologist that verifies nesting bird absence from the Site.



Appendix A

Development Layout





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INTERNAL ONLY	Rev: N/A Date: By: OH
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AREAS: BIO-DIVERSITY NET GAIN

(Calculation includes woodland area to Northern boundary of area approx. $\approx 996m^2$)

Existing natural grass area = 22082m²
Proposed ATP area = 13970m²
Retained natural grass area = 8112m²

Proposed Hedge:
Height 0.75m (nominal)
Length (overall) = 340m

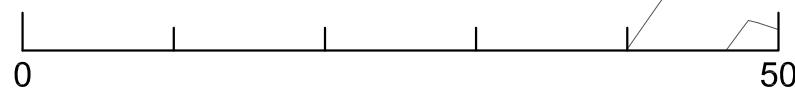
Legend - Surfaces

	Synthetic playing surface
	Grass banks
	Grass
	Grass (reinforced)
	Footpath

Client: Highgate School Highgate, London	
Project: Far Field: Proposed Pitch Renovation Works Adjacent Courtney Avenue, Highgate, London. (Nearest Postcode N6 4LP)	
Title: SITE PLAN SKETCH - EXTENT OF PROPOSED HEDGE	
Drawn by: ODH	Checked by: DKH
Scale: 1:500	Original size: A1
Date: DEC 2019	Revision:
Drawing Number: 1704-FF-SK_20210205-HEDGES	N/A

SKETCH - PROPOSED HEDGE EXTENT

Scale - 1:500 @ A1



Appendix B

Plant Species Lists



Notes: DAFOR: D = dominant, A = abundant, F = frequent, O = occasional, R = rare, (LD = locally dominant).

Amenity grassland

Species	DAFOR
Perennial rye-grass <i>Lolium perenne</i>	D
Red fescue <i>Festuca rubra</i>	A
Daisy <i>Bellis perennis</i>	F
Dandelion <i>Taraxacum officinale</i> agg.	F
Yarrow <i>Achillea millefolium</i>	O
Lesser celandine <i>Ficaria verna</i>	O
Common ragwort <i>Senecio jacobaea</i>	O
Creeping buttercup <i>Ranunculus repens</i>	O
Red dead-nettle <i>Lamium purpureum</i>	R
Common mouse-ear <i>Cerastium fontanum</i>	R



Appendix C

Artist's Impressions



Artist's impression – view looking east from the south-west corner



Artist's impression – view looking west from the south-east corner



Artist's impression – view looking west from the changing pavilion living roof



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