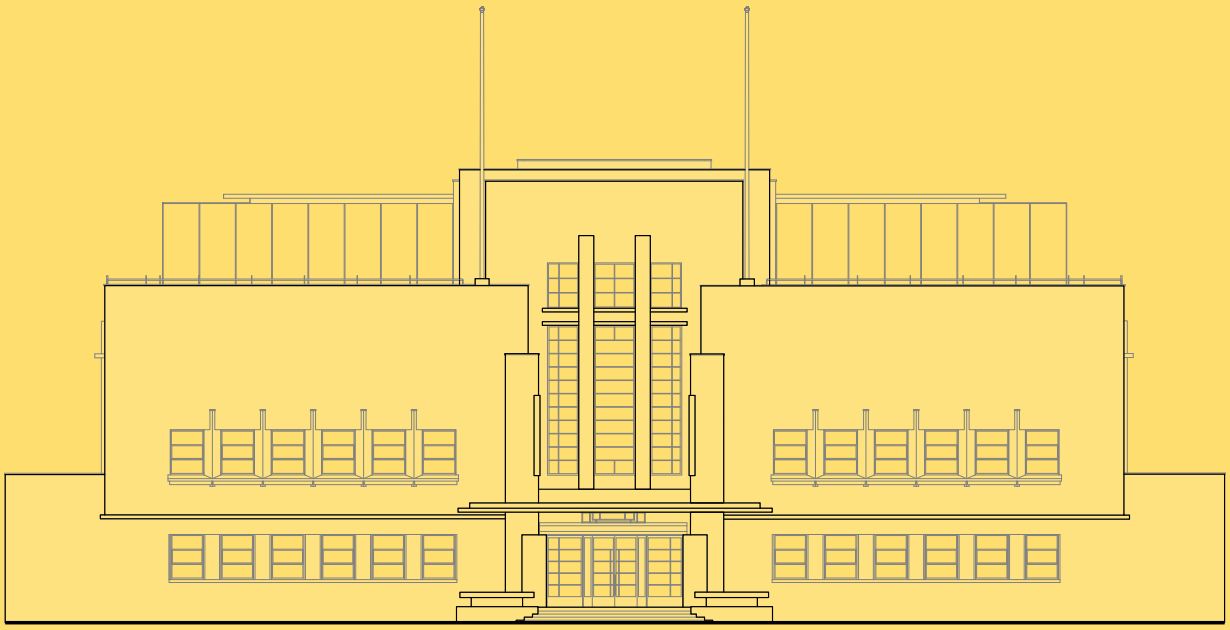

RAVENSCOURT PARK

FORMER ROYAL MASONIC HOSPITAL

LOGIKA GROUP

ECOLOGICAL IMPACT ASSESSMENT

13691A-30-R04-02-F November 2023

Ravenscourt Park Hospital,
Hammersmith

Ecological Impact Assessment

TTG

19 October 2023

Document Control

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Contents

1 Introduction

1.1 Project Background

1.1.1.1 Logika Consultants Ltd. ('Logika') has been commissioned by TTG to undertake an Ecological Impact Assessment (EcIA) of Ravenscourt Park Hospital (hereafter referred to as 'the Site').

1.1.1.2 The proposed development for the purposes of the planning and listed building consent application is:

1.1.1.3 *"Part demolition, part extension and alteration of the existing buildings and structures, change of use of the existing buildings and the erection of a new building including provision of a basement, to provide residential units (Use Class C3) and associated ancillary communal floorspace, a Care Home (Use Class C2) and flexible non-residential floorspace (Classes E, F1 and F2), together with associated roof top installations and structures, private and communal amenity space, landscaping, access, refuse storage, parking and associated works*.".

1.1.1.4 This report describes the ecological features present on the Site or within the wider area that may be affected by its development (the Zone of Influence), the actions to be taken to avoid, minimise or compensate for potential effects and residual effects that may be realised as a consequence of development. Details of a Biodiversity Net Gain (BNG) assessment are also provided, following the identification of residual effects.

1.1.1.5 This EcIA follows the Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018[1]) and has been based on information gained from a desk study, extended Phase 1 habitat survey and reptile survey undertaken by Tyler Grange Ltd in 2020.

1.2 The Site

1.2.1.1 The Site (see **Figure 1-1**) located in the London borough of Hammersmith and Fulham is approximately 1.56 hectares (ha) comprising the former Ravenscourt Park Hospital site that has been vacant since 2006 when use of the hospital ceased. Prior to its vacancy, the Site operated as an in-patient hospital and, there have been no changes of use approved on the Site since. As such, the site is considered to fall within Use Class C2.

[1] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

1.2.1.2 The property is Grade II listed (1192740) and is constructed in the Art-Deco architectural style, with construction completed between 1931-1933. The listed hospital buildings comprise four interconnecting blocks: a T-shaped three-storey administrative block facing Ravenscourt Park (Block A); to the west of Block A is Block B, a south-facing, five-storey U-shaped block; north of Block B is Block C, a five-storey annex block with a projecting ground floor with bowed ends. North of Block C is Block D, comprising a three-storey surgical block.

1.2.1.3 Later additions to the building include Block E to the north (constructed in 1978), connected to the building by a raised walkway, and the Wakefield Wing to the west (constructed in 1959) (beyond the Site boundary), now unconnected to the building, but historically joined by a bridge. The Site has a central grid reference of TQ 22187 78967.

1.2.1.4 The Site is surrounded by residential and commercial properties, with Ravenscourt Park adjacent to the east, and an active railway line to the south. Further south, approximately 690m and 570m, is the River Thames and the Great West Road, respectively.

Figure 1-1 Red Line Boundary for the Site

Imagery: @2023 Bluseky, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group. Map Data: @2023 Google Maps

2 Legislation and Policy

2.1.1.1 There is national, regional and local planning policy and legislation that is relevant to new development and the conservation of biodiversity on the Site. This is set out in Table 2-1 and Table 2-2 respectively.

Table 2-1 Relevant Planning Policy

Planning policy document/ legislation	Relevant policies
National Planning Policy Framework[2]	Paragraph 179 states: "To protect and enhance biodiversity and geodiversity, plans should: a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity. Paragraph 180 states: "When determining planning applications, local planning authorities should apply the following principles: a) 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; b) 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;

[2] Ministry of Housing, Communities, and Local Government. National Planning Policy Framework. 2021https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf (accessed 15th January 2022).

Planning policy document/ legislation	Relevant policies
	c) 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 d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."
The London Plan 2021	**Policy G6 Biodiversity and access to nature** A Sites of Importance for Nature Conservation (SINCs) should be protected. B Boroughs, in developing Development Plans, should: 1) use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks 2) identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them 3) support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans 4) seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context; and 5) ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements. C Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweighs the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts: 1) avoid damaging the significant ecological features of the site 2) minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site 3) deliver off-site compensation of better biodiversity value. D Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process. E Proposals which reduce deficiencies in access to nature should be considered positively. **Policy G7 Trees and woodlands** A London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees.

Planning policy document/ legislation	Relevant policies
	B In their Development Plans, boroughs should: 1) protect 'veteran' trees and ancient woodland where these are not already part of a protected site[3]; and 2) identify opportunities for tree planting in strategic locations. C Development proposals should ensure that, wherever possible, existing trees of value are retained[4]. If planning permission is granted that necessitates the removal of trees 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 or another appropriate valuation system. 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.
Hammersmith and Fulham Local Plan - 2018	**Policy OS4 - Nature Conservation** The nature conservation areas and green corridors identified on the Policies Map (and shown on Map 7 and listed in Appendix 4) will be protected from development likely to cause demonstrable harm to their ecological (habitats and species) value. In these areas, development will not be permitted unless: a. the proposed development would release a site for built development needed to realise a qualitative gain for the local community in pursuance of other physical, social and economic regeneration objectives of the Local Plan, and measures are included for the protection and enhancement of any substantive nature conservation interest that the site may have so that there is no net loss of native species and no net loss of habitat; or b. provision is made for replacement nature conservation interest of equal or greater value elsewhere in the locality. Outside of the areas identified on the Policies Map, proposals should enhance the nature conservation interest through initiatives such as new green infrastructure and habitats, tree planting and brown and green roofs and protect any significant interest on the site and any nearby nature conservation area, appropriate to the scale and nature of the development. Planning conditions will be imposed, or planning obligations sought to ensure the maintenance and enhancement of nature conservation areas where these are affected by development proposals. **Policy OS5 - Greening The Borough** The council will seek to enhance biodiversity and green infrastructure in the borough by:

[3] Forestry Commision/ Natural England (2018): Ancient woodland and veteran trees; protecting them from development, Planning applications affecting trees and woodland - GOV.UK (www.gov.uk)
[4] Category A, B and lesser category trees where these are considered by the local planning authority to be of importance to amenity and biodiversity, as defined by BS 5837:2012.

Planning policy document/ legislation	Relevant policies
	a. maximising the provision of gardens, garden space and soft landscaping, seeking green or brown roofs and other planting as part of new development; b. protecting back, front and side gardens from new development and encouraging planting in both back and front gardens; c. seeking to prevent removal or mutilation of protected trees; d. seeking retention of existing trees and provision of new trees on development sites e. adding to the greening of streets and the public realm; f. making Tree Preservation Orders where justified in the interests of amenity.

Table 3-2 Relevant Legislation

Relevant legislation	Relevance to Assessment
The Environment Act 2021[5]	The Environment Act covers a wide range of environmental aspects, including the provision of Biodiversity Net Gain (BNG). All development projects consented under the Town & Country Planning Act 1990 (as amended), unless of very small scale or permitted development, will be required to provide a BNG of 10% or more calculated using a standard approach (which is currently known as the Biodiversity Metric 4.0). This will become mandatory following the issue of secondary legislation.
Conservation of Habitats and Species Regulations 2017 ("the Habitats Regulations") as amended by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[6]	These regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna ('the Habitats Directive') into national law. They also transposed elements of Council Directive 2009/147/EC on the conservation of wild birds ('the Birds Directive'). The Habitats Regulations provide the framework for the protection of Natura 2000 sites (now referred to as the national site network following the amendments that came into force on 31 December 2020), and for certain flora and fauna (known as European Protected Species (EPS)). The regulations set out the process with regard to the assessment of development.

[5] The Environment Act 2021. Available at https://www.legislation.gov.uk/ukpga/2021/30/contents?section-102-3 (Accessed: 15th January 2022)
[6] The Conservation of Habitats and Species Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made (Accessed: 15th January 2022)

Relevant legislation	Relevance to Assessment
Natural Environment and Rural Communities Act 2006 (as amended by the Environment Act 2021) ('the NERC Act') [7]	The NERC Act (amongst other matters) places a duty to conserve and enhance biodiversity on public authorities in England. This requires local authorities and government departments to have regard to the purposes of conserving biodiversity in a manner that is consistent with the exercise of their normal functions. The NERC Act also places a duty on the Secretary of State to maintain lists of species and habitats which are regarded as being of principal importance for the conservation of biodiversity in England. These Habitats of Principal Importance (HPI) and Species of Principal Importance (SPI) are used to guide decision makers in implementing their duties to have regard to the conservation of biodiversity in England when carrying out their normal functions.
Countryside and Rights of Way Act 2000 ('the CRoW Act') [8]	This CRoW Act, amongst other elements, details further measures for the management and protection of Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation.
Protection of Badgers Act 1992 ("the Protection of Badgers Act") [9]	The Protection of Badgers Act consolidated and improved protection for badgers. It specifically makes it an offence to kill, injure or take a badger, or damage or interfere with a sett unless a licence has been obtained from a statutory authority.
Wildlife and Countryside Act 1981 (as amended) (WCA) [10]	The WCA consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention') and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive). Amongst other matters it provides protection for wild birds, certain flora and fauna and sets the framework for the protection and management of SSSIs

[7] The Natural Environment and Rural Communities Act 2006 c.16. Available at: https://www.legislation.gov.uk/ukpga/2006/16/contents (Accessed: 15th January 2022)
[8] Countryside and Rights of Way Act 2000 c.37. Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents (Accessed: 15th January 2022)
[9] The Protection of Badgers Act 1992 c.51. Available at: https://www.legislation.gov.uk/ukpga/1992/51/contents (Accessed: 15th January 2022)
[10] Wildlife and Countryside Act 1981 c.69. Available at: https://www.legislation.gov.uk/ukpga/1981/69 (Accessed: 15th January 2022)

3 Methodology – Baseline Establishment

3.1 Desk Study

3.1.1.1 A desk study was undertaken in February 2023 to gather existing information on statutory and non-statutory sites designated for nature conservation, Habitats and Species of Principal Importance and legally protected, controlled or otherwise notable species within the Site or in the area over which effects on ecological features of development could be realised (referred to as the Zone of Influence[11] or ZoI). **Table 3-1** describes the ecological features for which data was collected, the relevant ZoI for each ecological feature and the sources of the information.

Table 3-1 Ecological features, ZoI and information sources

Ecological Feature	ZoI (km)	Data sources
Internationally designated sites[12]	5	Magic.gov.uk[13] Natural England's designated sites website[14]
Nationally designated sites: Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR)	2	Magic.gov.uk Natural England's designated sites website
Locally designated sites: Local Nature Reserves (LNR)	1	Magic.gov.uk Natural England's designated sites website

[11] The ZoIs used within the desk study are set on a precautionary basis to ensure that all potential constraints are identified

[12] Following UK Government advice this includes Special Areas of Conservation (SAC), Special Protection Areas (SPA), proposed SAC, potential SPA, Ramsar sites and proposed Ramsar sites. SAC and SPA are protected via legislation, whilst the other sites are treated comparatively through policy. See https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site#European-sites

[13] Multi-Agency Geographic Information for the Countryside (MAGIC). Available at: www.magic.gov.uk

[14] Available at https://designatedsites.naturalengland.org.uk/

Non-statutory designated sites: Sites of Importance for Nature Conservations (SINC)	1	Greenspace Information for Greater London (GiGL)
Habitats of Principal Importance / Ancient Woodland	0.5	Priority Habitat Inventory and Ancient Woodland Inventory - provided on Magic.gov.uk and Forestry Commission Map Browser
Legally protected and notable species - bats and aquatic mammals (otter and water vole)	1	GiGL European Protected Species licence returns - provided on Magic.gov.uk
Legally protected and notable species – all other species	1	GiGL European Protected Species licence returns - provided on Magic.gov.uk
Legally controlled species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and other invasive non-native species (INNS)	1	GiGL
Waterbodies (ponds, wet ditches, lakes) inside or within 500m of the Site	0.5	Magic.gov.uk
Veteran trees	0.5	Ancient Tree Inventory[15]

3.1.2 Limitations

3.1.2.1 The desk study includes data on habitats and species that has been collected by both professional ecologists and members of the public both as part of focused survey efforts and as a result of incidental encounters. The desk study information therefore only provides contextual data and does not rule out the presence of habitats and species for which records have not been provided.

[15] Available at https://ati.woodlandtrust.org.uk/tree-search/

3.2 Site Survey

3.2.1.1 A Site walkover was undertaken in accordance with the Joint Nature Conservation Committee's Phase 1 Habitat Survey methodology (JNCC 2010). The survey was conducted on the 15th February 2023 by Kelly Jones MSc MCIEEM when weather conditions were dry with good visibility.

3.2.1.2 All habitats within the Site and within 50m of the boundary (where access was available) were identified, described, and mapped during the survey, and an indicative botanical species list compiled.

3.2.1.3 The survey was extended to highlight the potential presence of protected and / or priority species. This involved a search to identify the presence or potential presence of notable and / or legally protected species such as breeding birds, badger, dormouse, bats, reptiles, and amphibians. Target Notes (TNs) were used to record any features or habitats of ecological interest.

3.3 Preliminary Roost Assessment (PRA)

3.3.1.1 Survey methods followed best practice guidelines, interpreted using professional experience. The Bat Conservation Trust (BCT) third edition of Good Practice Guidelines (2016)[16] , The Bat Mitigation Guidelines[17], and Bat Workers' Manual[18], were taken into account when designing this survey method.

3.3.1.2 A preliminary roost assessment (PRA) was conducted all built structures and trees on and adjacent to the Site. This included a ground-based visual inspection of the exterior of structures and tree to assess their potential to support roosting bats. In assessing potential to support roosting bats, the external inspection considers the following factors:

- The presence of potential roost features (PRFs) such as roof voids, soffit boxes with access gaps, spaces between roof tiles and lining felt or boarding, gaps under bargeboards, roof tiles, hanging tiles, lead flashing and/or weatherboarding.
- Expected levels of artificial lighting around potential roost entrances.
- Expected levels of disturbance to any potential roosts.

[16] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.
[17] Mitchell-Jones, A.J. (2004) Bat Mitigation Guidelines English Nature, Peterborough
[18] Mitchell-Jones, A.J. & McLeish, A.P. (2012) The Bat Workers' Manual. Pelagic Publishing, Exeter.

- Quality of habitat for roosting bats at the structure, and the potential for bat foraging and/or commuting routes in the surrounding area.

3.3.1.3 Considering all the factors listed above, the structures and trees onsite were then categorised according to the level of potential for it to support roosting bats, following BCT guidance:

- **Confirmed roosts** – where it was possible to determine that the structure supports a PRF that is used or has been used by bats.
- **High potential suitability** – a structure with one or more PRFs that are obviously suitable for use by large numbers of bats on a regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.
- **Moderate potential suitability** – a structure with one or more PRFs that could be used by bats due to their size, shelter, protection, conditions, and surrounding habitat, but that are unlikely to support a roost type of high conservation status.
- **Low potential suitability** – a structure with one or more PRFs that could be used by individual bats opportunistically. PRFs do not provide sufficient space, shelter, protection, conditions and/or surrounding habitat to be used on a regular basis or by large numbers of bats.
- **Negligible suitability** – negligible habitat features on site likely to be used by roosting bats.

3.3.1.4 On the whole, structures and trees are categorised according to their potential to support bat roosts throughout the year, with the highest level of potential assigned (i.e., if a building had high potential to support a summer roost and low potential to support a winter roost it would be categorised, overall, as being of high potential).

3.4 Preliminary Roost Inspection (PRI)

3.4.1.1 Internal building inspections and tree endoscopic inspections were undertaken to further assess the suitability for roosting bats. These surveys were undertaken on 15th May 2023, by Kelly Jones and assisted by Alexandra Jackson MZool (Hons).

3.4.1.2 The interiors of both buildings were assessed for evidence of bat activity and potential roost features, undertaken using a torch, binoculars and endoscope.

3.4.1.3 All tree inspections were undertaken using a ladder, torch and an endoscope to allow a closer inspection of the potential roost features.

3.4.1.4 Evidence, such as the presence of bats, a concentration of, or scattered bat droppings, food remains (e.g. moth wings), scratch marks, fur, or urine stains, were sought.

3.5 Bat Surveys

3.5.1.1 The ancillary building and one tree (T37) were assessed as having moderate roosting potential, and as such, two dusk emergence surveys were carried out by Kelly Jones and Alexandra Jackson.

3.5.1.2 One nocturnal transect was required to monitor the activity levels of foraging and commuting bats in the surrounding habitat and was undertaken by Declan Murphy BSc (Hons) MRes ACIEEM.

3.5.1.3 The dusk surveys commenced fifteen minutes prior to sunset and ceased one and a half hours following sunset. The surveyors were equipped with Wildlife Acoustics Echo Meter Touch 2 Pros and Elekon Batlogger M2 bat detector. Recordings were made of any bats seen and/or heard and the species, the timing, activity, location and direction of flight. Where required owing to light levels / visibility, surveyors were assisted by infra-red video recording cameras.

3.5.1.4 Any bat calls that could not be identified in the field at the time of the individual surveys were subject to analysis using BatExplorer V2.2.4.0 software.

3.5.1.5 **Table 3-2** provides details of the surveys. The locations of the features surveyed, transect route walked and locations of surveyors are shown in **Figure 3-1**.

Table 3-2 – Bat survey details including survey timings and weather conditions.

Structure	Date	Timing	Weather*
Ancillary building, chestnut tree and one transect	15th May 2023	20:31 – 22:16 (sunset 20:46)	Start: 15°C, 1/8 cloud cover, wind 1, no rain End: 14°C, 1/8 cloud cover, wind 1, no rain
Ancillary building and chestnut tree	13th June 2023	21:03 – 22:48 (sunset 21:18)	Start: 23°C, 0/8 cloud cover, wind 2, no rain End: 22°C, 1/8 cloud cover, wind 1, no rain

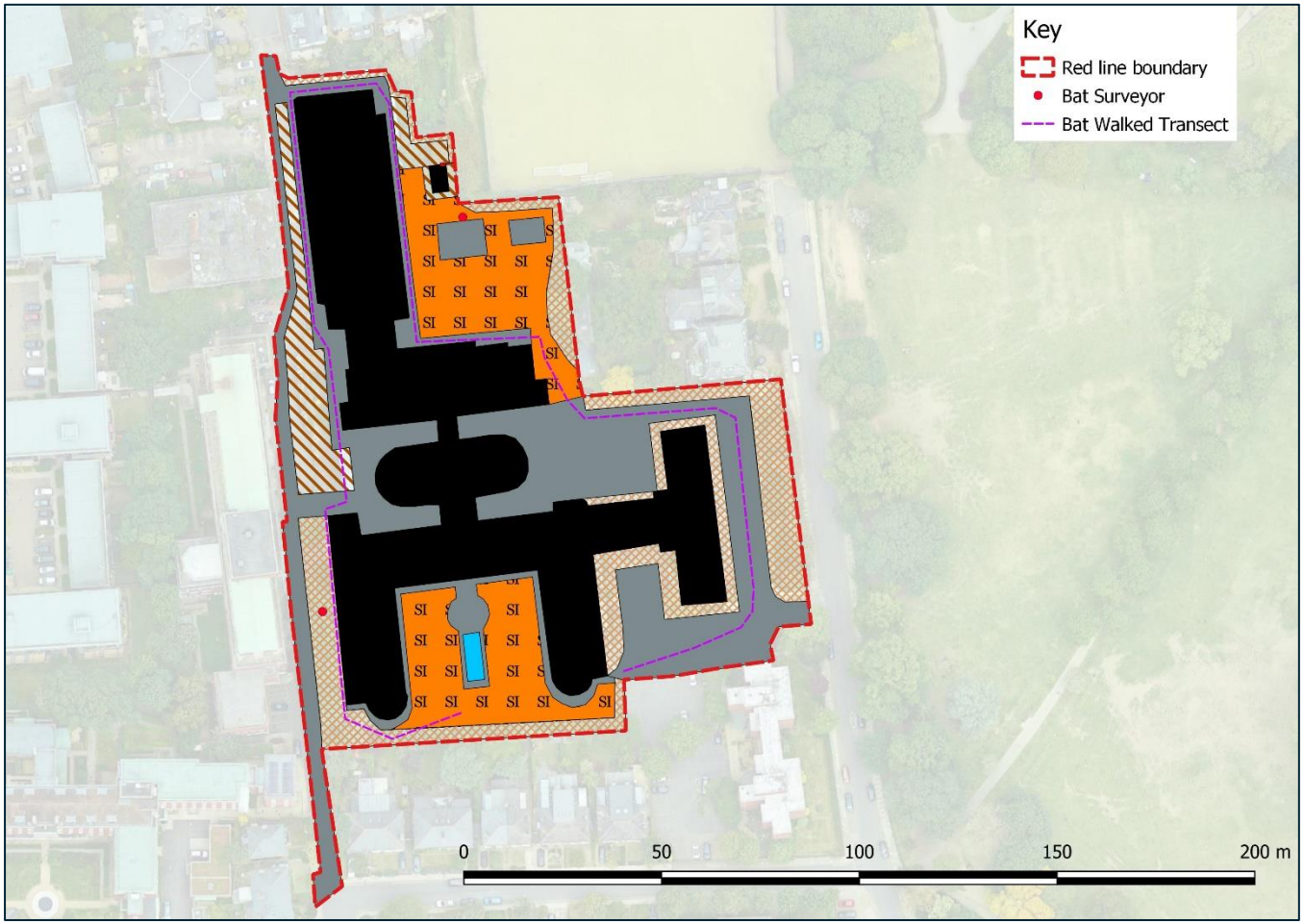
* Wind speed measured in Beaufort; cloud cover measured in Oktas.

3.5.1.6 With reference to the Bat Mitigation Guidelines (2004), Collins (2016) and professional judgement, the weather conditions during the survey were considered suitable for bat activity.

3.6 Survey Limitations

3.6.1.1 The Phase 1 habitat survey was undertaken during the sub-optimal time of year for identifying plant species on the Site. However, due to the urban location of the Site, potential misidentification of habitats is not considered to be a significant constraint.

Figure 3-1 Bat Survey Transect and Surveyor Locations



Imagery: @2023 Bluseky, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group. Map Data: @2023 Google Maps

4 Baseline Results

4.1 Desk study

4.1.1 Designated Sites

4.1.1.1 There is one internationally designated site within 5km of the Site, Richmond Park SAC. The site designation is described in **Table 4-1**.

Table 4-1 Internationally designated sites within 5km of the Site

Site	Designation	Distance from Site	Description
Richmond Park	SAC	4.5 km south	Richmond Park has a large number of ancient trees with decaying timber. It is at the heart of the south London centre of distribution for stag beetle *Lucanus cervus* and is a site of national importance for the conservation of the fauna of invertebrates associated with the decaying timber of ancient trees.

4.1.1.2 There is one nationally designated site, within 2km of the Site, Bam Elms Wetland Centre SSSI, this site is described in **Table 4-2**.

Table 4-2 Nationally designated sites within 2km of the Site

Site	Designation	Distance from Site	Description
Bam Elms Wetland Centre	SSSI	1.7 km south	A mosaic of wetland habitats supporting nationally important wintering populations of shoveler *Anas clypeata* and an assemblage of breeding birds associated with lowland waters and their margins

4.1.1.3 There is one LNR, seven SINCS and one proposed SINC within 1km of the Site. **Table 4-3** below sets out the non-statutory designated sites identified and that are considered relevant to the Site, based on proximity and connectivity.

Table 4-3 Local Nature Reserves within 1km of the Site

Site	Designation	Distance from Site	Description
Chiswick Eyot	LNR	0.9 km south	Chiswick Eyot is the last island of rural scale before the increasingly urban riverside downstream. It is one of 43 unbridged tidal islands which can be walked to from the mainland of Great Britain, dating back to the British Iron Age.

Table 4-4 SINC within 1km of the Site

Site	Designation	Distance from Site	Description
Ravenscourt Park	SINC – Borough Grade II	65m east	One of the largest parks in Hammersmith & Fulham, Ravenscourt Park has excellent tree and shrub cover, a sizeable lake and a small nature conservation area.

4.1.1.4 The Site falls within several SSSI Impact Risk Zones (IRZ). Proposals for development within an IRZ may on occasion require the Local Planning Authority (LPA) to consult with Natural England and assess planning applications for their likely (indirect) impacts on SSSIs/SACs/SPAs and Ramsar sites. In this instance, the Local Planning Authority (LPA) is required to consult Natural England (NE) on the likely risks from the following types of development:

- All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi-natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.
- Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
- Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
- Any industrial/agricultural development that could cause air pollution (including: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250 tonnes).
- General combustion processes >20 Megawatt (MW) energy input. Including: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
- Landfill. Including inert landfill, non-hazardous landfill, hazardous landfill.
- Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Including open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
- Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.

4.1.1.5 The proposed development falls outside of the above outlined criteria for IRZ consideration. The IRZ will therefore be removed from further consideration for this scheme.

4.1.2 Habitats and Species Records

4.1.2.1 Several parcels of deciduous woodland HPI were identified from the Priority Habitat Inventory, within 500m of the Site. None occurred onsite, however deciduous woodland is present within the east of Ravenscourt Park, with the closest habitat parcel being 67m east of the Site.

4.1.2.2 The ecological data search found there is one waterbody onsite and one waterbody within 500m of the boundary, located within Ravenscourt Park, approximately 119m northeast of the Site.

4.1.2.3 Data was requested for legally protected, legally controlled, or other notable species within the ZoIs set out in **Table 3.1**. The desk study returned:

- 33 records of bats, from a minimum of three species;
- One historic record of reptiles (slow worm *Anguis fragilis)*;
- 289 records of birds of 41 species;
- 191 records of invertebrates of seven species;
- 11 records of West European Hedgehog;
- Nine records of common toad;
- 23 records of common frog;
- 84 records of legally protected flora; and
- 36 records of INNS including legally controlled Schedule 9 listed species, and species listed on London Invasive Species Inventory (LISI).

4.2 Site Survey

4.2.1 On-site habitats

4.2.1.1 The Site is located within the grounds of a former hospital and comprises a large building complex with associated hardstanding, with surrounding areas of grassland, introduced and native shrubs, smaller areas of tall ruderal and ephemeral growth, a small ornamental pond, and scattered trees.

4.2.1.2 **Figure 4-1** shows the extent of habitat types and boundary features. Descriptions of the habitat types and dominant plant species found at the Site are provided below. Habitat descriptions are by broad habitat type, as listed in the Phase 1 Habitat Survey Manual (JNCC, 2010). Target Notes (TNs) are listed within **Appendix 1** whilst photographs of the Site survey are in **Appendix 2**.

4.2.1.3 The main, brick-built building is a former hospital constructed in 1933, with a variety of single and multi-storey with flat rooves with either concrete or roofing felt. The former hospital occupies the majority of the site, in the centre. The pattern of the brick indicates a

solid wall structure (without cavity), with intermittent air bricks. There are occasional locations on the building where cement mortar is degraded. Windows on the building were single pane, with a window on the ground level broken and boarded. A structure (TN9) in the northeast of the site and descending steps to a boarded Door (TN19) on the west of the building indicate at least one basement floor is present. Glass panelled stairwells and walkways occur on the east and west of the building. The roof could not be completely assessed, but roof edging was occasionally covered with lead flashing. Some areas of the roof supported ruderal growth, with butterfly bush recorded from a distance.

4.2.1.4 A smaller ancillary building is located to the east of the main building. It is a single storey brick-built structure with a flat roof. The structure is in a state of disrepair, with hole in the wooden soffit as a result of rot and boarded windows (TN10). Several glass doors on the building were boarded. The building has dense ivy growth over its western side, preventing full assessment from this side.

4.2.1.5 Two main areas of semi-improved grassland within the Site were located to the northeast and to the south of the main building. These grasslands are likely to have been amenity grassland until the closure of the hospital and reduced management since the closure of the hospital onsite.

4.2.1.6 The grasslands are long and tussocky, dominated by cock's-foot *Dactylus glomerata*. Other species included common nettle Urtica dioica, dock *Rumex spp.*, red fescue *Festuca rubra*, crocus and creeping buttercup *Ranunculus repens*. The grassland in the northwest supported a log pile (TN11) and in the south a brash pile (TN20) from recent management.

4.2.1.7 Hardstanding providing vehicle access and paving was present around the main building, some of which was in good condition. Some sections of hardstanding were degraded with successional tall ruderal or ephemeral plant growth. Some areas of hard standing have been used to store building materials, such as a pile of bricks (TN6) in the east of the site, and piles of paving slabs (TN18) in the west.

4.2.1.8 Planted borders occurred along the building edge and along the site boundary in the east, south and west of the site. Typical species included tutsan *Hypericum androsaemum*, *hydrangea spp.*, cherry laurel *Prunus laurocerasus*, elder *Sambucus nigra*, holly *Ilex aquifolium*, yew *Taxus baccata*, privet *Ligustrum spp.*, and clematis. Many of the borders had been left unmanaged, with excessive growth beyond the raised beds where they were planted. Bramble *Rubus fruticosus* was also recorded but appeared to have been cut back within the last year. In some places, species from adjacent residential areas have grown over into the site and become established, such as bamboo *Fargesia spp.* In the east.

4.2.1.9 Ruderal and ephemeral plant growth was recorded on degraded hardstanding throughout the Site, as well as a larger area in the northwest and northeast of the Site. The western area was dominated by a dense leaf litter owing to the mature horse chestnut trees. Other

species present include abundant bramble and butterfly-bush *Buddleja davidii*, with elephant-ears *Colocasia esculenta*, ox-eye daisy *Leucanthemum vulgare*, wood avens *Geum urbanum*, dock species, Montbretia *Crocosmia x crocosmiiflora*, ground ivy *Glechoma hederacea*, and green alkanet *Pentaglottis sempervirens*.

4.2.1.10 A single ornamental pond was located within the semi-improved grassland in the south of the Site. It was dominated by greater reed mace *Typha latifolia* and had a surface covering of pond weed.

4.2.1.11 Scattered trees are labelled on **Figure 4-1** numbering for which follows the arboricultural assessment provided by the client.

4.2.1.12 The majority of trees were located along the boundary, with one beech *Fagus sylvatica* and at least three eucalyptus *Eucalyptus sp.* trees, located within areas of semi-improved grassland. Other species identified within the site, were horse chestnut, weeping willow *Salix babylonica*, Leyland cypress *Cuprocyparis leylandii*, yew and elder.

4.2.1.13 The Site was enclosed using a variety of boundary features, including brick walls, panel fencing (bordering residential gardens), and sheets of woodchip boarding. Most boundary features were in a good condition, preventing pedestrian access or egress. In the northeast of the Site, a garden fencing panel had fallen (TN12). Most of the boundary features had some form of plant growth resulting from neighbouring gardens or successional ivy growth following undermanagement.

Figure 4-1 Phase 1 Habitat Plan

Imagery: @2023 Bluseky, Getmapping plc, Infoterra Ltd & Bluesky, Maxar Technologies, The Geoinformation Group. Map Data: @2023 Google Maps

4.2.2 Off-Site (adjacent) habitats

4.2.2.1 The Site is surrounded by residential and commercial properties, with Ravenscourt Park SINC located approximately 65m northeast and east of the Site, and the railway line 100 m to the south.

4.2.3 Preliminary Roost Assessment (PRA)

4.2.3.1 Habitats surrounding the buildings provided vegetation and dark areas suitable to support roosting bats. Specifically, the proximity to the nearby Ravenscourt Park provided additional foraging opportunities in an otherwise built-up landscape.

4.2.3.2 Moderate potential for roosting bats were identified within the main building, where windows and doors had been boarded, providing narrow gaps for crevice dwelling species such as common pipistrelle. Holes (TN14) and areas where mortar was missing in the brickwork (TN1, 2, 3) potentially provided access to the inside of the building. The roof was flat so could not be inspected during the initial survey, although assessment of the edges suggests that the materials are unlikely to support cavities or access points for bats to utilise. There were a number of locations where lead flashing protected the corner of the roof. Where this feature lifts, it is known to provide suitable roosting opportunities for crevice dwelling species. Broken windows and external materials allowed access into the main building in at least two locations (TN8 and TN15), potentially providing access to suitable roosting opportunities inside the building. In addition, boarded glass doors (TN22) provided potential for cavity roosting species where gaps between the wooden board and glass are present.

4.2.3.3 The small ancillary building in the east of the site provides high potential for roosting bats, behind boarded windows (TN10) and holes in the rotting soffit.

4.2.3.4 Three horse chestnut trees in the west of the site (T37, T62 and T63) provide high potential to support roosting bats. Each supported knot holes which either extended into a cavity or could not be fully inspected due to the direction at which they pointed (up).

4.2.4 Presence / potential presence of legally protected and notable species

4.2.4.1 The pond within the Site provided suitable habitat and surrounding terrestrial habitat including features such as brash and log piles, are suitable for amphibian species known to occur in the area, such as common toad and frog.

4.2.4.2 Habitats on the Site and the proximity to local parkland are suitable for badgers which occur frequently in metropolitan areas. However, the fencing around the property was mostly intact, which may restrict access. No field signs, such as latrines, mammal runs or hairs were identified during the survey and due to the lack of records within the ZoI, badgers are not considered a constraint at the Site.

Buildings and trees within the Site provide roosting opportunities for bats which are likely to occur in the area. In addition, the surrounding habitats, and their proximity to nearby parkland habitats, provides suitable commuting and foraging habitat.

4.2.4.3 Semi-improved grassland, tall ruderal and bordering shrub provides suitable habitat for the common and widespread reptile species, such as slow worm. In addition, brash and log piles within these habitats provide refuge and hibernating opportunities.

4.2.4.4 The Site provides habitat suitable for nesting birds.

4.2.4.5 Habitats on the Site and the proximity to local parkland was suitable for hedgehogs which occur frequently in metropolitan areas. However, the fencing around the property was mostly intact, which could prevent access.

4.2.4.6 Semi-improved grassland, tall ruderal, standing water, bordering shrub and log and brash piles provides suitable habitat for both terrestrial and aquatic invertebrates, including stag beetles.

4.2.5 Presence / potential presence of invasive non-native species

4.2.5.1 During the Site visit, montbretia *Crocosmia x crocosmiiflora*, listed on Schedule 9 of the WCA as a legally controlled species, was recorded at the Site within tall ruderal vegetation in the west of the Site (TN24).

4.2.5.2 Cherry laurel and butterfly-bush were present on-Site. These species are listed in the LISI, as an invasive non-native Category 3 species of high impact or concern which are widespread in London and require concerted, coordinated, and extensive action to control/eradicate.

4.3 Bat Surveys

4.3.1.1 No bats were recorded emerging from the ancillary building or from tree T37 during dusk emergence surveys on 15th May or 13th June. Overall, only one species of bat, common pipistrelle, which is known as a more light tolerant species, was recorded in low levels across the Site.

4.4 Future Baseline

4.4.1.1 Should the Site persist in its largely unmanaged state the baseline will change relatively quickly with introduced scrub expanding in all locations. This will lead to a reduction and eventual loss of tall ruderal vegetation and reduction and loss of grassland.

5 Embedded Environmental Measures

5.1.1.1 The Project has been designed to deliver a series of biodiversity enhancements within both the habitat management area and the proposed development. These include the following measures:

- Planting of native trees (no. 34), creation of flower rich perennial planting, amenity grassland, and hedge (mixture of native and non-native planting for ornamental purposes) within the footprint of the proposed development area.
- Creation of extensive green roofs.

5.1.1.2 The detailed design of the habitats to be created and details on their ongoing management will be provided in a Landscape and Ecological Management Plan (LEMP) which would be agreed with Hammersmith and Fulham Borough Council prior to commencement of site clearance and secured through a planning condition.

5.1.1.3 A Construction Environment Management Plan (CEMP) will be written and agreed with Hammersmith and Fulham Borough Council prior to site clearance that will describe the pollution prevention measures, including with regards dust, chemical pollutants, noise and light, to be implemented during the construction phase. The CEMP would be agreed as suitable with Hammersmith and Fulham Borough Council prior to commencement of site clearance and secured through a planning condition.

5.1.1.4 In addition, the project is committed to delivering a BNG of at least 10%, as measured using Natural England's Biodiversity Metric 4.0 (see **Section 9**).

6 Scope of the Assessment

6.1.1.1 The proposed scope of assessment for biodiversity is defined by the type of ecological features that occur within the area and the type of potential effects that could be realised by the construction and occupation of the Site. Following CIEEM (2018) guidance on EcIA the importance of each ecological feature present has been determined and justified. The following categories have been used in this assessment:

- International / European
- National (UK / England)
- County (London)
- Borough (Hammersmith and Fulham)
- Local
- Negligible

6.1.1.2 Key to understanding the extent of potential effects on important ecological features is the determination of a ZoI[19] for each that reflects their sensitivity to environmental change. The ZoIs are tied to the type of effects that could occur due to a particular development. At the Site the following effects have been considered:

- Permanent and temporary land take resulting in habitat loss / degradation
- Increased noise and light levels resulting in disturbance / displacement
- Pollution events resulting in degradation of habitats and direct toxicity to species (from dust liberation and chemical loss)
- Introduction or spread of invasive non-native species resulting in habitat change[20].

6.1.1.3 The risk of pollution from the construction site and operational assets will be controlled via the implementation of embedded environmental measures and the CEMP. These measures follow best practice guidelines and will be effective in negating the risk to ecological features.

6.1.1.4 The scope of the assessment is described in **Table 6-1**.

[19] At this stage the broad ZoI used to define the area for desk study are narrowed to reflect the baseline and a more detailed understanding of potential effects

[20] This can be discounted from detailed assessment as no species controlled under Schedule 9 of the Wildlife & Countryside Act 1981 (as amended) have been recorded on Site.

Table 6-1 Scope of Assessment

Ecological Feature	ZoI	ZoI justification	Importance	Importance justification	Scoped in / out of assessment
Internationally Protected Sites	5 km	Standard ZoI set for European sites	International	Designated sites covered by legislation and/or convention	Out – Natural England have identified risks to water supply and water pollution associated with large non-residential and commercial developments as potential sources of impact to these sites. Owing to the small size of the development, the urban location and the relative separation of the Site from these designated sites, the development is not considered likely to result in a significant adverse impact on the SPA/Ramsar
Nationally Protected Sites	2km	Standard ZoI set for nationally designated sites	National	Designated sites covered by legislation and/or convention	Out – Natural England have identified risks to water supply and water pollution associated with large non-residential and commercial developments as potential sources of impact to these sites. Owing to the small size of the development, the urban location and the relative separation of the

Ecological Feature	ZoI	ZoI justification	Importance	Importance justification	Scoped in / out of assessment
					Site from these designated sites, the development is not considered likely to result in a significant adverse impact on the and SSSI
Chiswick Eyot LNR	500m	The designated features could be affected by changes in hydrology or pollutant loss from construction. 500m is a precautionary ZoI based on advice from the Institute of Air Quality Management. Increased recreational pressured from the development are not likely past 500 m.	Local	Designated sites covered by legislation and/or convention	Out – Given the scale and operation of the proposed scheme, recreation is unlikely to increase as far as Chiswick Eyot. Additionally, given the distance from the Site, construction impacts are not considered relevant.
Ravenscourt Park SINC – Borough Grade II	500m	The designated features could be affected by changes in hydrology or pollutant loss from construction. 500m is a precautionary ZoI based on advice from the Institute of Air Quality Management. Increased recreational pressured from the development are not likely past 500 m.	Local	The Site, part of which occurs adjacent to its eastern boundary, is afforded non-statutory protection through the local planning process.	In – due to the close location of the SINC, and the potential for impacts during construction, and recreational impacts during operation

Ecological Feature	ZoI	ZoI justification	Importance	Importance justification	Scoped in / out of assessment
Grassland	Within Site boundary	An isolated patch of grassland that if lost to development would not alter the outcomes of other grasslands in wider area.	Site	The habitat is a mixture of native and non-native species that is typical of areas which are not actively managed. It is a common and widespread habitat in Hammersmith and Fulham Borough.	Out - small local losses of a common and widespread habitat are not material. Commitment to BNG ensures overall benefit to the biodiversity of the local area.
Introduced shrub	Within Site boundary	Isolated small patches of habitat that if lost to development would not alter the outcomes of other similar habitat in the in wider area.	Site	The habitat is a mixture of native and non-native species that is typical of areas which are not actively managed. It is a common and widespread habitat	Out - small local losses of a common and widespread habitat are not material. Commitment to BNG ensures overall benefit to the biodiversity of the local area.
Trees	Within Site boundary	All trees on Site are very common in the local area, and	Site	The habitat is common and widespread with low diversity.	Out - small local losses of a common and widespread habitat are not material. Commitment to BNG ensures overall benefit to the biodiversity of the local area.
Pond	Within Site boundary	Isolated small patches of habitat that if lost to development would not alter the outcomes of other similar habitat in the in wider area.	Site	This habitat is a concrete lined pool with very little biodiversity value.	Out - small local losses of a common and widespread habitat are not material. Commitment to BNG ensures overall benefit to the biodiversity of the local area.

Ecological Feature	ZoI	ZoI justification	Importance	Importance justification	Scoped in / out of assessment
Ruderal	Within Site boundary	Isolated small patches of habitat that if lost to development would not alter the outcomes of other similar habitat in the in wider area.	Site	The habitat is common and widespread with low diversity.	Out - small local losses of a common and widespread habitat are not material. Commitment to BNG ensures overall benefit to the biodiversity of the local area.
Bats	5 km	Bat survey guidelines[21] state the core sustenance zones[22] (CSZ) for all regularly occurring bat species within the UK. All except barbastelle have CSZ below the 5km ZoI here identified. Barbastelle have a CSZ of 6km however the desk study did not return records of barbastelle.	International	Bats are a European Protected Species and as such are classified at international importance level. However, any impacts from the proposed development would only impact bats within the local population.	Out – bat surveys undertaken on the buildings and the Site as a whole and ruled out roost activity, and anything other than incidental commuting activity on the Site.

[21] Collins, J. (ed) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.
[22] Core Sustenance Zone (CSZ) refers to the area surrounding a communal bat roost within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost.

Ecological Feature	ZoI	ZoI justification	Importance	Importance justification	Scoped in / out of assessment
Nesting birds	Within Site boundary	Given the self-contained nature of the Site and its neighbouring land uses in direct effects on breeding birds using other local habitats would not be expected.	Local	The bird assemblage on Site is likely consistent with those commonly found within the local area.	Out – any habitat removal with the potential to impact nesting birds will be carried out under the supervision of an ecologist or outside of the bird nesting season (March – August), ecological enhancements are embedded within the proposals which will mitigate negative impacts, and CEMP will be created to reduce impact during construction.

7 Significance Criteria

7.1 Magnitude of Impact

7.1.1.1 CIEEM (2018, updated 2019) defines a significant effect as one '*that either supports or undermines biodiversity conservation objectives for 'important ecological features' or for biodiversity in general*'.

7.1.1.2 When considering likely significant effects on ecological features, whether these are negative or positive, the following characteristics of environmental change are taken into account:

- extent – the spatial or geographical area over which the environmental change may occur;
- magnitude – the size, amount, intensity or volume of the environmental change;
- duration – the length of time over which the environmental change may occur;
- frequency – the number of times an environmental change may occur;
- timing – the periods of the day / year / season during which an environmental change may occur; and
- reversibility – whether the environmental change can be reversed through restoration actions or regeneration.

7.1.1.3 Both negative and positive effects are assessed as being significant if the favourable conservation status of an ecological feature would be altered as a result of the Proposed Development. Conservation status is defined in CIEEM 2018 (in paragraph 5.3.2) as follows:

"*habitats - conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area'*; and

'*species - conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area*".

7.1.1.4 Professional judgement has been used, in light of the available evidence, to determine whether the conservation status of an ecological feature will be altered either negatively or positively.

7.1.1.5 When considering designated sites it is their integrity that is considered. This is defined as "*the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*."

7.1.1.6 The assessment of effects on integrity will draw upon the assessment of effects on the conservation status of the features for which the site has been designated.

7.1.1.7 Where likely adverse effects are identified, environmental measures, including mitigation, have been incorporated into the project where practicable. These are described earlier in the embedded measures section.

8 Assessment of Potential Effects

8.1 Ravenscourt Park SINC – Borough Grade II

Baseline

8.1.1.1 Ravenscourt Park Brough Grade II SINC, which is afforded non-statutory protection at the Borough level, occurs to the east of the Site, on the opposite side of the Ravenscourt Park road. In this location the SINC comprises a mosaic of grassland, trees, pond, and native and non-native shrub vegetation which closely reflects the description within the SINC citation.

8.1.1.2 Development proposals do not extend into the Site itself and therefore effects that are considered within this detailed assessment relate to those that might occur indirectly whether during demolition and construction, or occupation of the development.

Demolition and construction

8.1.1.3 The habitats that occur within the SINC where it is adjacent to the Site, are considered to be tolerant of activities associated with highly urbanised locations such as this. They have grown up within metres of an operational rail line (and is in fact split by a branch of the London Underground), a school, commercial and residential properties and a number of roads. As a result of the surrounding infrastructure, the area appears generally well-lit and subject to considerable noise that is generated from infrastructure activities.

8.1.1.4 That said, robust construction measures will still be introduced to ensure that the potential for increased effects to occur during construction are avoided and / or mitigated. In addition, the control of potential pollutants that might arise during the demolition and construction phase will be managed following best practice measures that will be specified by the appointed contractor within a Construction Environmental Management Plan (CEMP). The measures will cover all pollutant pathways including dust suppression, run-off / drainage control and waste disposal. And may include specifying set working hours and / or limiting the noise levels associated with certain types of plant.

8.1.1.5 The CEMP will also specify how construction lighting will limit light spill into the SINC. Although, the SINC is already subject to street lighting associated with such an urbanised environment, care will still be taken to ensure that light levels are not increased.

8.1.1.6 Pollution control measures will be specified within the CEMP and secured through a mechanism such as a planning condition. This will ensure that the pollutant risks can be effectively managed.

8.1.1.7 Due to the embedded environmental measures outlined above, and the implementation of a CEMP during the construction phase of the proposed development, it is considered that the potential for construction effects upon Ravenscourt Park SINC are negligible.

Occupation

8.1.1.8 Given the nature of the occupation and the uses for the proposed development are broadly similar to that which already occur within close proximity of the Site, and that currently noise within the local area is dominated by road and rail activity, it is considered that the development is unlikely to impact the biodiversity value of the SINC as a result of increased noise during its occupation. The SINC is located within a highly urbanised environment, and it is not considered that the new development will cause further impacts to the SINC during occupation.

8.1.1.9 The area in and around the Site, including that of the SINC, is well-lit by street lighting associated with a highly urbanised environment and abutting major rail infrastructure. However, during the detailed design phase that will accompany future reserved matters applications, lighting will be designed sympathetically to limit light spill on to the SINC. Additionally, when the development is occupied, there could be an increase in recreational pressure on the Ravenscourt SINC. However, given the purpose of the development (care and residential home) this impact is likely to not be significant.

9 Biodiversity Net Gain

9.1.1.1 BNG is a concept that in principle is simple – i.e., provide more biodiversity than that which is lost to development. However, to deliver a unified mandatory system it has been necessary for Natural England to develop the Biodiversity Metric 4.0. The metric works by considering the extent of habitat (measured in hectares ha or kilometres dependent on whether the habitat is linear or area-based), how distinctive it is (i.e., its complexity, rarity, diversity etc.), its condition (i.e., its structure and management) and its strategic location. These elements are both used to determine the biodiversity value (measured in habitat units, hedgerow units and river units) of the losses due to a particular development, but also the gains made from its proposed habitat enhancement and creation measures. However, the biodiversity value of the gains is refined based on a number of risk multipliers that account for the difficulty of habitat creation (e.g. it is easier to create 'medium distinctiveness' habitats such as a semi-improved grassland, than a 'very high distinctiveness' active raised bog), the time it takes for a habitat to reach target condition (e.g. a grassland reaches target condition quicker than a woodland), the location of delivery (i.e. habitat creation local to the biodiversity loss is worth more than habitat creation unrelated to the impact) and the time of delivery (e.g. before, during or after the losses have occurred).

9.1.1.2 The metric is also framed by a set of principles that seek to ensure:

- Adherence to the mitigation hierarchy (i.e., avoid, mitigate, compensate, enhance)
- The exclusion of designated sites and irreplaceable habitats from the main calculations (encouraging their avoidance and ensuring any losses are compensated for on a case-by-case basis)
- The "like for like or better" replacement of high value habitats (e.g., removal of valuable woodland, requires replacement of woodland habitat, as opposed to replacement with grassland or other habitats that may provide more biodiversity unit value per hectare ha of creation). These elements are known as the "trading rules".
- Habitats provided to deliver BNG will be managed for a minimum period of 30 years.

9.1.1.3 BNG is considered after the assessment of effects as it is to account for both residual effects and the need to deliver a positive legacy. The Ravenscourt Park Hospital redevelopment design has sought to deliver its BNG through the provision of habitats within the Site, as opposed to an off-site solution.

9.1.2 Results

9.1.2.1 All habitats within the proposed development, with the exception of 24 retained trees, have been considered to be lost; new habitats such green roofs, and perennial grasses and herbs and tree planting are shown on the masterplan in Appendix 2.

9.1.2.2 Overall, the Site baseline is currently considered to be 7.44 habitat units and 0.00 hedgerow units; following development the proposed Site value will increase to 8.95 habitat units and 0.03 hedgerow units respectively.

9.1.2.3 **Tables 9-1 to 9-4**, provide a breakdown of the information within The Biodiversity Metric 4.0 tool.

Table 9-1 Biodiversity Net Gain Baseline – area-based habitats

Habitat	Condition	Extent (ha)	Habitat units
Developed land; sealed surface	N/a	1.06	0.00
Modified grassland	Poor	0.22	0.44
Tall Ruderal	Poor	0.07	0.14
Introduced shrub	N/a	0.21	0.42
Urban tree	Poor	0.30	1.20
Total		**1.86**	**2.20**

Table 9-2 Biodiversity Net Gain Baseline – area-based habitats retained

Habitat	Condition	Extent (ha)	Habitat units
Urban tree	Poor	0.13	0.52
Developed land; sealed surface	N/a	1.06	0.00
Total		**0.13**	**0.52**

Table 9-3 Biodiversity Net Gain Post-Development – area-based habitats

Habitat	Condition	Extent (ha)	Habitat units
Urban Tree	Moderate	0.27*	0.76
Other neutral grassland	Poor	0.26	0.97
Modified grassland	Poor	0.11	0.21
Biodiverse green roof	Poor	0.17	0.39
Ponds (non-priority)	Poor	0.01	0.04
Total		**0.17**	**2.42**

*As trees do not provide a groundcover area, their areas are not included in the total within this table, meaning that the total areas presented remain the same as the area of the Site

Table 9-4 Biodiversity Net Gain Baseline – linear-based habitats

Habitat	Condition	Length (km)	Habitat units
Non Native and Ornamental Hedgerow	Poor	0.01	0.01
Total		**0.01**	**0.01**

9.1.2.4 This represents an increase of 33.42% in habitat units and 100% in hedgerow units. However, the trading rules are not satisfied as the loss of scrub habitats across much of the Site means that replacement with the same broad habitat type is not being fulfilled (e.g. the masterplan shows different habitats being created). However, given the large increase in habitat units, the widespread and common nature of scrub in the surrounds and the general understanding that the scrub (as currently) is reducing the potential biodiversity interest in the area the failure to meet this element of the trading rules is not considered to alter the conclusion that the development will deliver biodiversity net gain.

9.1.2.5 It is also of note that all habitats to be created or enhanced have been assumed to reach a moderate target condition following establishment. This is to reflect that the areas of habitat are relatively small and will be within an area that will be used by the public. This is a precautionary position and therefore, given correct management greater value maybe achieved over time.

10 Conclusions

10.1.1.1 The Site is dominated by a former hospital building, surrounded by associated hardstanding and a small, ancillary building. Areas of vegetation include semi-improved grassland, introduced and native shrubs, tall ruderal and ephemeral growth, a small ornamental pond, and scattered trees.

10.1.1.2 The habitats on-Site have the potential to support nesting birds, reptiles, bats, amphibians, hedgehogs and invertebrates. A CEMP will be written prior to site clearance and will describe the pollution prevention measures, including with regards dust, chemical pollutants, noise and light, to be implemented during the construction phase in order to protect these species.

10.1.1.3 INNS such as the legally controlled Schedule 9 montbretia, and LISI category 3 cherry laurel and butterfly-bush have been recorded on Site and require environmental measures and removal.

10.1.1.4 The ancillary building and three trees were assessed as having moderate potential to support roosting bats. During the emergence surveys, no bats were recorded emerging and are considered likely absent from roosting within.

10.1.1.5 Most of the ecological features present on-Site were scoped out from the impact assessment, apart from Ravenscourt Park SINC, due its close proximity to the Site. **Table 10-1** summarises the conclusions of the assessment.

Table 10-1 Summary of assessment

Ecological Feature	Potential Effect	Mitigation / Compensation	Significant / Not Significant
Ravenscourt Park SINC – Borough Grade II	Pollution during construction	Measures to prevent pollution to be detailed in CEMP	Not Significant
Ravenscourt Park SINC – Borough Grade II	Noise during construction	Measures to prevent significant noise to be detailed in CEMP	Not significant
Ravenscourt Park SINC – Borough Grade II	Recreational disturbance	Not required given the low-level increase anticipated.	Not Significant

A1 Habitat Photographs

A2 Table A2-1 Habitat Photographs

Habitat / Species	Photograph
Main building	
Ancillary building	

Habitat / Species	Photograph
Semi-improved grassland	
Hardstanding, slowly being colonised by butterfly-bush	

Habitat / Species	Photograph
Introduced and native shrubs	
Tall ruderal and ephemeral	

Habitat / Species	Photograph
Standing water (ornamental pond)	
Scattered trees