

Ecological Mitigation Strategy

Phases 1B and 2, St. Ann's New Neighbourhood

A Report To: Peabody Trust, Catalyst by Design and Hill Residential Limited

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Quality Assurance

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Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of Practice for Planning and Development”. The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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1. Introduction

1.1 Project Background

In May 2023 Peabody Trust, Catalyst by Design and Hill Residential Limited commissioned Middlemarch to produce an Ecological Mitigation Strategy associated with Phase 1B and Phase 2 (referred to as the RMA1 boundary) of the St. Ann's New Neighbourhood development in Haringey, London.

St Ann's is a residential led, mixed use scheme providing up to 995 residential units with a hybrid planning application approved on 10th July 2023 (ref: HGY/2022/1833). Reserved Matters 1 (RMA 1) seeks detailed approval of the appearance, landscaping, layout and scale of Phases 1B and 2 of the outline component of the hybrid application. This strategy is required to fulfil Condition 69 of the hybrid application as detailed below:

Each reserved matters application for landscaping shall be accompanied by detailed ecological impact assessment, undertaken by a suitably qualified individual, that includes the results of appropriate up to date surveys, full details of onsite mitigation and enhancement measures to deliver a net gain in biodiversity (including bat boxes, bird boxes, bee bricks and a sensitive lighting scheme) and associated long term maintenance and monitoring plan. The development shall proceed in accordance with the mitigation and enhancement measures.

Middlemarch has previously carried out a suite of bat surveys at the St. Ann's Hospital site, findings of which are detailed in the following reports:

- Preliminary Bat Roost Assessment, Report RT-MME-155416-01 (2021);
- Dusk Emergence and Dawn Re-Entry Surveys, Report RT-MME-155416-02 (2021);
- Bat Surveys, Report RT-MME- 158642 (2022); and,
- Updated Bat Surveys, Report RT-MME-160950 (2023).

Additional ecological survey work to inform the hybrid application was carried out by Ecosulis in 2017 and London Wildlife Trust in 2019-2022 and was used to inform the Ecology Chapter of the Environmental Statement (ES) and strategic design for the entire site.

Middlemarch has also been commissioned to produce the following reports to support the RMA1 application, having regard to various conditions of the hybrid consent which requires the submission of a range of information relating to ecology:

- Construction Ecological Management Plan (Report RT-MME-159856-02); and,
- Landscape and Ecology Management Plan (Report RT-MME-159856-03).

The overall aim of the EMS is to outline potential impacts to ecological features that could occur as a result of the proposed development, and to detail control measures and mitigation proposals that will be implemented to ensure that the works proceed without breaching wildlife legislation, and that the favourable conservation status of ecological features will be maintained. The content of this document is guided by wildlife legislation and relevant planning policy and biodiversity targets.

To inform this EMS an updated ecological desk study and Phase 1 Habitat Survey for Phases 1B and 2 was undertaken. An updated Biodiversity Metric Assessment (BMA) of the entire scheme

(Phases 1A, 1B, 2 and 3) was also undertaken to allow for comparison with the Biodiversity Net Gain Report produced for the hybrid application.

Detailed methodology is included in Chapter 2.

1.2 Site Description and Context

Table 1.1 provides a brief summary of the site and its surroundings.

Attribute	Description
Location	St. Ann's Hospital, London Borough of Haringey
National Grid Reference	TQ 3246 8856
Site Area (ha)	2.39 ha (RMA1)
Topography	Flat
Land Cover (on site)	The RMA1 boundary, hereafter referred to as the 'application site', is dominated by former hospital buildings and hardstanding, with areas of grassland, shrubs and scattered trees located throughout the grounds. Mature woodland lies along the southern boundary of the site forming St Ann's Hospital Woods, Site of Importance for Nature Conservation (SINC).
Land Cover (site surrounds)	The site is surrounded by urban environments, dominated by high density housing and associated gardens. An active railway line runs along the southern boundary beyond St Ann's Hospital Wood. The remaining hospital site extends to the immediate north and east of the application site. Approximately 190 m north is Chestnuts Park comprising open green space and mature trees.

Table 1.1: Summary of Site and Surroundings

1.2 Description of Development

Application for the approval of reserved matters in respect of appearance, landscaping, layout and scale relating to Phases 1B and 2 associated with the outline component of planning permission HGY/2022/1833 for *"Outline planning permission (with all matters reserved except for access) for Phases 1B, 2 and 3, for: (a) the erection of new buildings for residential development (Use Class C3) and a flexible range of non-residential uses within Use Class E, F1/F2; (b) provision of associated pedestrian and cycle accesses; (c) landscaping including enhancements to the St Ann's Hospital Wood and Tottenham Railsides Site of Importance for Nature Conservation (SINC); and, (d) car and cycle parking spaces and servicing spaces."*

1.3 Documentation Provided

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.2.

Document / Drawing Number	Author
Environmental Statement (ES) Chapter 13: Biodiversity	London Wildlife Trust
Site Wide Urban Greening Factor (UGF) Plan: N15302-A&S-ZZ-ZZ-DR-L-40002 Rev 05	Adam & Sutherland
Detail Planting Plans Phase 1B & 2: N15302-A&S-ZZ-ZZ-DR-L-400(31-35) Rev 03	Adam & Sutherland
Detail Planting Plans Phase 1A: N15301-A&S-ZZ-ZZ-DR-L-400(31-37)	Adam & Sutherland
Existing Tree Plan (overlaid with proposed masterplan drawing): SA125-JCLA-DR-LND-0001	Adam & Sutherland
Existing Tree Canopy Calculation: SA125-JCLA-DR-LND-0004	Adam & Sutherland

Table 1.2: Documentation Provided by Client

2. Methods

2.1 Determining the Ecological Baseline

2.1.1 Desk Study

An updated ecological desk study was undertaken in May 2023 to determine the presence of any designated nature conservation sites and protected species in proximity to the site. This involved contacting appropriate statutory and non-statutory organisations which hold ecological data relating to the survey area. Middlemarch then assimilated and reviewed the desk study data provided by these organisations.

The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites; and,
- Greenspace Information for Greater London (GIGL).

The desk study included a search for European statutory nature conservation sites within a 10 km radius of the site, UK statutory sites within a 2 km radius and non-statutory sites and protected/notable species records within a 2 km radius.

The data collected from the consultees is discussed in the following chapters and a summary provided in Appendix 1. In compliance with the terms and conditions relating to its commercial use, the full desk study data are not provided within this report. Relevant local planning policy with regard to biodiversity and nature conservation is provided in Appendix 2.

2.1.2 Field Surveys

Methodologies for each of the surveys undertaken at the site are summarised in Table 2.1.

Survey	Timing	Description of Methodology
Phase 1 Habitat Survey	May 2023	A field survey of Phases 1B and 2 (and peripheral areas) was conducted following the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee¹ and the Institute of Environmental Assessment². Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim was to provide a record of habitats present on site and inform the mitigation requirements for RMA1. A Phase 1 Habitat Map (C159856-01-01) and habitat descriptions are included in Chapter 9. During the survey, the presence or potential presence of protected species was noted where observed. This included a review of suitable habitat opportunities or field signs of notable species groups (amphibians, bats, birds, terrestrial and aquatic invertebrates, terrestrial and aquatic mammals, plants and reptiles).

Table 2.1: Summary of Ecological Field Surveys Undertaken to Inform EMS (cont.)

¹ Joint Nature Conservation Committee (2010). *Handbook for Phase 1 Habitat Survey: A technique for environmental audit (reprint)*. Joint Nature Conservation Committee, Peterborough.

² Institute of Environmental Assessment. (1995). *Guidelines for Baseline Ecological Assessment*, Institute of Environmental Assessment. E&FN Spon, An Imprint of Chapman and Hall. London.

Survey	Timing	Description of Methodology
Phase 1 Habitat Survey	May 2023	The survey was undertaken on 23rd May 2023 by Angel Fernandez BSc ACIEEM (Senior Ecological Consultant) and Gillian Tetlow BSc PGDip (Biodiversity Consultant).
Bat Surveys		A Preliminary Bat Roost Assessment of all buildings within Phases 1A, 1B, 2 and 3 was carried out in 2022 in line with the specifications detailed in Bat Mitigation Guidelines (English Nature, 2004) ³ and Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) ⁴ . A visual assessment was conducted during daylight hours of the structures to determine the presence of any Potential Roost Features (PRFs), together with a general appraisal of the suitability of the site for foraging and commuting bats. The structures were then assigned a category (high, moderate, low and negligible bat roost potential) based on the potential roost features present (Collins, 2016) ⁴ .
	August/ September 2022 (Bat Surveys, Report RT-MME-158542)	All buildings within Phases 1A and 1B with high potential to support roosting bats were subject to further survey in 2022. In line with Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016) ⁴ , three bat surveys were carried out for each building consisting of either two dusk emergence surveys and one dawn re-entry survey, or one dusk emergence survey and two dawn re-entry surveys. The aim of these surveys was to detect whether bats are roosting within the buildings, and to enable a profile of site utilisation by bats to be compiled.
	July 2023 (Updated Bat Survey, Report RT-MME-160950)	Electronic bat detectors were used to aid in the determination of bat species using the site and recordings were analysed to verify the findings and support species identification. To bring the data of previous bat surveys up to date, for Phases 1A and 1B, a single updated dusk emergence or dawn re-entry survey was undertaken in July 2023.
		Dusk emergence and dawn re-entry bat surveys have yet to be undertaken of the buildings within Phases 2 and 3 that have been identified as having bat roosting potential (with the exception of B24). Given demolition works within Phase 2 are not scheduled until 2025, it was agreed with the Ecology Officer from Haringey that Dusk Emergence and Dawn Re-entry surveys will be deferred until the activity season prior to demolition (May – September 2024) in order to avoid abortive work.

Table 2.1: (cont'd) Summary of Ecological Field Surveys Undertaken to Inform EMS

³ English Nature (2004). *Bat Mitigation Guidelines*. English Nature, Peterborough

⁴ Collins, J. (ed). (2016). *Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd Ed.)*. The Bat Conservation Trust, London

2.2 Biodiversity Metric Assessment

A Biodiversity Net Gain Report (London Wildlife Trust, 2022)⁵ was previously prepared for the hybrid application. This report concluded that the scheme would result in a 12 % biodiversity net gain (BNG). The baseline for this report utilised descriptions of habitats and measurement of areas provided in the St Ann's Hospital Site Strategic Ecology Outline (London Wildlife Trust, 2019)⁶.

In order to ascertain whether the scheme continues to achieve a biodiversity net gain when taking into account updated design proposals for a RMA1, a site-wide Biodiversity Metric Assessment was undertaken by Sarah Boulstridge BSc Hons (Principal Consultant) using 'The Biodiversity Metric 3.0' and following guidance set out by Panks *et al.* (2021)⁷. Metric 3.0 was used, rather than the more recent Metric 4.0, to allow a direct comparison to be made to the original calculation.

The data used for the assessment and the assumptions applied are described below.

2.2.1 Data Sources

Existing Baseline

The baseline habitat data and condition assessment has been determined utilising existing data provided by London Wildlife Trust. Given original raw data files were not available from LWT the habitats have been re-mapped, resulting in slightly adjusted baseline figures. Site visits by Middlemarch in 2023 also confirmed a greater extent of existing woodland along the southern site boundary, which has been reflected in the baseline figures. In addition, it is important to note that within the baseline habitat map included within the Biodiversity Net Gain Report (London Wildlife Trust, 2022)⁵ areas were previously mapped as '*Open Mosaic on Previously Developed Land*', however correspondence with the LWT reveals that upon quality assurance this was re-classified as 'Ruderal/Ephemeral' in Poor condition and incorporated into the metric as such. The slight differences in baseline data are fully described in Section 4.1.3.

An adjusted Baseline Habitat Map (C159856-01-02RevA) showing the extent and location of each habitat recorded across the entire site (hybrid application boundary) is included in Chapter 9.

Each habitat or linear feature recorded within the site is assigned a score for 'Distinctiveness', 'Condition' and 'Strategic Significance'. These categorisations have been kept consistent with those used in the original calculation carried out by LWT.

Future Baseline

The future baseline conditions of the site are based on the plans detailed in Table 1.2 and associated planting schedules. This includes the Urban Greening Factor (UGF) plan (which includes basic detail for Phase 3) and detailed planting plans for Phase 1A, 1B and 2.

Target habitat 'Distinctiveness' and 'Condition' values are subsequently assigned for created or enhanced habitats, taking account of any management proposals detailed for these features. The areas (or lengths) of these new target habitats are entered into the calculator and are assigned

⁵ London Wildlife Trust (2022) *Appendix 13.6 St Ann's New Neighbourhood Biodiversity Net Gain Report*. London Wildlife Trust, London

⁶ London Wildlife Trust (2019) *Appendix 13.2 St Ann's Hospital Site Strategic Ecological Outline*. London Wildlife Trust, London

⁷ Panks, S., White, N., Newsome, A., Potter, J., Heydon, M., Mayhew, E., Alvarez, M., Russell, T., Scott, S. J., Heaver, M., Scott, S. H., Trewick, J., Butcher, B. and Stone, D. (2021). *Biodiversity metric 3.0: Auditing and accounting for biodiversity – User Guide*. Natural England.

predicted scores for 'Strategic Significance'. As the calculation of target habitats requires some degree of prediction based on professional judgement, additional risk factors are included in the calculation to account for the difficulty in restoring or creating habitats and the time it takes for enhanced or created habitats to reach their predicted condition.

Following the calculation of the existing and future biodiversity value of the site, a calculation of the net biodiversity change is carried out to determine the 'Post-intervention habitat (or hedgerow) units', along with a figure for the percentage of net biodiversity impact loss (or gain).

2.2.2 Constraints and Assumptions

The following constraints and assumptions are applied to this report:

- For the purposes of this report, the term 'Habitat Loss' is applied to proposals that result in a change of habitat type or habitat 'distinctiveness'. This is defined in the Biodiversity Metric even where the new habitat type is created without any physical loss of the previous habitat type (e.g. creation of scrub over grassland). 'Habitat Enhancement' is applied where the habitat type and 'distinctiveness' remains the same, but the 'condition' of the habitat is improved;
- The BMA necessitates an estimation of future baseline values, based on professional opinion, to determine the change in biodiversity value that could occur as a result of the proposals at the site. The assumptions about target habitat types or condition in this report are based on professional opinion about the likely achievable outcomes at the site, based on the proposed planting plans and presumed management resources. All target habitats presume the implementation of a long-term Management Plan to achieve these ends.
- According to the 'Urban Tree Helper' embedded in the Metric on the Main Menu Tab the area of canopy created by new tree planting is estimated to be 2.4ha. However, this is significantly higher than the projected area of new canopy cover shown on the UGF Plan (0.58 ha). Consequently, the projected canopy cover inputted takes the halfway point between these two estimates (1.49 ha), which is consistent with the approach previously taken by the London Wildlife Trust (2022)⁵.

3. Nature Conservation Sites

3.1 Baseline Data

3.1.1 Desk Study

The desk study search identified the following designated sites within the search parameters (full details are provided in Appendix 1):

European Statutory Sites within 10 km:

- Lee Valley Special Protection Area (SPA) / Ramsar (1,930 m east); and,
- Epping Forest Special Area of Conservation (SAC) (6,400 m east).

UK Statutory Sites within 2 km:

- Walthamstow Reservoirs Site of Special Scientific Interest (SSSI) which has overlapping designation with Lee Valley SPA (1,930 m east); and,
- Four Local Nature Reserves (LNR), the closest being Railway Fields located 470 m west.

Reference to Natural England's SSSI Impact Risk Zone (IRZ) Tool indicates that the application site falls within two SSSI Impact Risk Zones associated with Lee Valley SPA/Ramsar and Walthamstow Reservoirs SSSI.

Non-statutory Sites within 2 km:

- 29 Sites of Interest for Nature Conservation (SINC), including parks, churchyards, railway lines and watercourses. The closest sites comprise:
 - St Ann's Hospital Wood SINC (Local) which falls within the application site boundary at its southern extent; and,
 - Tottenham Railside SINC (Borough) lies immediately adjacent to the southern boundary; and,
 - Harringay Stadium Slopes SINC (Borough), 50 m to the south.

The Biodiversity Chapter of the ES identified that St Ann's Hospital Wood SINC will be, or has the potential to be, impacted by the construction and/or operational phases of the proposed development. The remaining sites are not considered further within this assessment and the rationale for this decision is provided in Table 3.1.

Ecological Feature	Rationale
European & UK Statutory Sites	Reference to the IRZ Tool indicates that 'residential development' is not a category of concern. All seven statutory sites within the search parameters lie with an existing suburban landscape with no obvious connectivity (such as hydrological pathways) to/from the application site. In addition, a consultation response from Natural England regarding the hybrid application, received on 16 th August 2022 (Ref.401628), stated that ' <i>based on the plans submitted, Natural England considers that the proposed development will not have significant adverse impacts on statutorily protected nature conservation sites or landscapes</i> '.

Table 3.1: Sites ruled out from further assessment (continues)

Ecological Feature	Rationale
SINCs adjacent to site	The retention of the woodland on site will ensure that the ecological corridor function of Tottenham Railsides Borough SINC and connecting Harringay Stadium Slopes SINC will be unaffected. In addition, mitigation measures put in place to protect the SINC on site will additionally protect those non-statutory sites adjacent.
SINC within 2 km	The remaining sites are in excess of 100 m from the application site and are separated by extensive areas of urban and suburban development. Given the distance and lack of meaningful ecological connectivity between these sites and the application site, these features have been scoped out from further assessment and are not discussed within the remainder of this report.

Table 3.1: (Continued) Sites ruled out from further assessment

3.2 Impact Assessment

3.2.1 Pre and Mid Development / Construction Phase Impacts

The woodland in the southern portion of the site, which forms St Ann's Hospital Woodland SINC, will be retained, however some minor clearance along the northern edge may be required to allow for the construction of a c.2 m wide compacted gravel path. The aim is to minimise any impact on existing habitat by tracing the route along clearer areas.

In the absence of mitigation construction activities such as ground works and use of operational machinery could result in the physical damage and disturbance of the woodland. There is also the potential for the SINC to be temporarily adversely impacted during the construction phase as a result of a localised increase in air pollutants (e.g. nitrogen and dust deposition) from construction traffic and activities, as well as increases in illumination from temporary lighting, resulting in potential disturbance to bats using the woodland as a commuting route (discussed further in Chapter 5). The Biodiversity Chapter of the ES identified that without mitigation these impacts would have a temporary minor adverse effect on the woodland SINC at the local level.

3.2.2 Long Term / Operational Phase Impacts

Potential operational phase impacts on the St Ann's Hospital Woodland comprise:

- Disturbance and degradation of habitats resulting from increased human presence, increased disturbance could limit the number and variety of birds feeding and nesting in the woodland; and,
- A lack of, or inappropriate, management, which may result in a decline in conservation status of the local bird population.

The Biodiversity Chapter of the ES identified that without mitigation the above impacts would result in a permanent moderate adverse effect at the site level.

3.3 Avoidance and Mitigation Measures

3.3.1 Habitat Retention

In accordance with the ecological mitigation hierarchy (i.e. avoid, mitigate, compensate, enhance) the presence of St Ann's Woodland SINC was taken into account during the development of the scheme design. The existing woodland will be retained and the extent of the SINC increased through establishment of complementary habitats along its boundary.

3.3.2 Construction Phase Measures

To avoid and mitigate for construction impacts on St Ann's Woodland SINC, the following measures are proposed:

- Implementation of buffer zones and use of protective fencing to clearly demarcate the existing boundary of the SINC and prevent any unintentional incursion into the area;
- Protection of retained trees in accordance with British Standard 5837:2012 "Trees in relation to design, demolition and construction - recommendations";
- Implementation of pollution prevention measures; and,
- Control of lighting, noise and vibration.

These measures will be implemented through the use of a Construction Ecological Management Plan (CEcMP). Please refer to Report RT-MME-159856-02 for further details.

3.3.3 Operation Phase Measures

A Landscape Ecology and Management Plan (LEMP) has been produced and will be implemented. This document details how the retained SINC will be managed during the operational phase of the proposed development and also includes proposals for monitoring, to allow the success of management to be assessed and to inform requirements for any changes in management practices. Please refer to Report RT-MME-159856-03 for further details.

Access by residents into the main part of the SINC will be discouraged through the installation of a designated pathway/nature trail along the northern edge of the woodland which will reduce residents straying into habitats outside the path. The operational lighting scheme will also need to be designed to ensure that any lighting required along the pathway limits light spill into the woodland (see Chapter 5).

3.4 Compensation and Enhancement Measures

Reference to the Detail Planting Plans (see Table 1.2) indicates that the woodland SINC will be enhanced and extended through the creation of a 'transitional buffer zone' to include planting of new native trees, understorey/ground flora species and wildflower rich wet grassland (bioswale). This will create a more ecologically rich woodland edge that should attract a wider range of invertebrates than currently use the site, thus benefitting foraging bats, birds, reptiles and small mammals. Further details regarding habitat creation are provided in Section 4.4.

3.5 Residual Effects

The Biodiversity Chapter of the ES concluded that with implementation of the measures outlined above the overall residual effect on the woodland SINC would be as follows:

- Construction – neutral; and,
- Operation – minor beneficial.

3.6 Post Development Management and Monitoring

The LEMP outlines the ongoing management measures required for habitats within the SINC. The implementation of this document will ensure that the condition of the SINC is enhanced and maintained in the long-term.

4. Habitats

4.1 Baseline Data

4.1.1 Desk Study

Table 4.1 summarises known priority or notable habitats within a 1 km radius of the site.

Habitat Type	No. of Records	Location of Nearest Record
Deciduous woodland	6	On site
Open Habitat Mosaic (draft)	2	On site
Woodpasture and Parkland	1	570 m south-west

Table 4.1: Summary of Priority/Notable Habitats

Reference to OS mapped data and aerial imagery reveals there are no obvious ponds within a 1 km radius of the application site. A large reservoir is located c.780 m south.

4.1.2 Field Survey

Updated Phase 1 Habitat Survey (RMA1)

An updated Phase 1 Habitat Survey was undertaken of the application site (RMA1) in May 2023. A Phase 1 Habitat Map and associated habitat descriptions are included in Chapter 9. Where the RMA1 boundary cut through the middle of existing habitats i.e. buildings and woodland, the entirety of the habitat parcel and peripheral areas were also surveyed, identified on the Phase 1 Map as the 'Survey Area 2023'. The application site was dominated by former hospital buildings and hardstanding, with areas of grassland, shrubs and scattered trees located throughout the grounds. It was noted that some areas of vegetation had been subject to recent clearance. Mature woodland lies along the southern boundary of the site forming St Ann's Hospital Woods, Site of Importance for Nature Conservation (SINC).

The most notable habitat surveyed is the semi-natural broadleaved woodland which is considered to meet priority habitat criteria. The mature trees on site are also of intrinsic value as they cannot be easily replaced in the short to medium term and complement the wooded SINC to the south.

Grassland, introduced shrub, ornamental hedgerows and other habitat (those which had recently been cleared) are not considered to be important and do not require further detailed consideration in the context of assessing impacts, however they do hold some value and contribute to overall site biodiversity, which is recognised through the use of the biodiversity metric tool.

The buildings and hardstanding have negligible biodiversity value and are not considered further within this assessment. The buildings have been identified as having the potential to support roosting bats, the importance of which is considered in the context of protected and notable species within this assessment.

4.1.3 Site Wide Habitat Baseline (for BMA purposes)

As outlined in Section 2.2, the habitat baseline determined by London Wildlife Trust has been utilised within the updated metric calculation to allow for a direct comparison to be made. The slight discrepancies between habitat areas as a result of re-mapping the data are outlined in Table 4.2. An adjusted Baseline Habitat Map (C159856-01-02RevA) is provided in Chapter 9.

Habitat Type and Condition	Area (ha) Original	Value (BU) Original	Area (ha) Adjusted	Value (BU) Adjusted
Other woodland; broadleaved (moderate)	0.26	2.08	0.35	2.80
Other coniferous woodland (poor)	0.01	0.02	0.02	0.04
Mixed scrub (poor)	0.09	0.36	0.1	0.40
Bramble scrub (poor)	0.03	0.12	0.02	0.08
Other neutral grassland (poor)	0.32	1.28	0.38	1.52
Other neutral grassland (fairly poor)	0.11	0.66	0.11	0.66
Modified grassland (poor)	1.55	3.1	1.63	3.26
Ruderal/ephemeral (moderate)	0.05	0.20	0.05	0.20
Ruderal/ephemeral (poor)	0.38	0.76	0.36	0.72
Introduced shrub (poor)	0.59	1.18	0.44	0.88
Vegetated garden (poor)	0.04	0.08	0.04	0.08
Developed land; sealed surface (N/A)	3.66	0.00	3.52	0.00
Other woodland; mixed (fairly poor)	0.02	0.09	0.03	0.18
Tall herb communities (poor)	0.02	0.11	0.01	0.06
Tall herb communities (fairly poor)	0.07	0.63	*	-
Urban tree (moderate)	1.1	8.80	1.1	8.80
Total	7.20**	19.47	7.06**	19.68
Key: *Area now forms part of woodland habitat **Total excludes tree area				

Table 4.2: Habitat Baseline Comparison

As the above table demonstrates, the adjusted habitat baseline value of **19.68 BU** is broadly in line with the original figure. A hedgerow baseline was not previously calculated by LWT, however for completeness this has been determined below in Table 4.3:

Hedgerow Type and Condition	Length (km)	Value (BU)
Hedge ornamental non-native (poor)	0.37	0.37
Total	0.37	0.37

Table 4.3: Hedge Baseline

The baseline metric calculations are provided in Appendix 3.

4.2 Impact Assessment

4.2.1 Pre – and Mid-Development / Construction Phase Impacts

The woodland within the application site, as well as a number of mature scattered trees, will be retained as part of the development. Potential impacts on the woodland habitat are discussed in Section 3.2.1.

In the absence of mitigation construction activities such as ground works and use of operational machinery could result in the physical damage and disturbance of retained trees.

The remaining habitats within the application site will be lost to facilitate the development.

4.2.2 Long- Term / Operational Phase Impacts

There is the potential for retained and created habitats to be subject to disturbance and degradation due to increased recreational pressure. Limited or inappropriate management of retained and created habitats could also lead to a decline in their conservation status in the long-term.

4.3 Avoidance and Mitigation Measures

4.3.1 Habitat Retention

The development has been designed to minimise the loss of notable habitats where possible (retention of semi-natural broad-leaved woodland and some mature trees). The retained woodland habitat will also be enhanced (please refer to Section 4.4).

4.3.2 Construction Phase Measures

The implementation of the measures outlined in Section 3.3.2 to protect St. Anns Wood will also ensure that other retained habitats (namely scattered trees) are protected throughout construction works. These measures will be implemented through the use of the CECMP.

4.3.3 Operational Phase Measures

The implementation of the LEMP (Report RT-MME-159856-03) will ensure that declines in the conservation status of retained and created habitats are avoided.

4.4 Compensation and Enhancement Measures

As detailed in Section 2.2 a site wide approach to soft landscaping has been adopted and therefore compensation and enhancement measures for RMA1 are discussed in the context of the entire site.

A series of habitat enhancement and creation proposals have been incorporated into the landscape strategy to compensate for the loss of habitats on site and deliver an overall net gain for biodiversity. The proposals will create effective steppingstones and links within the site boundary and will comprise:

- Enhancement of existing woodland and new woodland planting;
- Species-rich lawn creation;
- Wildflower and wetland grassland creation;
- SuDs features (including bioswales, bioretention tree pits and rain gardens);
- Ground cover and shrub planting (largely ornamental);

- Tree and hedgerow planting; and,
- Green roofs (biodiverse).

The future baseline for the purposes of this BMA is set out in the UGF Plan and Detailed Planting Plans (please refer to Table 1.2). An adapted map (C159856-01-03RevA) combining this detail is included in Chapter 9 showing how each landscaping area has been translated to a habitat type for the purpose of the BMA.

The proposals (habitat loss, retention, enhancement and creation combined) will deliver the following:

- **Habitats:** net gain of 2.81 habitat units, a **14.29% increase** of baseline habitat value.
- **Hedgerows:** net gain of 0.80 hedgerow units, a **214.99% increase** of baseline hedgerow value.

The future baseline metric calculations are provided in Appendix 3.

The BMA demonstrates that the overall scheme is still achieving a greater than 10% biodiversity net gain when taking into account updated design proposals for a RMA1. The 14.29 % increase of baseline habitat value actually demonstrates a betterment to the original 12 % BNG projected as part of the hybrid application.

Additional faunal enhancement features include bat and bird boxes (see Sections 5.4 and 6.4 respectively).

4.5 Post Development Management and Monitoring

The LEMP outlines the ongoing management measures required for the retained and created habitats. If the measures within this document are implemented, it is considered that valuable habitats within the site will fulfil their biodiversity potential and continue to support a range of species. The implementation of measures within the LEMP will also be key to ensuring that target conditions for created and enhanced habitats are met, and a biodiversity net gain is achieved.

5. Bats

5.1 Baseline Data

5.1.1 Desk Study

The desk study identified records of at least nine bat species (noctule *Nyctalus noctula*, Daubenton's bat *Myotis daubentonii*, common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, Nathusius pipistrelle *Pipistrellus nathusii*, whiskered bat *Myotis mystacinus*, Leisler's bat *Nyctalus leisleri*, brown long-eared bat *Plecotus auritus* and Natterer's bat *Myotis nattereri*) within a 2 km radius of the site. The closest record was of an unidentified bat species from 2020, situated 387 m south-west.

5.1.2 Field Surveys

Phase 1B (roosting)

The bat survey work undertaken during 2021, 2022 and 2023 identified two roosts within Phase 1B; one common pipistrelle day roost in building 34, and one soprano pipistrelle day roost within building 50. All licensable activities in Phase 1B works required under Natural England Bat Mitigation Licence (Licence no. 2023-65542-EPS-MIT) have been completed on site. Please refer to Report RT-MME- RT-MME-159304 (ECoW) for details.

Phase 2 (roosting)

A Preliminary Bat Roost Assessment of buildings within Phase 2 was carried out in 2022, identifying buildings with high, low and negligible bat roosting potential. Given demolition works within Phase 2 are not scheduled until 2025, it was agreed with the Ecology Officer from Haringey that Dusk Emergence and Dawn Re-entry surveys will be deferred until the activity season prior to demolition (May – September 2024) in order to avoid abortive work.

Foraging/commuting

Five species of bat were recorded during the 2023 updated bat surveys: noctule, common pipistrelle, Nathusius' pipistrelle, soprano pipistrelle and brown long-eared bat. Commuting and foraging activity was recorded during the survey period; this was predominantly over the areas of grassland and scattered trees located between the hospital buildings, with intermittent foraging activity also recorded over the adjacent residential gardens located to the west of the site, along the trees lining St Ann's Road to the north, and along St Ann's Wood located to the south. Bats were observed entering and exiting the survey area by commuting along the boundary trees. The treeline to the west of the site and St Ann's Wood SINC to the south are considered key commuting and foraging habitats for bats at the site level.

5.2 Impact Assessment

5.2.1 Pre – and Mid Development / Construction Phase Impacts

If bats are roosting within the remaining buildings within Phase 2, in the absence of mitigation, there is the potential for building demolition works to result in the killing or injury of bats and the loss of roosts. Loss or disturbance of a bat roost would be in breach of the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). The Biodiversity Chapter of the ES identified that without mitigation the loss/disturbance of bat roosts would have a permanent moderate adverse effect at the local level.

The removal of some scattered trees and shrubs on site will reduce foraging opportunities for bats, however the key area of foraging habitat along the southern boundary will be retained and enhanced (see Section 4.4.). Construction lighting has the potential to cause fragmentation of dark corridors which may be utilised by foraging and commuting bats, and significant increases in noise or vibration may alter how bats utilise the site during the construction phase. The Biodiversity Chapter of the ES identified that without mitigation this would have a temporary minor adverse effect on the population of foraging/commuting bats at the site level.

5.2.2 Long-Term / Operational Phase Impacts

Increased human and vehicular activity, in combination with increased lighting throughout the site due to the residential nature of the development, could have a negative impact on the favourable conservation status of bats utilising habitats within the site for roosting, foraging and commuting purposes. The Biodiversity Chapter of the ES identified that without mitigation this would constitute a permanent moderate adverse effect at the site level.

5.3 Avoidance and Mitigation Measures

The avoidance and mitigation measures proposed will:

- Prevent killing or injury of bats, or destruction or disturbance of bat roosts; and,
- Minimise disturbance to bat foraging and commuting habitat.

5.3.1 Further Surveys (Phase 2)

Further survey effort, including an updated Preliminary Roost Assessment (PRA) and subsequent dusk emergence and dawn re-entry bat surveys, will be undertaken of buildings within Phase 2 prior to the commencement of any works to these buildings (scheduled 2025). It is understood that the further survey work will be conditioned as part of the RMA1. If required a Natural England licence will be applied for.

5.3.2 General Construction Phase Measures

To minimise construction impacts on bats, the following measures are proposed:

- Appropriate measures to minimise any temporary noise, vibration or light disturbance effects on foraging bats or bats using roosts within the surrounding area; and,
- Protection of retained trees and woodland.

These measures will be implemented via the use of the CECMP (Report RT-MME-159856-02).

5.3.3 Operational Phase Measures

The operational lighting scheme or schemes will need to be designed to ensure that lighting installed within the application site will not illuminate important roosting, foraging or commuting areas for bats.

The Bat Conservation Trust's 2012 publication 'Landscape and Urban Design for Bats and Biodiversity' (Gunnell *et al.*, 2012)⁸ states *"With smarter lighting, rather than less lighting, it is possible to reduce the effects of light pollution. Lighting should only be erected where it is needed, illuminated during the time period it will be used, and only to levels that enhance visibility. Artificial light shining on bat roosts, their access points and the flightpaths leading to and from the roosts must always be avoided. Where lighting is unavoidable, consideration should focus on the design"*.

⁸ Gunnell, K., Grant, G. and Williams, C. (2012) *Landscape and urban design for bats and biodiversity*. Bat Conservation Trust

The document then highlights a series of design principles recommended to manage the impact of lighting on bats, which are reiterated in '*Bats and artificial lighting in the UK*' (Miles *et al*, 2018)⁹. The detailed lighting design for the proposed development will take the following principals into account:

- Do not provide excessive lighting. Use only the minimum amount of light needed for safety;
- Minimise light spill. Eliminate any bare bulbs and any upward pointing light. The spread of light should be kept near to or below the horizontal. Flat cut-off lanterns are best;
- Use narrow spectrum bulbs to lower the range of species affected by lighting. Use light sources that emit minimal ultraviolet light and avoid the white and blue wavelengths of the light spectrum to avoid attracting lots of insects. Lighting regimes that attract lots of insects result in a reduction of insects in other areas like parks and gardens that bats maybe using for foraging;
- Lights should peak higher than 550nm and use glass lantern covers to filter UV lights. White LED lights do not emit UV but have still been shown to disturb slow flying bat species.
- Reduce the height of lighting columns. Light at a lower level reduces impact. However, higher a mounting heights allow lower main beam angles, which can assist in reducing glare;
- For pedestrian lighting, use low-level lighting that is as directional as possible and below 3lux at ground level but preferably below 1lux;
- Increase the spacing of lanterns;
- Limit the times that lights are on to provide some dark periods;
- Avoid using reflective surfaces under lights; and,
- Use temporary close-boarded fencing until vegetation matures to shield sensitive areas from lighting.

The Operational Lighting Strategy can be secured by a suitably worded planning condition.

5.4 Compensation and Enhancement Measures

The compensation and enhancement measures proposed will:

- Replace bat roosting features lost to the development;
- Replace bat foraging and commuting habitat lost to the development; and,
- Provide additional roosting and foraging features for bats.

Phase 1B

Any replacement/additional bat boxes will be provided in accordance with the licence (Licence no. 2023-65542-EPS-MIT). The following boxes will be incorporated within Phase 1B:

- 4 no. Schwegler 2F* and Schwegler 2F DFP* boxes will be erected on site within trees (already installed); and,
- 2no. Habibat* boxes will be built into the new buildings constructed during Phase 1B works.

**or appropriate alternatives if there are issues with stock availability*

⁹ Miles, J., Ferguson, J., Smith, N. and Fox, H. (2018) *Bats and artificial lighting in the UK. Bats and the Built Environment Series*. Bat Conservation Trust and Institution of Lighting Professionals.

Phase 2

Further surveys as outlined in Section 5.3.1 and the subsequent licence application to Natural England (if required) will inform the requirements for the provision of bat boxes to compensate for any roosts lost as a result of this phase of the development.

Phase 1B and 2

The landscaping scheme has been designed to ensure that strong ecological networks are maintained and created across the site, providing foraging and commuting habitat for bats. Areas of wet and species-rich grassland will create a 'transitional buffer zone' between the SINC and development, whilst biodiverse green roofs in combination with trees, shrub and hedgerow planting will ensure ecological steppingstones are created throughout the built areas. Further details regarding habitat creation are provided in Section 4.4.

5.5 Residual Effects

The Biodiversity Chapter of the ES concluded that subject to the implementation of the measures outlined above the overall residual effect on bats would be as follows:

- Construction – neutral; and,
- Operation – minor beneficial.

5.6 Post - Development Management and Monitoring

Monitoring of replacement bat roosts, if required, will be carried out in accordance with the Natural England licence. General maintenance checks of bat boxes should be completed annually by a suitably qualified ecologist, to ensure these roosting features remain fit for purpose.

The long-term management of retained and created habitats will be carried out in accordance with the LEMP.

6. Birds

6.1 Baseline Data

6.1.1 Desk Study

The desk study provided records of 33 bird species listed on Schedule 1 of the Wildlife Countryside Act 1981 (as amended) potentially located within a 2 km radius of the survey area. The specific breeding ranges and habitat requirements of these species mean that they are unlikely to nest within the survey area. Numerous additional records of Species of Principal Importance were provided including house sparrow *Passer domesticus* and starling *Sturnus vulgaris*, for which suitable habitat is present on site.

6.1.2 Field Surveys

The habitats on site, such as woodland, hedgerows, trees and shrubs provide suitable opportunities for nesting birds. A variety of notable (Red List, Amber List and Species of Principal Importance) as well as common bird species were observed during the updated Phase 1 Habitat Survey in 2023, including magpie *Pica pica*, woodpigeon *Columba palumbus*, feral pigeon *Columba palumbus* (nesting in B47), ringed-necked parakeet *Psittacula krameri*, house sparrow (nesting inside streetlamp along western boundary), great tit *Parus major* (nesting in B34), jay *Garrulus glandarius* (gathering nesting material and flying into woodland), collared dove *Streptopelia decaocto*, blackbird *Turdus merula* and robin *Erithacus rubecula*.

Previous survey work has also identified blue tit *Cyanistes caeruleus*, song thrush *Turdus philomelos*, great spotted woodpecker *Dendrocopos major*, blackcap *Sylvia atricapilla* and starling.

6.2 Impact Assessment

6.2.1 Pre – and Mid Development / Construction Phase Impacts

The demolition and/or refurbishment of some of the buildings will result in the loss of nest sites for some species of birds, including priority species such as starling. The removal of some mature trees and shrubs on site will also reduce nesting and foraging opportunities for a range of bird species, however the key nesting/foraging resource on site (woodland) will be retained. In addition, construction works directly affecting buildings and vegetation (or in close proximity) could result in destruction, damage or disturbance to the nest and eggs of breeding birds.

Overall, these impacts have the potential to result in minor shifts in the distribution of local bird populations as well as being in breach of wildlife legislation. The Biodiversity Chapter of the ES identified that without mitigation this would constitute a permanent minor to moderate adverse effect at the local site level.

6.2.2 Long-Term / Operational Phase Impacts

Inappropriate management of retained and created habitats could limit the availability of nesting and food sources within the site. Management activities timed to occur within the nesting bird season could also lead to the injury or death of birds which would be in breach of the Wildlife and Countryside Act 1981 (as amended). Increased human/vehicular activity could also reduce the foraging activity of birds and deter nesting by more sensitive species; although the majority of bird species on site are likely to tolerate some increase in activity as they are species that are relatively common in urban and suburban areas.

Overall, the Biodiversity Chapter of the ES identified these impacts could negatively affect breeding success and result in a permanent minor adverse effect at the local site level.

6.3 Avoidance and Mitigation Measures

The avoidance and mitigation measures proposed will:

- Prevent the killing or injury of nesting birds; and,
- Minimise disturbance of nesting birds during construction works.

6.3.1 General Construction Phase Measures

To minimise construction impacts on nesting birds, the following measures are proposed:

- Protection of retained trees and woodland;
- Implementation of measures to reduce noise and vibration;
- Appropriate timing of works: building demolition / vegetation clearance should be undertaken outside the bird nesting season. The bird nesting season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible (for example to ensure vegetation is cleared during the active season for amphibians) then any vegetation to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

These measures will be implemented through the use of the CEcMP (Report RT-MME-159856-02).

6.3.2 Operational Phase Measures

All vegetation management should be undertaken outside the bird nesting season. The bird nesting season is weather dependent but generally extends between March and September inclusive (peak period March-August). This measure can be delivered through the implementation of the LEMP.

6.4 Compensation and Enhancement Measures

The compensation and enhancement measures proposed aim to:

- Replace foraging and nesting habitat lost to development and provide additional habitat for nesting birds.

The following bird boxes will be installed:

- At least two building integrated nest-boxes suitable for starlings (such as Habibat Starling Nest Box*) and two building integrated nest-boxes suitable for house sparrows (such as Habibat Sparrow Nest Box*) on each block; and,
- At least two Schwegler 1B* nest boxes suitable for species such as blue tit and great tit should be located in retained trees (five boxes were suggested in total for the entire site in the Biodiversity Chapter of the ES).

**or appropriate alternatives if there are issues with stock availability.*

Exact locations will be agreed on site by a suitably qualified ecologist during the construction phase.

The habitats which are to be created and enhanced as part of the proposed development will include those of value to nesting birds. Further details regarding habitat creation are provided in Section 4.4.

6.5 Residual Effects

The Biodiversity Chapter of the ES concluded that subject to the implementation of the measures outlined above the overall residual effect on birds would be as follows:

- Construction – neutral
- Operation – minor beneficial.

6.6 Post - Development Management and Monitoring

A maintenance check of bird boxes should be completed annually by a suitably experienced ecologist, to ensure these nesting features remain fit for purpose.

The long-term management of retained and created habitats will be carried out in accordance with the LEMP.

7. Other Protected/Notable Species

7.1 Baseline Data

7.1.1 Desk Study Data and Field Survey

Table 7.1 summarises desk study records, the suitability of the site for other protected/notable species and any species/evidence recorded during the field survey. A justification for scoping species/species groups in/or out of further assessment is also provided.

Species/Group	Description
Amphibians	The desk study provided records of common toad <i>Bufo bufo</i> and common frog <i>Rana temporaria</i> within a 2 km radius of the application site. No records of great crested newt <i>Triturus cristatus</i> were provided. The areas of the site which have been left unmanaged offer some suitable terrestrial habitat for amphibians, however given the lack of aquatic habitat on site or within a 500 m radius the likelihood of amphibians being present is considered negligible. This species group has been scoped out of further assessment.
Aquatic mammals and invertebrates	Aquatic mammals and invertebrates have been scoped out of further assessment due to a lack of desk study records and suitable aquatic habitat on or immediately adjacent to the site.
Dormouse	The desk study provided no records of dormouse within a 2 km radius. The habitats on site are deemed unsuitable to support a dormouse population given the limited amount of hazel present and isolation of the habitats within a predominantly urban environment. This species has been scoped out of further assessment.
Invasive plants	Butterfly bush and green alkanet were recorded across the site which are considered invasive in London and listed on the London Invasive Species Initiative (LISI). Further consideration of invasive plants is therefore provided in the following sections.
Reptiles	The desk study provided nine records of reptiles (slow worm and grass snake) within a 2 km radius; the closest record was of grass snake located 750 m south-east. The site provides limited suitable for reptiles given the dominance of the built environment and previous management; however, pockets of suitable habitat exist including the woodland, longer areas of grass and piles of chippings, logs and rubble. Suitable habitat exists off-site to the south (along the railway line) and within residential gardens (to the west). All reptiles are protected under the Wildlife and Countryside Act 1981 (as amended) and are listed as Species of Principal Importance. Reptiles are considered further in the following sections.
Terrestrial invertebrates (stag beetle)	The desk study provided 31 records of stag beetle within a 2 km radius with the closest record located 39 m south of the site. The deadwood habitat throughout the woodland has the potential to support this species. Stag beetle is a Species of Principal Importance and is listed as a 'priority species' on the London Biodiversity Action Plan. Stag beetle is considered further in the following sections.

Table 7.1: Summary of Other Protected/Notable Species (continues)

Species/Group	Description
Terrestrial mammals (badger and hedgehog)	The desk study provided 33 records of hedgehog within a 2 km radius, the closest was located 584 m west. The site offers suitable foraging and refuge habitat for hedgehog, specifically the woodland to the south. Hedgehog is a Species of Principal Importance and is afforded limited protection under the Wildlife and Countryside Act 1981 (as amended). The desk study provided five records of badger within a 2 km radius. The woodland offers suitable sett building, foraging and commuting habitat for badgers, however the majority of the site is considered sub-optimal. The woodland links directly to further suitable habitat off-site along the railway corridor. All badgers and their setts are protected under the Wildlife and Countryside Act 1981 (as amended) and the Protection of Badgers Act 1992. No evidence of hedgehog or badger was recorded during the field survey, however it is considered likely that they may pass through the site on occasion. There is also potential for badger to excavate new setts within the woodland on site prior to the commencement of development works. Terrestrial mammals are therefore considered further in the following sections.

Table 7.1: (continued) Summary of Other Protected/Notable Species

7.2 Impact Assessment

Whilst the species/species groups listed below were not identified as important ecological features (likely to be subject to any significant effects) in the Biodiversity Chapter of the ES, there is still a low risk of impacts in the absence of appropriate mitigation:

- Reptiles;
- Terrestrial mammals;
- Stag beetle; and,
- Invasive plants.

Potential impacts are outlined below and appropriate avoidance, mitigation, compensation and enhancement measures identified in the following sections.

7.2.1 Pre – and Mid Development /Construction Phase Impacts

Reptiles

Given the limited suitable habitat on site and the presence of alternative habitat in the wider landscape (vegetated railway line to the south) the loss of habitat on site is unlikely to result in a notable decline in the favourable conservation status of any local reptile population. However, construction activities such as vegetation clearance and ground works could result in the disturbance, injury, or killing of individual reptiles in the absence of appropriate mitigation.

Terrestrial Mammals

During the construction phase of the proposed development, there is the potential for individual foraging terrestrial mammals to become trapped and harmed in open excavations, leading to a reduction in foraging success. In addition, vegetation clearance could disturb or damage habitats which may be used by terrestrial mammals. Without mitigation this could have a minor adverse effect on any populations within the local area.

Stag beetle

Any ground clearance required to establish the nature trail through the woodland could disturb/damage deadwood habitat, which could result in the killing or injury of stag beetle. Without mitigation this could have a minor adverse effect on any populations within the local area.

Invasive plants

The proposed development could result in the disturbance or spread of an invasive plant species during the construction phases. In the absence of mitigation, the spread of non-native invasive species could result in a reduction in biodiversity as native species are outcompeted.

7.2.2 Long-Term / Operational Phase Impacts

Reptiles

During operation of the site, increased human presence and inappropriate management of the retained and created habitats within the site could result in the disturbance/degradation of suitable habitats for reptiles which could lead to minor changes in the site distribution of local populations. However, given the presence of additional suitable habitat in the surrounding landscape for species to disperse into, any adverse effect is deemed not to be significant.

Terrestrial Mammals

Suitable habitat for terrestrial mammals will be retained and created around the site peripheries and will remain connected to suitable habitats in the wider landscape. No long-term effects on populations of terrestrial mammals are anticipated.

Stag beetle

Suitable habitat for stag beetle will be retained and created on site within the woodland. As access will be limited to the SINC, no long-term effects on populations of stag beetle due to habitat disturbance are anticipated.

Invasive plants

During operation of the site inappropriate post-construction landscape management could result in the spread of non-native species. In the absence of mitigation this could result in a reduction in biodiversity as native species are outcompeted.

7.3 Avoidance and Mitigation Measures

7.3.1 General Construction Phase Measures

Reptiles

A separate Reasonable Avoidance Method Statement (RAMS), which allows the predicted level of risk to reptiles to be reduced to negligible, has been incorporated into the CECMP and provides details of the following:

- Site clearance protocol;
- Avoidance of refuge creation in active work areas;
- Staff awareness; and
- Action in response to the discovery of reptiles.

Terrestrial Mammals

The following construction phase mitigation measures will be implemented:

- Site personnel will remain vigilant and, should any potential badger setts be identified, all works will cease and a suitably experienced ecologist will be contacted for further advice;
- Any excavations which are left overnight will be covered or be fitted with ramps to prevent any harm to any terrestrial mammals which may pass through the site;
- Any open pipework with an outside diameter of greater than 150 mm must be covered at the end of each work day to prevent terrestrial mammals entering/becoming trapped; and,
- Construction phase lighting, noise and vibration will be kept to a minimum.

Stag Beetle

Any deadwood habitat on site will be retained on site where feasible. If retention is not possible the removal and relocation of the deadwood habitat will be undertaken under the supervision of an experienced ecologist.

Invasive Plants

Butterfly bush was present throughout the site (including growing out of some buildings) as well as scattered green alkanet. The plants will be sensitively removed during vegetation clearance and disposed of in an appropriate manner.

These measures will be implemented through the use of the CEcMP.

7.3.2 Operational Phase Measures

The LEMP comprises habitat management techniques for all retained and created habitats within the site, which, if implemented, would ensure that suitable habitat for the above species is maintained and potentially improved in the long term.

7.4 Compensation and Enhancement Measures

The habitats to be created and enhanced across the site include those of value to reptiles, terrestrial mammals and invertebrates. Further detail regarding habitat creation is provided in Section 4.4.

7.5 Post - Development Management and Monitoring

Given the minimal impact of the proposed development on these species groups, no post-development monitoring is considered necessary.

8. Summary

This document details avoidance, mitigation, compensation and enhancement proposals that will be implemented to ensure that the favourable conservation status of key ecological features will be maintained at the site prior to, during and after development. It is recognised that the proposed development will result in the loss of some habitats, although the most valuable habitat (St Ann's Hospital Wood SINCC) will be retained and enhanced. In addition, new habitats will be created including, green roofs, bioswales/raingardens, species-rich grassland as well as tree, shrub and hedge planting. The site wide landscape strategy has been designed to ensure the long-term retention of existing key habitats and to create linking wildlife corridors through and around the site, allowing species movement into the wider landscape.

The updated site wide BMA (inclusive of Phases 1A, 1B, 2 and 3) identifies that the proposed development (habitat loss, retention, enhancement and creation combined) will result in the following:

- Habitats: net gain of 2.81 habitat units, a **14.29% increase** of baseline habitat value.
- Hedgerows: net gain of 0.80 hedgerow units, a **214.99% increase** of baseline hedgerow value.

This demonstrates a slight betterment to the 12 % BNG projected as part of the hybrid application.

This document has identified mitigation proposals to ensure the long-term protection of protected and notable species or species groups which have either been recorded at or near to the site, or for which suitable habitats are present within the site. These species and species groups are: bats, birds, reptiles, terrestrial mammals and stag beetle.

It is proposed that the implementation of ecological mitigation will be overseen by a suitably qualified Ecological Clerk of Works who will provide advice to construction and landscaping contractors and manage the interaction between mitigation requirements for each species throughout the development process.

Provided that the measures outlined in the CEcMP (Report RT-MME-159856-02) are implemented, most of the predicted or potential ecological effects during construction can either be avoided entirely or reduced to negligible significance. Upon implementation of the LEMP (RT-MME-159856-03) and a carefully designed lighting strategy it is predicted that the RMA1 development has the potential to result in minor beneficial effect on site biodiversity in the medium to long term.

9. Drawings

Drawing C159856-01-01

Phase 1 Habitat Map (RMA1)

Drawing C159856-01-02RevA

Habitat Baseline Map (All Phases)

Drawing C159856-01-03RevA

Drawing Adaptation of Landscape Strategy Proposal for
Purposes of the BMA



C159856-01-01

Legend

Survey area

RMA1 application boundary

Target note - habitat parcel

Scattered small tree

Scattered medium tree

Scattered large tree

Scattered shrub

Species-poor hedgerow with trees

Species-poor intact hedgerow

Amenity grassland

Building

Hardstanding

Introduced shrub

Other habitat

Poor semi-improved grassland

Semi-natural broad-leaved woodland

Feature note

F1 Bark chippings

F2 Rubble pile

F3 Soil pile

F4 Buddleia

F5 Dead tree

F6 Log pile

F7 Demolished building

0

20

40 m

188500

188450

188400

188350

532250

532300

532350

532400

532450

Project

Phases 1B and 2,
St. Ann's New Neighbourhood

Drawing

Phase 1 Habitat Map

Client

Hill Holdings Ltd

Drawing Number

C159856-01-01

Revision

00

Scale @ A3

1:750

Date

May 2023

Approved By

AF

Drawn By

GT

MIDDLEMARCH

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Habitat Descriptions - Updated Phase 1 Habitat Survey May 2023 (RMA1 boundary only)

Amenity grassland (TN1)

The amenity grassland on site was primarily located around the buildings, being more dominant in the south of the site. Damage from machinery driving over areas of grassland was present. The grassland was previously regularly mowed, although currently no management regime appears to be in place resulting in a variable sward height between 3 – 15 cm. The grassland comprised dominant perennial rye-grass *Lolium perenne* with locally frequent common bent *Agrostis capillaris*, meadow foxtail *Alopecurus pratensis*, and barren brome *Bromus sterilis*. Other species included frequent annual meadow grass *Poa annua*, creeping buttercup *Ranunculus repens*, daisy *Bellis perennis*, and creeping cinquefoil *Potentilla reptans*, occasional cow parsley *Anthriscus sylvestris*, ribwort plantain *Plantago lanceolata*, and white clover *Trifolium repens*, with scattered dandelion *Taraxacum officinale* agg., broad-leaved dock *Rumex obtusifolius*, herb Robert *Geranium robertianum*, chickweed *Stellaria media*, cut-leaved cranesbill *Geranium dissectum*, bristly oxtongue *Helminthotheca echioides*, ragwort *Senecio jacobaea*, groundsel *Senecio vulgaris*, common nettle *Urtica dioica*, and green alkanet *Pentaglottis sempervirens*.

Poor semi-improved grassland (TN2)

The poor semi-improved grassland on site was primarily located along the western portion of the site. Damage from machinery driving over areas of grassland was noted. The grassland was previously regularly mowed, although currently no management regime appears to be in place and as such the grassland is transitioning into other neutral grassland. The sward height was variable between 5 – 20 cm in height and comprised dominant perennial rye-grass, common bent, and meadow foxtail with locally frequent cock's-foot *Dactylis glomerata*, and barren brome. Other species included frequent annual meadow grass, creeping buttercup, and creeping cinquefoil, occasional cow parsley, daisy, broad-leaved dock, ribwort plantain, and white clover, with scattered dandelion, herb Robert, chickweed, cut-leaved cranesbill, lesser trefoil *Trifolium dubium*, ragwort, and black medic *Medicago lupulina*.

Buildings (TN3)

A range of buildings of varying age and construction. *Buddleja davidii* was growing out of some buildings.

Hardstanding (TN4)

Hardstanding comprised tarmac roads and footpaths linking the existing buildings with car parking located to the south. Grassland and scrub was noted encroaching from surrounding habitats.

Semi-natural broadleaved woodland (TN5)

A semi-natural broad-leaved woodland was present in the south of the site bordering the offsite railway line. There was evidence of previous management, but no recent management was noted. The canopy was 5 – 20 m in height and comprised frequent ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus* with pedunculate oak *Quercus robur*, poplar species *Populus* spp., horse chestnut *Aesculus hippocastanum*, apple species *Malus x domestica*, and plum species *Prunus* sp. also present. The shrub layer was characterised by hawthorn *Crataegus monogyna*, elder *Sambucus nigra*, and dogwood *Cornus sanguinea*. The ground flora comprised dominant cleavers *Galium aparine* and bramble *Rubus fruticosus*, locally abundant cow parsley, frequent ivy *Hedera helix*, garlic mustard *Alliaria petiolata*, bindweed *Convolvulus arvensis*, and barren brome. Wood

avens *Geum urbanum*, herb Robert, bluebell *Hyacinthoides non-scripta*, nettle *Urtica dioica*, and green alkanet were also recorded. Dead wood was present throughout the woodland as well as scattered standing dead trees.

Introduced shrub (TN6)

Pockets of introduced shrub beds were located along the east of the site around the buildings. Species comprised lilac *Syringa* sp., *Forsythia* sp., buddleia, evergreen spindle *Euonymus japonicus*, holly species *Ilex* sp., *Jasmine* sp., *Rosa* sp., *Clematis* sp., and black locust *Robinia pseudoacacia*. Scattered trees present included apple species, ash, crab apple *Malus sylvestris*, and elder.

Other habitat (TN7)

Areas of mixed scrub were generally located in the west of the site and had been recently cleared to ground level within the last six months of the site being surveyed. Bark chippings were left on site as well as tree stumps. Species starting to recolonise the area included bramble, hawthorn, elder, hazel, and holm oak saplings, English holly, garden privet, buddleia, ivy, bindweed, and cow parsley. The south-eastern section was in a depression dominated by bramble stalks, buddleia, and tree stumps including goat willow and ash. Dead branches / canes were covering the ground.

Other habitat (TN8)

Small pockets of bramble scrub were present around the centre of the site and had been recently cleared within the last six months of the site being surveyed. Currently bramble stalks are present within areas of bare soil with scattered buddleia and bindweed.

Other habitat (TN9)

Areas of introduced shrub were generally located throughout the middle of the site and had been recently cleared to ground level within the last six months of the site being surveyed. The ground was covered in ivy with bark chippings left on site. Scattered bramble, cleavers, bindweed, and tree saplings including elder, cherry laurel, sycamore, ash, and hazel were starting to recolonize the areas. Currently stumps of viburnum, garden privet, holm oak *Quercus ilex*, elder, laburnum, and buddleia were present. Scattered rose bushes were located around the buildings in the northern part of the site.

Other habitat (TN10)

The ruderal / ephemeral on site comprised a disused section of hardstanding with colonising species growing on top/through the cracks. All scrub and tree species had been recently cleared within the last six months of the site being surveyed. The area comprised of herb Robert, barren broom, perennial rye-grass, buddleia, bramble, and chickweed with locally frequent valerian and scattered ragwort, vetch, speedwell, bindweed, and tree saplings including sycamore, ash, and wild cherry *Prunus avium*. Moss species were noted underlying most of the vegetation. A section along the eastern side was dominated by cow parsley and cleavers with young wild cherry trees.

Scattered trees (TN11)

12 small, scattered trees were located around the northern and eastern perimeter of the site. The trees ranged from 3 to 10 m in height and comprised of cherry plum *Prunus cerasifera*, cherry sp. *Prunus* sp., ash, wild cherry, silver birch *Betula pendula*, sycamore, elder, and false acacia *Robinia pseudoacacia*. All trees were generally in good health with little to no deadwood present.

Scattered trees (TN12)

Eight medium, scattered trees were generally located in the east and west of the site. The trees comprised of common hawthorn, silver birch, horse chestnut, holm oak, false acacia, sycamore, and cherry plum. The trees measured 7 – 12 m in height and were semi-mature with some deadwood present.

Scattered trees (TN13)

Three large, scattered trees were located within the western perimeter or on the east of the site and comprised hybrid black poplar *Populus x canadensis* and sycamore. All trees were mature, measured 8 – 12 m in height, and had deadwood present or wound damage. The two poplar trees were pollarded.

Species-poor hedgerow with trees (H1)

Hedgerow located along the western boundary of the site. Hedgerow was intact and unmanaged but signs of historic management evident. The hedgerow measured approximately 3 m in height and 2 m in width. Norway maple, sycamore, horse chestnut, ash, holm oak, and pedunculate oak trees were present in the hedgerow and most were immature to semi-mature in age measuring up to 8 m in height. Hedgerow species included dominant garden privet with scattered hawthorn, hazel, and elder. Light ivy coverage was present on some of the trees. The hedgerow acted as a screen for the brick wall and residential gardens outside the boundary on the western side. The western side lacked ground vegetation and comprised of large amounts of deadwood from the privet. The eastern side comprised a 1 m vegetated base including cleavers, barren brome, daisy, meadow foxtail, and broad-leaved dock.

Species-poor intact hedgerow (H2)

Hedgerow located along the eastern boundary of the site. The hedgerow was intact, unmanaged, and measured approximately 3 m in height and 4 m in width. The hedgerow comprised evergreen spindle with a 1 m base of flora including perennial rye-grass, bramble, broad leaved dock, cleavers, herb Robert, cut-leaved cranesbill, and barren brome.



C159856-01-02

Legend

Hybrid Application Boundary

RMA1 Application Boundary

Individual trees

Urban trees

Hedgerows

Non-native, ornamental hedgerow

Sparsely vegetated land

Ruderal/ephemeral

Woodland and forest

Other woodland: broadleaved

Other coniferous woodland

Grassland

Modified grassland

Other neutral grassland

Tall herb communities

Heathland and scrub

Mixed scrub

Bramble scrub

Urban

Developed land; sealed surface (building)

Developed land; sealed surface

Introduced shrub

Vegetated garden

Project

Phases 1B and 2,
St. Ann's New Neighbourhood

Drawing

Baseline Habitat Map

Client

Peabody Trust, Catalyst by Design and
Hill Residential Limited

Drawing Number

C159856-01-02

Revision

Rev A

Scale @ A3

1:1,500

Date

November 2023

Approved By

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Drawn By

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C159856-01-03

Legend

Hybrid Application Boundary

RMA1 Application Boundary

Removed tree

Retained tree

Proposed urban trees

Climbers

Proposed Native hedgerow

Proposed Ornamental hedgerow

Removed hedgerow

Retained hedgerow

Biodiverse green roof

Bioswales

Introduced shrub

Modified grassland

Other neutral grassland

SINC Woodland (retained)

Other woodland: mixed

Permeable paving

Buildings and hardstanding

Project

Phases 1B and 2,
St. Ann's New Neighbourhood

Drawing

Drawing Adaptation of Landscape
Strategy Proposal for Purposes of the BMA

Client

Peabody Trust, Catalyst by Design and
Hill Residential Limited

Drawing Number

C159856-01-03

Revision

Rev A

Scale @ A3

1:1,500

Date

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Appendix 1 - Desk Study Data

A.1 Designated Sites

Statutory and non-statutory nature conservation sites located in proximity to the survey area are summarised in Table A.1.

Site Name	Designation	Proximity to the Survey Area	Description
European Statutory Sites			
Lee Valley	SPA / Ramsar	1,930 m east	The Lee Valley SPA/Ramsar comprises a series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that display a range of man-made and semi-natural wetland and valley bottom habitats. It qualifying features comprises non-breeding populations of bittern <i>Botaurus stellaris</i> , shoveler <i>Anas clypeata</i> and gadwall <i>Anas strepera</i> . In addition, the site supports nationally important numbers of cormorant <i>Phalacrocorax carbo</i> , great crested grebe <i>Podiceps cristatus</i> , tufted duck <i>Aythya fuligula</i> , pochard <i>Aythya ferina</i> and grey heron <i>Ardea cinerea</i> .
Epping Forest	SAC	6,400 m east	Epping Forest represents Atlantic acidophilous beech forests in the north-eastern part of the habitat's UK range. Although the epiphytes at this site have declined, largely as a result of air pollution, it remains important for a range of rare species, including the moss <i>Zygodon forsteri</i> . The long history of pollarding, and resultant large number of veteran trees, ensures that the site is also rich in fungi and dead-wood invertebrates such as stag beetle <i>Lucanus cervus</i> and many Red Data Book and Nationally Scarce invertebrate species. The following important habitats are also present on site: Northern Atlantic wet heaths with <i>Erica tetralix</i> and European dry heaths.
UK Statutory Sites			
Railway Fields	LNR	470 m west	Railway Fields has been developed as an educational resource centre for schools and groups of people to visit throughout the borough. Although small, the site is abundant in wildlife, containing habitats such as a woodland copse, grassland and a small pond.

Table A.2: Summary of Designated Sites (Cont.)

Site Name	Designation	Proximity to the Survey Area	Description
Parkland Walk	LNR/SINC (Met)	1,400 m south-west	The Parkland Walk is a 2.5 mile disused railway that is specifically managed as a Natural Conservation Area. The walkway contains naturally regenerated woodland, scrub and rough grassland forming a variety of habitats for flora and fauna. There is an information and education centre located on site for use by the public, local community and schools.
Abney Park Cemetery	LNR/SINC (Met)	1,580 m south-east	The Cemetery is principally comprised of woodland and contains a mixture of mature trees and dense undergrowth. It represents the most important area of woodland in LB Hackney. This creates a valuable habitat for a diverse assemblage of woodland birds. The cemetery also supports a diversity of butterfly species. The main use of the site is for formal education purposes and the Abney Park Cemetery Trust promotes the nature conservation interest.
Gillespie Park	LNR/SINC (Met)	1,890 m south-west	The site is divided into two distinct areas—the lower level is a mix of small woodlands, scrub, meadows and a pond. The upper level is mainly grassland with patches of scrub and two wetland areas. The site is good for school visits because of its wide variety of habitats contained within a compact area. There is also an Ecology Centre with good facilities.
Walthamstow Reservoirs	SSSI	1,930 m east	The Walthamstow Reservoirs contain one of the country's major heronries and a particularly large concentration of breeding wildfowl. They are also an important gathering area for moulting tufted duck and in winter attract nationally significant populations of wildfowl and other wetland birds. Overlapping designations include Lee Valley Ramsar and SPA.
Non-statutory Sites			
St Ann's Hospital Wood	SINC (Local)	On site	This narrow strip of woodland lies on the southern edge of the hospital grounds, alongside the embankment of the Barking to Gospel Oak railway line. Habitats comprise secondary woodland, semi-improved neutral grassland and tall herbs.
Tottenham Railside	SINC (Borough Grade II)	Adjacent to southern boundary	Triangles of railside land in Haringey, forming an important wildlife corridor

Table A.2: Summary of Designated Sites (Cont.)

Site Name	Designation	Proximity to the Survey Area	Description
Harringay Stadium Slopes	SINC (Borough Grade II)	50 m south	A steep vegetated bank on the site of the old stadium, with woodland and grassland good for butterflies.
Chestnuts Park	SINC (Local)	190 m north	A sizeable park opposite St Ann's Hospital with a large number of mature trees.
Lordship Lane Recreation Ground	SINC (Local)	1, 240 m north	A large park with a length of stream and a pond.
Finsbury Park	SINC (Borough Grade II)	560 m south-west	A large and popular public park giving its name to an area of north London.
New River	SINC (Metro)	680 m west	Probably London's cleanest river, this man-made waterway stretching from Hertfordshire to London now supports a range of aquatic plants, as well as fish, water birds and amphibians.
Paignton Road Open Space	SINC (Local)	750 m east	A small park with numerous trees, including old fruit trees, and a variety of other habitats.
Stoke Newington Reservoirs	SINC (Metro)	780 m south	These two reservoirs provide a remarkable haven for wildfowl in a densely built-up part of London.
Downhills Park	SINC (Local)	900 m north	A large park with lots of mature trees and dense shrubberies.
Stroud Green Railway Banks	SINC (Borough Grade II)	920 m west	A steep vegetated slope above railway sidings.
Holmleigh Railway Cutting	SINC (Borough Grade I)	1,040 m south-east	A fairly broad railway cutting containing one of the largest areas of self-established vegetation in Hackney.
Allen's Gardens	SINC (Local)	1,360 m south-east	A small park, managed by local residents to provide contact with nature.
Granville Road Spinney	SINC (Local)	1,440 m west	A small area of sycamore woodland, with an unusual range of planted trees.
Clissold Park	SINC (Borough Grade I)	1,680 m south	The largest park in Hackney, with two sizeable lakes.
Upper Holloway Railway Cutting	SINC (Borough Grade I)	1,720 m south-west	A long railway cutting, providing an important habitat for wildlife, as well as pleasant views for rail travellers.
Holly Park Estate	SINC (Borough Grade II)	1,720 m south-west	This estate has retained the mature parkland trees of the original site and therefore has one of the highest concentrations of mature trees in Islington. It also include thickets of scrub and various woodland wild flowers.

Table A.2: Summary of Designated Sites (Cont.)

Site Name	Designation	Proximity to the Survey Area	Description
Markfield Park	SINC (Borough Grade II)	1,730 m east	A small park next to the River Lea, with a range of habitats, where a nationally scarce plant, wall bedstraw, grows.
St Mary's Churchyard, Hornsey	SINC (Local)	1,760 m north-west	An old churchyard, containing a tiny patch of ancient woodland and the tower of the former St Mary's Church.
Land behind 3 Fairfield Road	SINC (Local)	1,908 m west	An area of scrub, trees and rough grassland, surrounded by back gardens.
Lea Valley	SINC (Metro)	1,930 m east	This sprawling series of open spaces, in the valley of the River Lea, includes lakes, reservoirs, marshes and wet grassland. The wonderfully diverse range of wetland habitats has made this area a haven for many rare plants and a tremendous range of birds.
Spring Hill Playing Fields	SINC (Local)	2,000 m east	Disused playing fields with flowery grassland.
Clapton Common Pond	SINC (Local)	2,000 m east	An ornamental pond with a large population of the rare greater duckweed.
Bruce Grove Wood	SINC (Local)	2,000 m north-east	A small site with a range of habitats, tucked away at the back of Bruce Grove School.
Ancient Mother Churchyard, Stoke Newington	SINC (Local)	2,000 m south	A fine example of an ancient churchyard, popular with local artists.
Key: SAC: Special Area of Conservation SPA: Special Protection Area SSSI: Site of Special Scientific Interest Ramsar: Site listed on The Convention on Wetlands of International Importance (Ramsar Convention) SINC (Local): Site of Local Importance SINC (Metro): Site of Metropolitan Importance SINC (Borough Grade I): Site of Borough Importance SINC (Borough Grade II): Site of Borough Importance			

Table A.2: (Cont.) Summary of Designated Sites

A.2: Protected/Notable Species Records

Table A.2 and the following text provide a summary of protected and notable species records within a 2 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Amphibians					
Common frog <i>Rana temporaria</i>	65	2021	509 m west	-	WCA 5 S9(5)
Common toad <i>Bufo bufo</i>	26	2016	565 m west	✓	WCA 5 S9(5)
Birds					
Redwing <i>Turdus iliacus</i>	263	2023	479 m south-west	-	WCA1i
Kingfisher <i>Alcedo atthis</i>	261	2022	655 south-west	-	WCA1i
Scaup <i>Aythya marila</i>	3	1995	788 m south	✓	WCA1i
Bittern <i>Botaurus stellaris</i>	8	2017	788 m south	✓	WCA1i
Black tern <i>Chlidonias niger</i>	2	2011	788 m south	-	WCA1i
Marsh harrier <i>Circus aeruginosus</i>	1	2009	788 m south	-	WCA1i
Merlin <i>Falco columbarius</i>	3	2009	788 m south	-	WCA1i
Brambling <i>Fringilla montifringilla</i>	26	2019	788 m south	-	WCA1i
Great northern diver <i>Gavia immer</i>	2	2017	788 m south	-	WCA1i
Little gull <i>Hydrocoloeus minutus</i>	4	2017	788 m south	-	WCA1i
Mediterranean gull <i>Larus melanocephalus</i>	23	2017	788 m south	-	WCA1i
Black-tailed godwit <i>Limosa limosa</i>	2	2006	788 m south	✓	WCA1i
Crossbill <i>Loxia curvirostra</i>	2	2009	788 m south	-	WCA1i
Common scoter <i>Melanitta nigra</i>	2	2009	788 m south	✓	WCA1i
Red kite <i>Milvus milvus</i>	12	2019	788 m south	-	WCA1i

Table A.2: Summary of Protected/Notable Species Records (Cont.)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Whimbrel <i>Numenius phaeopus</i>	1	2007	788 m south	-	WCA1i
Osprey <i>Pandion haliaetus</i>	1	2009	788 m south	-	WCA1i
Black necked grebe <i>Podiceps nigricollis</i>	6	2018	788 m south	-	WCA1i
Firecrest <i>Regulus ignicapilla</i>	74	2019	788 m south	-	WCA1i
Garganey <i>Anas querquedula</i>	29	2019	788 m south	-	WCA1i
Wood sandpiper <i>Tringa glareola</i>	2	2019	788 m south	-	WCA1i
Greenshank <i>Tringa nebularia</i>	9	2017	788 m south	-	WCA1i
Green sandpiper <i>Tringa ochropus</i>	37	2019	788 m south	-	WCA1i
Fieldfare <i>Turdus pilaris</i>	71	2022	788 m south	-	WCA1i
Black redstart <i>Phoenicurus ochuros</i>	2	2011	969 m south-west	-	WCA1i
Spoonbill <i>Platalea leucorodia</i>	1	2014	969 m south-west	-	WCA1i
Honey-buzzard <i>Pernis apivorus</i>	1	2008	1,956 m south	-	WCA1i
Lapland bunting <i>Calcarius lapponicus</i>	1	2010	*		WCA1i
Barn owl <i>Tyto alba</i>	1	2021	†	-	WCA1i
Avocet <i>Recurvirostra avosetta</i>	2	2021	†	-	WCA1i
Peregrine <i>Falco peregrinus</i>	416	2021	†	-	WCA1i
Little ringed plover <i>Charadrius dubius</i>	50	2021	†	-	WCA1i

Table A.2: Summary of Protected/Notable Species Records (Cont.)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Cetti's warbler <i>Cettia cetti</i>	1011	2021	†	-	WCA1i
Invertebrates					
Stag beetle <i>Lucanus cervus</i>	31	2019	39 m south	✓	ECH 2, WCA 5 S9(5)
Jersey tiger moth <i>Euplagia quadripunctaria</i>	18	2016	476 m south-east	-	ECH 2
Mammals - Bats					
Unidentified bat <i>Vespertilionidae</i> sp.	15	2020	387 m south-west	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Pipistrelle <i>Pipistrellus</i> sp.	42	2019	451 m south	#	ECH 4, WCA 5, WCA 6
Noctule <i>Nyctalus noctula</i>	86	2017	528 m west	✓	ECH 4, WCA 5, WCA 6
Daubenton's bat <i>Myotis daubentonii</i>	27	2021	549 m south-east	-	ECH 4, WCA 5, WCA 6
Common pipistrelle <i>Pipistrellus pipistrellus</i>	184	2021	628 m south-west	-	ECH 4, WCA 5, WCA 6
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	374	2017	638 m south-west	✓	ECH 4, WCA 5, WCA 6
Nathusius's pipistrelle <i>Pipistrellus nathusii</i>	42	2017	655 m south-west	-	ECH 4, WCA 5, WCA 6
Unidentified bat <i>Chiroptera</i> sp.	4	2012	685 m south-east	#	ECH 2 #, ECH 4, WCA 5, WCA 6
Whiskered bat <i>Myotis mystacinus</i>	2	2017	884 m east	-	ECH 4, WCA 5, WCA 6
Leisler's bat <i>Nyctalus leisleri</i>	21	2017	884 m east	-	ECH 4, WCA 5, WCA 6
Brown long-eared bat <i>Plecotus auritus</i>	3	2017	884 m east	✓	ECH 4, WCA 5, WCA 6
Unidentified myotis <i>Myotis</i> sp.	2	2021	1,708 m north	#	ECH 2 #, ECH 4, WCA 5, WCA 6

Table A.2: Summary of Protected/Notable Species Records (Cont.)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Survey Area	Species of Principal Importance?	Legislation / Conservation Status
Unidentified nyctalus <i>Nyctalus</i> sp.	1	2021	1,708 m north	#	ECH 4, WCA 5, WCA 6
Natterer's bat <i>Myotis nattereri</i>	3	2008	1,984 m west	-	ECH 4, WCA 5, WCA 6
Mammals- Other					
Hedgehog <i>Erinaceus europaeus</i>	33	2020	584 m west	✓	WCA 6
Badger <i>Meles meles</i>	5	2017	†	-	WCA 6, PBA
Reptiles					
Grass snake <i>Natrix helvetica</i>	6	2012	750 m south-east	✓	WCA 5 S9(1), WCA 5 S9(5)
Slow worm <i>Anguis fragilis</i>	3	2021	1,035 m south-east	✓	WCA 5 S9(1), WCA 5 S9(5)
Key: #: Dependent on species. †: Records are confidential and therefore proximity is not provided within the report. *: Record of 1 km² accuracy, ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. PBA: Protection of Badgers Act 1992. WCA 1i: Schedule 1 Part 1 of Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties at all times. WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). WCA 5 S9(1): Schedule 5 Section 9(1) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to intentional killing, injury or taking. WCA 5 S9(5): Schedule 5 Section 9(5) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal. WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods. Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.					

Table A.2: (Cont.) Summary of Protected/Notable Species Records

In addition to the species list in Table A.2, the desk study also provided records of the following Species of Principal Importance within a 2 km radius:

- 15 x bird species including house sparrow *Passer domesticus* and starling *Sturnus vulgaris*;
- Blue ground beetle *Carabus intricatus*;
- 4 x butterfly species including small blue and wall;
- 32 x moth species including September thorn *Ennomos erosaria* and rustic *Hoplodrina blanda*;
- Brown-banded carder bee *Bombus humilis* and red-shanked carder bee *Bombus ruderarius*; and,
- Cornflower *Centaurea cyanus*.

Records of numerous other notable species (including birds, invertebrates and flowering plants) were provided including Red List Species and Local Species of Conservation Concern.

A.3 Invasive Plant Species

Table A.3 provides a summary of invasive species records within a 2 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Legislation / Conservation Status
Few-flowered garlic <i>Allium paradoxum</i>	4	2007	970 m west	WCA 9
False-acacia <i>Robinia pseudoacacia</i>	134	2021	1,000 m north	LISI 4
Tree-of-heaven <i>Ailanthus altissima</i>	63	2021	1,010 km north-east	LISI 3
Cotoneaster <i>Cotoneaster</i> sp.	44	2020	1,020 m north	LISI 2, WCA 9
Cherry laurel <i>Prunus laurocerasus</i>	57	2021	1,040 m north	LISI 3
Japanese knotweed <i>Fallopia japonica</i>	73	2017	1,040 m east	LISI 3, WCA 9
Turkey oak <i>Quercus cerris</i>	34	2019	1,040 m south	LISI 5
Tree cotoneaster <i>Cotoneaster frigidus</i>	23	2021	1,040 m west	LISI 2
Butterfly-bush <i>Buddleia davidii</i>	92	2021	1,050 m south-west	LISI 3

Table A.3: Summary of Invasive Species Records (Cont.)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Legislation / Conservation Status
Snowberry <i>Symphoricarpos albus</i>	33	2019	1,050 m north-west	LISI 2
Evergreen oak <i>Quercus ilex</i>	56	2020	1,060 m south-west	LISI 5
Goat's-rue <i>Galega officinalis</i>	8	2016	1,090 m south	LISI 4
Nuttall's waterweed <i>Elodea nuttallii</i>	9	2002	1,090 m south	WCA 9
Highclere holly <i>Ilex aquifolium x perado = I. x altaclerensis</i>	48	2015	1,100 m south-west	LISI 5
Few-flowered cotoneaster <i>Cotoneaster nitens</i>	1	1999	1,160 m east	LISI 2
Green alkanet <i>Pentaglottis sempervirens</i>	26	2019	1,170 m south-west	LISI 6
Giant hogweed <i>Heracleum mantegazzianum</i>	2	2002	1,190 m south-west	WCA 9 , LISI 3
Water fern <i>Azolla filiculoides</i>	3	2002	1,190 m north	LISI 2, WCA 9
Canadian waterweed <i>Elodea canadensis</i>	3	2009	1,230 m north-west	WCA 9, LISI 5
Bluebell <i>Hyacinthoides non-scripta x massartiana</i>	11	2015	1,310 m south-west	LISI 4
Montbretia <i>Crocsmia x crocosmiiflora</i>	3	2015	1,310 m south-west	LISI 2, WCA 9
A flowering plant <i>Lamiastrum galeobdolon subsp. argentatum</i>	4	2015	1,310 m south-west	LISI 4
Three-cornered garlic <i>Allium triquetrum</i>	4	2015	1,310 m south-west	WCA 9
Himalayan balsam <i>Impatiens glandulifera</i>	6	2002	1,480 m north	LISI 3, WCA 9
Fox-glove tree <i>Paulownia tomentosa</i>	19	2020	1,530 m north-west	LISI 5
Wall cotoneaster <i>Cotoneaster horizontalis</i>	3	2017	1,580 m east	WCA 9, LISI 2

Table A.3: Summary of Invasive Species Records (Cont.)

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Legislation / Conservation Status
Blue passionflower <i>Passiflora caerulea</i>	1	2011	1,730 m north-east	LISI 6
Hollyberry cotoneaster <i>Cotoneaster bullatus</i>	1	2011	1,730 m south-east	LISI 2, WCA 9
Francet's cotoneaster <i>Cotoneaster franchetii</i>	1	2011	1,730 m south-east	LISI 2
Spanish bluebell <i>Hyacinthoides hispanica</i>	6	2012	1,740 m west	LISI 4
Shaggy soldier <i>Galinsoga quadriradiata</i>	6	2015	1,780 m north-west	LISI 3
Willow leaved cotoneaster <i>Cotoneaster salicifolius</i>	16	2000	1,800 m west	LISI 2
Curly waterweed <i>Lagarosiphon major</i>	1	1994	1,850 m east	WCA 9 , LISI 3
Floating pennywort <i>Hydrocotyle ranunculoides</i>	2	2004	1,940 m east	WCA 9, LISI 3
Late cotoneaster <i>Cotoneaster lacteus</i>	2	2012	1,940 m south	LISI 2

Key:

WCA9: Schedule 9 of Wildlife and Countryside Act 1981 (as amended). Invasive, non-native, plants and animals.

LISI: London Invasive Species Initiative

LISI 1: London Invasive Species Initiative – Species not currently present nearby or of concern because of the high risk of negative impacts should they arrive. Should any species listed in this category appear in London then action should be taken rapidly.

LISI 2: London Invasive Species Initiative – Species of high impact or concern present at specific sites that require attention (control, management, eradication etc).

LISI 3: London Invasive Species Initiative – Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control/eradicate.

LISI 4: London Invasive Species Initiative – Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required.

LISI 5: London Invasive Species Initiative – Species for which insufficient data or evidence was available from those present to be able to prioritise.

LISI 6: London Invasive Species Initiative – Species that were not currently considered to pose a threat or have the potential to cause problems in London.

Table A.3: (Cont.) Summary of Invasive Species Records

Appendix 2 - Legislation and Policy

General Biodiversity Legislation and Policy

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (the Habitats Regulations 2019)

The Habitats Regulations 2017 (as amended) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into English and Welsh law. Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1 January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of sites or species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

The Habitats Regulations 2019 have created a 'National Site Network' on land and at sea, including both the inshore and offshore marine areas in the UK. The National Site Network includes:

- Existing Special Areas of Conservation (SACs), which are designated due to their importance to the habitats and species listed in Annexes I and II of the Habitats Directive;
- Existing Special Protection Areas (SPAs), which are designated due to their importance for wild birds in accordance with the Wild Birds Directive; and,
- New SACs and SPAs designated under these Regulations.

SACs and SPAs in the UK no longer form part of the European Union's Natura 2000 ecological network. Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new National Site Network. However, guidance provided by Freeths (2020)¹⁰ recommends that SACs and SPAs can continue to be referred to as "European sites" / "European marine sites".

Designated Wetlands of International Importance (known as Ramsar sites) do not form part of the National Site Network. Many Ramsar sites overlap with SACs and SPAs and may be designated for the same or different species and habitats. All Ramsar sites remain protected in the same way as SACs and SPAs.

The 2019 Regulations establish management objectives for the National Site Network. The network objectives are to:

- Maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive to a favourable conservation status; and,

¹⁰ Freeths (2020). *The Habitats Regulations Assessment regime after 31 December 2020 – how will it look?*
Available: <https://www.freeths.co.uk/2020/10/22/the-habitats-regulations-assessment-regime-after-31-december-2020-how-will-it-look/?cmpredirect>

- Contribute to ensuring, in their area of distribution, the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

The appropriate authorities must also have regard to the:

- Importance of protected sites;
- Coherence of the National Site Network; and,
- Threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

The network objectives contribute to the conservation of UK habitats and species that are also of pan-European importance, and to the achievement of their favourable conservation status within the UK.

The Wildlife and Countryside Act (WCA) 1981 (as amended)

The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Habitat Regulations 2017 and the Habitats Regulations 2019, offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

Schedules of the act provide lists of protected species, both flora and fauna, and detail the possible offences that apply to these species.

The Countryside and Rights of Way (CROW) Act 2000

The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the National Assembly for Wales to have regard for biodiversity, and provides increased powers for the protection and maintenance of SSSIs. The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The Natural Environment and Rural Communities (NERC) Act 2006

Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. These lists superseded Section 74 of the CROW Act 2000.

The Hedgerow Regulations 1997

The Hedgerow Regulations make provision for the identification of important hedgerows which may not be removed without permission from the Local Planning Authority.

Species and Habitats of Material Consideration for Planning in England

Previous planning policy (and some supporting guidance which is still current, e.g. ODPM Circular 06/2005, now under revision), refers to UK BAP habitats and species as being a material consideration in the planning process. Equally many local plans refer to BAP priority habitats and species. Both remain as material considerations in the planning process but such habitats and species are now described as Species and Habitats of Principal Importance for Conservation in England, or simply priority habitats and priority species under the UK Post-2010 Biodiversity Framework. The list of habitats and species remains unchanged and is still derived from Section 41 list of the Natural Environment and Rural Communities (NERC) Act 2006. As was previously

the case when it was a BAP priority species hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

National Planning Policy Framework and Practice Guidance

In July 2021, the National Planning Policy Framework (NPPF) was updated, replacing the previous framework published in 2012 and revised in 2018 and 2019. A presumption towards sustainable development is at the heart of the NPPF. This presumption does not apply however where developments require appropriate assessment under the Birds or Habitats Directives.

Chapter 15, on conserving and enhancing the natural environment, sets out how the planning system should contribute to and enhance the natural and local environment by:

- protecting and enhancing existing sites of biodiversity value;
- minimising impacts on and providing net gains for biodiversity; and,
- establishing coherent ecological networks.

If a proposed development would result in significant harm to the natural environment which cannot be avoided (through the use of an alternative site with less harmful impacts), mitigated or compensated for (as a last resort) then planning permission should be refused. With respect to development on land within or outside of a Site of Special Scientific Interest (SSSI) which is likely to have an adverse effect (either alone or in-combination with other developments) would only be permitted where the benefits of the proposed development clearly outweigh the impacts on the SSSI itself, and the wider network of SSSIs. Development resulting in the loss of deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons for the development, and a suitable compensation strategy is provided.

Chapter 15 identifies that development whose primary objective is to conserve or enhance biodiversity should be supported and 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.

Chapter 11, making effective use of the land, sets out how the planning system should promote use of land in meeting the need for homes and other uses, while safeguarding and improving the environment and ensuring safe and healthy living conditions. Substantial weight should be given to the value of using suitable brownfield land within settlements for homes and other identified needs. Opportunities for achieving net environmental gains, including new habitat creation, are encouraged.

In March 2014 the Department for Communities and Local Government released guidance to support the National Planning Policy Framework (NPPF), known as the National Planning Practice Guidance (NPPG). This has been produced to provide guidance for planners and communities which will help deliver high quality development and sustainable growth in England.

The guidance includes a section entitled 'Natural Environment: Biodiversity, geodiversity and ecosystems and green infrastructure', which was updated in July 2019. This document sets out information with respect to the following:

- the statutory basis for seeking to conserve and enhance biodiversity;
- the local planning authority's requirements for planning for biodiversity;
- what local ecological networks are and how to identify and map them;

- how plan-making bodies identify and safeguard Local Wildlife Sites, including Standard Criteria for Local Wildlife Sites;
- the sources of ecological evidence;
- the legal obligations on local planning authorities and developers regarding statutory designated sites and protected species;
- definition of green infrastructure;
- where biodiversity should be taken into account in preparing a planning application;
- how policy should be applied to avoid, mitigate or compensate for significant harm to biodiversity and how mitigation and compensation measures can be ensured;
- definitions of biodiversity net gain including information on how it can be achieved and assessed; and,
- the consideration of ancient woodlands and veteran trees in planning decisions and how potential impacts can be assessed.

The NPPG July 2019 issue also includes a section entitled 'Appropriate assessment: Guidance on the use of Habitats Regulations Assessment' which provides information in relation to Habitats Regulations Assessment processes, contents and approaches in light of case law. This guidance will be relevant to those projects and plans which have the potential to impact on European Sites and European Offshore Marine Sites identified under the Conservation of Habitats and Species Regulations 2017 (as amended).

Local Planning Policy - London Borough of Haringey

Haringey's development plan is currently made up of the Strategic Policies, Development Management Policies, Site Allocations and Tottenham Area Action Plan, alongside the London Plan and the North London Waste Plan.

The London Plan

The London Plan is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20–25 years. It is the policies in this document that form part of the development plan for Greater London, and which should be taken into account in taking relevant planning decisions, such as determining planning applications.

This London Plan runs from 2019 to 2041. It was formally published by the Mayor on 2nd March 2021. This is a new plan, replacing all previous versions.

The policies of relevance to ecology are:

Policy G1 Green Infrastructure

- A. London's network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits.
- B. Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A.
- C. Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to:
 - 1) identify key green infrastructure assets, their function and their potential function

- 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.
- D. Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.

Policy G2 London's Green Belt

- A. The Green Belt should be protected from inappropriate development:
 - 1) development proposals that would harm the Green Belt should be refused except where very special circumstances exist,
 - 2) subject to national planning policy tests, the enhancement of the Green Belt to provide appropriate multi-functional beneficial uses for Londoners should be supported.
- B. Exceptional circumstances are required to justify either the extension or de-designation of the Green Belt through the preparation or review of a Local Plan.

Policy G3 Metropolitan Open Land

- A. Metropolitan Open Land (MOL) is afforded the same status and level of protection as Green Belt:
 - 1) MOL should be protected from inappropriate development in accordance with national planning policy tests that apply to the Green Belt
 - 2) boroughs should work with partners to enhance the quality and range of uses of MOL.
- B. The extension of MOL designations should be supported where appropriate. Boroughs should designate MOL by establishing that the land meets at least one of the following criteria:
 - 1) it contributes to the physical structure of London by being clearly distinguishable from the built-up area
 - 2) it includes open air facilities, especially for leisure, recreation, sport, the arts and cultural activities, which serve either the whole or significant parts of London
 - 3) it contains features or landscapes (historic, recreational, biodiverse) of either national or metropolitan value
 - 4) it forms part of a strategic corridor, node or a link in the network of green infrastructure and meets one of the above criteria.
- C. Any alterations to the boundary of MOL should be undertaken through the Local Plan process, in consultation with the Mayor and adjoining boroughs. MOL boundaries should only be changed in exceptional circumstances when this is fully evidenced and justified, taking into account the purposes for including land in MOL set out in Part B.

Policy G4 Open Space

- A. Development Plans should:
 - 1) undertake a needs assessment of all open space to inform policy.
 - 2) Assessments should identify areas of public open space deficiency, using the categorisation set out in Table 8.1 (the reader should refer to the full text within the plan) as a benchmark for the different types required. Assessments should take into account the quality, quantity and accessibility of open space
 - 3) include appropriate designations and policies for the protection of open space to meet needs and address deficiencies
 - 4) promote the creation of new areas of publicly accessible open space particularly green space, ensuring that future open space needs are planned for, especially in areas with the potential for substantial change
 - 5) ensure that open space, particularly green space, included as part of development remains publicly accessible.

- B. Development proposals should:
 - 1) not result in the loss of protected open space
 - 2) where possible create areas of publicly accessible open space, particularly in areas of deficiency.

Policy G5 Urban Greening

- A. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.
- B. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2 (the reader should refer to the full text within the plan), but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses).
- C. Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Table 8.2.

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 1 km 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
 - 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 outweigh 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.

- B. In their Development Plans, boroughs should:
 - 1) protect 'veteran' trees and ancient woodland where these are not already part of a protected site
 - 2) identify opportunities for tree planting in strategic locations.
- C. Development proposals should ensure that, wherever possible, existing trees of value are retained. 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.

Policy SI 17 Protecting and enhancing London's waterways

- A. Development Plans should support river restoration and biodiversity improvements.
- B. Development proposals that facilitate river restoration, including opportunities to open culverts, naturalise river channels, protect and improve the foreshore, floodplain, riparian and adjacent terrestrial habitats, water quality as well as heritage value, should be supported. Development proposals to impound and narrow waterways should be refused.
- C. Development proposals should support and improve the protection of the distinct open character and heritage of waterways and their settings.
- D. Development proposals into the waterways, including permanently moored vessels, should generally only be supported for water-related uses or to support enhancements of water-related uses.
- E. Development proposals along London's canal network, docks, other rivers and water space (such as reservoirs, lakes and ponds) should respect their local character, environment and biodiversity and should contribute to their accessibility and active water-related uses. Development Plans should identify opportunities for increasing local distinctiveness and recognise these water spaces as environmental, social and economic assets.
- F. On-shore power at water transport facilities should be considered at wharves and residential moorings to help reduce air pollution.

The Local Plan: Strategic Policies 2013 (with alterations 2017)

Haringey's Local Plan: Strategic Policies was adopted by the council in 2013, to replace the Unitary Development Plan (UDP) - with subsequent alterations adopted on the 24th July 2017. The purpose of the document is to set out the long term vision of how Haringey should develop by 2026 and sets out the council's strategy for achieving that vision including high-level strategic policies used in determining planning applications.

The policy of relevance to ecology is detailed below:

SP13 Open Space and Biodiversity

New development shall protect and improve Haringey's parks and open spaces. All new development shall:

- Protect and enhance, and when and where possible, extend the existing boundaries of the borough's Green Belt, designated Metropolitan Open Land, designated Open Spaces, Green Chains, allotments, river corridors and other open spaces from inappropriate development;
- Provide amenity space in accordance with the Council's Open Space and Recreational Standards Supplementary Planning Document (SPD);

- Manage the impact of such new developments in areas adjacent to designated open space;
- Secure improvements, enhancement and management in both quality and access to existing green spaces;
- Seek on-site or financial contributions towards open space from new developments as set out in the Open Space and Recreational Standards SPD;
- Seek to secure opportunities for additional publicly accessible open space especially in those identified areas of Open Space deficiency e.g. in the east of the borough where the quality and amount of provision is poorer as set out in the Council's Open Space and Recreational Standards SPD; and
- Conserve the historic significance of the borough's designated historic parks and gardens.

All development shall protect and improve sites of biodiversity and nature conservation, including private gardens through its:

- Contribution to wildlife and ecological habitats and, where possible, include green and brown roofs, rainwater harvesting, green walls, bird and bat nesting/roosting opportunities;
- Protection, management and maintenance of existing trees and the planting of new trees where appropriate; and
- Protection, enhancement and creation of Sites of Importance for Nature Conservation (SINCs) and Local Nature Reserves (LNRs).

The Council will enhance and improve the borough's green infrastructure through:

- Implementation of the Haringey Green Grid projects (such as Lordship Recreation Ground Improvements);
- Working with adjoining boroughs and partners to safeguard the existing Green Infrastructure, to create new green infrastructure and link up sites; and
- Working with Lee Valley Regional Park Authority to protect and enhance access to the park, its waterside open spaces and habitats, recreational and sporting facilities.

New development shall provide opportunities for Children's Play Space by:

- Protecting and enhancing existing play spaces;
- Making provision for children's informal or formal play space in addition to amenity space provision as set out above;
- Provide children's informal or formal play space to meet minimum of 3m² as set out in the Council's Open Space Standards SPD and an aspirational target of 10m² as set out in the Mayor's SPG Providing for Children's and Young People's Play and Informal recreation;
- Ensuring easy access to a range of quality and safe play opportunities for all children and within a practical journey from their home without the need to use public or private transport;
- Provide play spaces that are attractive, welcoming and engaging for all children and young people, children of both gender, disabled children and children from minority groups in the community; and
- Securing a financial contribution pursuant to a S106 Agreement towards the provision of Children's Play Space and ensuring its long term maintenance is addressed through planning obligations.

Developers will need to demonstrate:

- That the potential for play spaces for a range of outdoor activities and across different age groups can be provided on off-site open space(s) which already exist and which are close to the application site;

- They're working with the relevant agencies, community groups and developers to ensure the provision of safe, stimulating play facilities; and
- How they will secure new open spaces and SINCs, through identifying and securing funding to purchase and enhance such sites in areas of deficiency, such that there is a net increase in provision.

Development Management Policies

The council has prepared a Development Management, Development Plan Document (DPD) which sets out planning policies to help determine which developments are granted planning permission in Haringey. It was adopted by the council on the 24th July 2017.

Policies of relevance to ecology are detailed below:

DM19: Nature Conservation

- Development proposals on sites which are, or are adjacent to, internationally designated sites, Sites of Special Scientific Interest, Local Nature Reserves, Sites of Importance for Nature Conservation or Ecological Corridors, should protect and enhance the nature conservation value of the site.
- Development that has a direct or indirect adverse impact upon important ecological assets, either individually or in combination with other development, will only be permitted where:
 - The harm cannot be reasonably avoided; and
 - It has been suitably demonstrated that appropriate mitigation can address the harm caused.

DM20: Open Space and Green Grid

- Development that protects and enhances Haringey's open spaces will be supported.
- The reconfiguration of open space will be supported where:
 - It is part of a comprehensive, deliverable scheme;
 - There would be no net loss of open space;
 - It would achieve enhancements to address identified deficiencies in the capacity, quality and accessibility of open space, and it would secure a viable future for the open space; and
 - It would not be detrimental to any environmental function performed by the existing open space.
- The Council will require all development providing new or replacement open space, wherever possible, to connect to the All London Green Grid. Protection and enhancement of this network will make a positive contribution to Haringey and its communities, in addition to providing social, recreational and ecological benefits.
- Proposals for ancillary development on open space will be supported where they:
 - Are necessary for, or would facilitate, the proper functioning of the open space;
 - Would not be detrimental to any other functions of the open space;
 - Are ancillary to the use(s) of the open space;
 - Are of an appropriate scale; e Do not detract from the open character of the site or surroundings; and
 - Do not detract from the open character of the site or surroundings; and
 - Contribute positively to the setting and quality of the open space.
- The Council supports the provision and improvement of outdoor leisure facilities. Ancillary developments which enhance the park and open space offer (such as refreshment facilities, market and event spaces, public conveniences, public art installations or outdoor

play and fitness equipment), or those which meet the special needs of education, will be permitted, provided that they:

- a) Are of a high standard of design and quality, safe and accessible to all;
 - b) Do not detrimentally impact on nature conservation and biodiversity;
 - c) Do not adversely detract from the overall function, amenity, character and appearance of the park or open space.
- F. Development adjacent to open space should seek to protect and enhance the value and visual character of the open land.
- G. Sites over 1Ha in size which are located in identified areas of open space deficiency should seek to create new publically accessible open space on the site, in accordance with the open space standards set out in the Haringey Open Space and Biodiversity Study (2013), subject to viability.
- H. Consideration will be given to designating Local Green Spaces in line with national planning guidance.

DM21: Sustainable Design, Layout and Construction

- A. All new development, including building and landscape works, will be expected to consider and implement sustainable design, layout and construction techniques. Proposals should:
 - a) Apply the energy hierarchy to minimise energy use in order to meet, and if possible exceed, minimum carbon dioxide reduction requirements;
 - b) Apply the cooling hierarchy to reduce the potential for overheating and limit reliance on mechanical air conditioning systems;
 - c) Maximise opportunities to enhance biodiversity on-site, including through appropriate landscaping, Sustainable Drainage Systems, living roofs and green walls
 - d) Wherever possible, use building materials with high environmental performance ratings; and
 - e) Seek opportunities for locally sourced labour.
- B. The Council will support appropriate measures to sustainably retrofit existing homes and nonresidential buildings.
- C. Proposals that fail to demonstrate adequate consideration for sustainable design, layout and construction techniques will be resisted.
- D. Consideration will be given to the use of carbon offset payments, to be secured by planning obligations, where it can be demonstrated that proposals are unable to meet carbon dioxide emission reduction targets on-site.

DM23: Environmental Protection

Air Quality

- A. All development proposals should consider air quality and be designed to:
 - a) Improve or mitigate the impact on air quality in the Borough;
 - b) Improve or mitigate the impact on air quality for the occupiers of the building or users of the development.
- B. Air quality assessments will be required for all major development and other development proposals, where appropriate.
- C. Where necessary, adequate mitigation must be provided.

Noise and Vibration

- D. The Council will seek to ensure that new noise sensitive development is located away from existing or planned sources of noise pollution. Proposals for potentially noisy development must suitably demonstrate that measures will be implemented to mitigate its impact.

- E. A noise assessment will be required to be submitted if the proposed development is a noise sensitive development, or an activity with the potential to generate noise.

Light Pollution

- F. Development proposals that include external lighting must mitigate potential adverse impacts from such lighting. Where appropriate, proposals will be required to submit details demonstrating that external lighting is:
 - a) Appropriate for its purpose in its setting;
 - b) Designed to minimise and provide protection from glare and light spillage, particularly to sensitive receptors such as residential properties and natural habitats, including watercourses; and
 - c) Energy efficient.
- G. Proposals for new development will only be permitted where it is demonstrated that any risks associated with land contamination, including to human health and the environment, can be adequately addressed in order to make the development safe.
- H. All proposals for new development on land which is known to be contaminated, or potentially contaminated, will be required to submit a preliminary assessment to identify the level and risk of contamination and, where appropriate, a risk management and remediation strategy.

Hazardous Substances

- I. Proposals for development of new hazardous installations, or development of sites located within the vicinity of existing installations, will only be permitted where it is demonstrated that necessary safeguards are incorporated to ensure the development is safe.

DM25: Sustainable Drainage Systems

- A. All proposals for new development must seek to manage surface water as close to its source as possible in line with the London Plan drainage hierarchy.
- B. The Council will require Sustainable Drainage Systems (SuDS) to be sensitively incorporated into new development by way of site layout and design, having regard to the following requirements:
 - a) All major development proposals will be required to reduce surface water flows to a greenfield run-off rate for a 1 in 100 year critical storm event;
 - b) All minor development proposals should aim to achieve a greenfield run-off rate and, at a minimum, achieve a 50 per cent reduction on existing site run-off rates;
 - c) All other development should seek to achieve a greenfield run-off rate and include at least one 'at source' SuDS measure resulting in a net improvement in water quantity or quality discharging to a sewer; and
 - d) For all development where a greenfield runoff rate cannot be achieved justification must be provided to demonstrate that the run-off rate has been reduced as much as possible.
- C. Where Sustainable Drainage Systems are implemented they will be expected to:
 - a) Meet the requirements set out in the Council's relevant local standards and guidance, or national standards where agreed;
 - b) Incorporate measures identified in the Surface Water Management Plan;
 - c) Be designed to maximise biodiversity and local amenity benefits, and where appropriate, ensure that SuDS techniques provide for clean and safe water at the surface;
 - d) Improve water quality; and e Function effectively over the lifespan of the development.

- D. Where SuDS cannot be implemented due to site constraints (such as land contamination or space limitations) robust justification must be provided along with proposed alternative sustainable approaches to surface water management.

Overview of Relevant Species Legislation

Bats

Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process. Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

Disturbance of animals includes in particular any disturbance which is likely to impair their ability to survive, to breed or reproduce, or to rear or nurture their young, or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or to affect significantly the local distribution or abundance of the species to which they belong.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

The reader should refer to the original legislation for the definitive interpretation.

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992. The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury, badgers are not protected for conservation reasons. The following are criminal offences:

- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.
- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

A badger sett is defined in the legislation as:

- 'Any structure or place that displays signs indicating current use by a badger'.

'Current use' is not synonymous with current occupation and a sett is defined as such (and thus protected) as long as signs of current usage are present. Therefore, a sett is protected until such a time as the field signs deteriorate to such an extent that they no longer indicate 'current usage'.

Badger sett interference can result from a multitude of operations including excavation and coring, even if there is no direct damage to the sett, such as through the disturbance of badgers whilst occupying the sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England. In England a licence must be obtained from Natural England before any interference with a badger sett occurs.

The reader should refer to the original legislation for the definitive interpretation.

Hedgehog

Hedgehogs receive some protection under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended); this section of the Act lists animals which may not be killed or taken by certain methods, namely traps and nets, poisons, automatic weapons, electrical devices, smokes/gases and various others. Humane trapping for research purposes requires a licence.

Hedgehogs are a Species of Principal Importance for Nature Conservation in England and are thus capable of being material considerations in the planning process.

Nesting Birds

The Conservation of Habitats and Species Regulations 2017, (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019) places a duty on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds.

Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended).

Subject to the provisions of the act, if any person intentionally:

- kills, injures or takes any wild bird;
- takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Some species (listed in Schedule 1 of the WCA) are protected by special penalties. Subject to the provisions of the act, if any person intentionally or recklessly:

- disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird, he shall be guilty of an offence.

Several bird species are Species of Principal Importance for Nature Conservation in England, making them capable of being material considerations in the planning process.

Reptiles

All of the UK's native reptiles are protected by law. The two rarest species – sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* – benefit from the greatest protection.

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix helvetica* are protected under the Wildlife and Countryside Act 1981 (as amended) from intentional killing or injuring.

Sand lizard and smooth snake are protected under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that it is illegal to kill, injure, capture, handle or disturb these animals. Places they use for breeding, resting, shelter and protection are also protected from being damaged or destroyed. In addition, it is illegal to obstruct these animals from using such areas.

All native reptile species are listed as Species of Principal Importance for Nature Conservation in England and as such are material considerations in the planning process.

This is a simplified description of the legislation. In particular, the offences mentioned here may be absolute, intentional, deliberate or reckless. Note that where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.

The reader should refer to the original legislation for the definitive interpretation.

Stag beetle

The stag beetle is in decline globally. It is listed on Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora (a list of animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation). Stag beetle also receives protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended, making the following activities illegal: selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or

any part of, or anything derived from, such animal. Stag beetle is also listed as a Species of Principal Importance for Nature Conservation in England.

Appendix 3 - Biodiversity Metric Assessment