ENVIRONMENTAL STATEMENT: 6.3 APPENDIX 7-1: BIODIVERSITY NET GAIN REPORT

DECARBONISATION

Cory Decarbonisation Project

PINS Reference: EN010128

March 2024

Revision A

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations (2009) - Regulation 5(2)(a)

TABLE OF CONTENTS

TABLE

ANNEXES

1. INTRODUCTION

1.1.1. WSP has been instructed by Cory Environmental Holdings Limited (hereafter referred to as the Applicant) to prepare a Biodiversity Net Gain assessment for the Cory Decarbonisation Project to be located at Norman Road, Belvedere in the London Borough of Bexley (LBB; National Grid Reference/NGR 549572, 180512). The following figures are available in this Environmental Statement (ES):

- **Figure 1-1: Site Boundary Location Plan (Volume 2)**; and
- **Figure 1-2: Satellite Imagery of the Site Boundary Plan (Volume 2)**.

1.1.2. The Applicant intends to construct and operate the Proposed Scheme to be linked with the River Thames. It comprises of the following key components, which are described below, and further detail is provided within **Chapter 2: Site and Proposed Scheme Description (Volume 1)**:

- The Carbon Capture Facility (including its associated Supporting Plant and Ancillary Infrastructure): the construction of infrastructure to capture a minimum of 95% of carbon dioxide (CO_2) emissions from Riverside 1 and 95% of CO_2 emissions from Riverside 2 once operational, which is equivalent to approximately 1.3Mt CO_2 per year. The Carbon Capture Facility will be one of the largest carbon capture projects in the UK.
- The Proposed Jetty: a new and dedicated export structure within the River Thames as required to export the CO_2 captured as part of the Carbon Capture Facility.
- The Mitigation and Enhancement Area: land identified as part of the **Outline LaBARDS (Document Reference 7.9)** to provide improved access to open land, habitat mitigation, compensation and enhancement (including forming part of the drainage system and Biodiversity Net Gain delivery proposed for the Proposed Scheme) and planting. The Mitigation and Enhancement Area provides the opportunity to improve access to outdoor space and to extend the area managed as the Crossness LNR.
- Temporary Construction Compounds: areas to be used during the construction phases for activities including, but not limited to office space, warehouses, workshops, open air storage and car parking, as shown on the **Works Plans (Document Reference 2.3)**. These include the core Temporary Construction Compound, the western Temporary Construction Compound and the Proposed Jetty Temporary Construction Compound.
- Utilities Connections and Site Access Works: The undergrounding of utilities required for the Proposed Scheme in Norman Road and the creation of new, or the improvement of existing, access points to the Carbon Capture Facility from Norman Road.

1.1.3. Together, the Carbon Capture Facility (including its associated Supporting Plant and Ancillary Infrastructure), the Proposed Jetty, the Mitigation and Enhancement Area, the Temporary Construction Compounds and the Utilities Connections and Site Access Works are referred to as the 'Proposed Scheme'. The land upon which the Proposed Scheme is to be located is referred to as the 'Site' and the edge of this land referred to as the 'Site Boundary'. The Site Boundary represents the Order Limits for the Proposed Scheme as shown on the **Works Plans (Document Reference 2.3)**.

1.2. BIODIVERSITY NET GAIN

1.2.1. BNG is an approach to development which aims to leave the natural environment in a measurably better state than beforehand. The process follows the mitigation hierarchy, which sets out that everything possible must be done to firstly avoid, secondly minimise and thirdly restore/rehabilitate losses of biodiversity on a site. Only as a last resort, residual losses are compensated for using offsite habitat enhancement or creation. To undertake the assessment the Statutory Biodiversity Metric Calculation Tool[1] (herein referred to as 'the Metric') is used to quantify the biodiversity losses and gains resulting from the Proposed Scheme and a qualitative assessment is undertaken to review adherence to BNG Good Practice Principles[2] (hereafter referred to as 'the BNG Principles').

1.3. SCOPE OF ASSESSMENT

1.3.1. This BNG assessment does not cover potential impacts of the Proposed Scheme on protected species, designated sites, and indirect effects on habitats. These are covered within **Chapter 7: Terrestrial Biodiversity (Volume 1)**.

1.3.2. This assessment does use the Metric and the BNG Principles to produce a report that achieves the following:

1. Establishes the total number of baseline Area Habitat Biodiversity Units (AHBU), Hedgerow Biodiversity Units (HBU) and Watercourse Biodiversity Units (WBU) within the Site.
2. Establishes the total number of AHBU, HBU and WBU which will be retained, enhanced, and created under the current design of the Proposed Scheme's post-development landscaping model, as illustrated in the **Outline LaBARDS (Document Reference 7.9)**.
3. Determines whether the Proposed Scheme will result in a quantitative net loss, no net loss, or a net gain for biodiversity.
4. Determines whether the Proposed Scheme achieves a scheme-wide net gain for biodiversity by evidencing compliance with the BNG Principles.
5. Provides recommendations to be taken forward in the **Outline LaBARDS (Document Reference 7.9)** and pursuant to DCO requirement to achieve a net gain.

1.3.3. It is important to recognise that the quantification of BU is one of several factors to be considered when assessing the impact of the Proposed Scheme on biodiversity. The Proposed Scheme has a net gain target of 10% in line with the Environment Act 2021[3], under which this level of gain is to become a mandatory requirement for developments under the Town and Country Planning Act consenting regime from 12th February 2024. Implementation of the BNG regime for Planning Act 2008 projects, is expected in 2025[4].

2. METHODOLOGY

2.1. APPROACH

2.1.1. This BNG assessment uses the following industry recognised good practice guidance:

- Chartered Institute of Ecology and Environmental Management (CIEEM), Institute of Environmental Management and Assessment (IEMA) & Construction Industry Research and Information Association (CIRIA) (2019) Biodiversity Net Gain: Good Practice Principles for Development[2];
- The Statutory Biodiversity Metric[1], following the methodology set out within its User Guide and Technical Supplement;
- British Standard 8683 Process for designing and implementing Biodiversity Net Gain – Specification (2021)[5]; and
- CIEEM (2021) Biodiversity Net Gain Reporting and Audit Templates[6].

2.1.2. The approach in **Table 2-1** has been used to identify the relevant category for strategic significance.

2.1.3. The time it takes for a habitat to reach its specified target condition following its creation, is standardised within the Metric. However, habitats proposed within the Carbon Capture Facility footprint will be installed following the completion of the construction phase and the onset of the operation phase, and therefore an additional two years has been added to the time it will take them to reach target condition. This has been done by populating the 'delay in starting habitat creation' column in the Metric, to reflect the lag between habitat clearance and habitat creation.

2.1.4. The majority of habitat creation and enhancement will take place concurrently with construction of the Proposed Scheme as it is located outside the footprint of the Carbon Capture Facility, and within areas identified to achieve a net gain for biodiversity. For these areas outside of the built footprint, the delay in starting habitat creation in the Metric is assumed to be 0 years.

2.1.5. The Metric has been used to calculate the baseline biodiversity value; a post-development biodiversity value; and a net change in biodiversity value associated with the Proposed Scheme.

2.1.6. A qualitative assessment has also been undertaken, against the BNG Principles.

Table 2-1: Method for Assigning Strategic Significance

Strategic Significance	Method
Within an area formally identified in local strategy	Habitats are assigned this category where the following criteria are met: • it is located within an area identified as a statutory designated site[a] or non-statutory designated site[b] or within a relevant local strategy[c]; • habitats are specified in relation to the identified area; or • where specific details on relevant habitats to the identified site are unknown, all habitats which sit within the formally identified area are assigned to this level.
Location ecologically desirable but not in location strategy	Professional judgement will be applied to determine if the location is deemed ecological desirable for a particular habitat type. This decision will take account of the proximity of formally identified areas and ecological connectivity (i.e. if the habitat forms a strategic corridor) to the Site. This category has been used for habitats of ecological importance that are not within a designated site and are not highlighted specifically by local planning policies but do receive conservation designation in some way, such as Habitats of Principal Importance (HPI)[d].
Area not in a local strategy	Any habitats which do not fall into either of the above categories will be assigned this level of strategic significance.

[a] Includes Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar, Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR).
[b] Includes Local Nature Reserves (LNR), Sites of Nature Conservation Interest (SNCI).
[c] The London Plan (2021), The Bexley Local Plan 2023.
[d] Those listed under the Natural Environment and Rural Communities (NERC) Act (2006) as amended.

2.2. DATA SOURCES

2.2.1. The following data sources have been used to complete this BNG assessment:

1. Publicly available datasets for HPI, ancient woodland (classed as irreplaceable habitat), and statutory designated sites for nature conservation. Full detail of the desk study method is provided within the **Chapter 7: Terrestrial Biodiversity (Volume 1)**. The results of the desk study have been used to inform the strategic significance value in line with the methodology detailed within the Metric.
2. Baseline habitat and condition assessment data for onsite and offsite areas collected through surveys carried out in 2023 (as summarised in **Chapter 7: Terrestrial Biodiversity (Volume 1)**), using the UKHab Version 1.1 habitat classification system[7]. These comprised:
   - UKHab habitat survey undertaken in January and February 2023, led by a Botanical Society of Britain & Ireland (BSBI) Field Identification Skills Certificate (FISC) Level 3[e] accredited surveyor. This survey covered the land within the Site Boundary in accordance with the PEIR[8], which was later expanded to include a wider area of the Crossness LNR;
   - observations made by surveyors visiting the Site to undertake Protected Species surveys undertaken throughout 2023, allowing initial UKHab classification of habitats within the extended areas covered by the Site Boundary;
   - detailed botanical survey undertaken in July 2023, which confirmed classification of habitats within the Site as well as providing condition assessment data for all habitats within the Site. Undertaken by a FISC Level 4[f] accredited surveyor;
   - UKHab survey undertaken by Ecological Planning and Research (EPR) covering habitats at the BNG Opportunity Area, approximately 1.1km to the west of the Proposed Scheme, that is intended to act as an area to support the achievement of BNG **(Annex A: EPR Preliminary Ecological Appraisal)**;
   - habitat condition assessment survey of the BNG Opportunity Area undertaken in September 2023 by a FISC Level 4 accredited surveyor; and
   - post-development landscaping model, as set out in the **Outline LaBARDS (Document Reference 7.9)**.
3. All areas/lengths of habitats have been measured using QGIS v3.28.4/with reference to an Ordnance Survey MasterMap base layer.
4. Post-development landscaping proposals were translated into UKHab habitat types for use in the assessment. The post-development landscape plan has

[e] Level with appropriate skill to undertake UKHab survey competently.
[f] Level with appropriate skill to undertake National Vegetation Classification and other detailed botanical survey competently.

undergone iterative improvements in an attempt to achieve the best outcomes for biodiversity.

2.3. IRREPLACEABLE HABITATS AND STATUTORY DESIGNATED SITES

2.3.1. In accordance with the Metric, impacts on irreplaceable habitats and very high distinctiveness habitats should be excluded from the calculations. It is important to note that net gain cannot be achieved for the Proposed Scheme as a whole if there is a loss of irreplaceable habitat.

2.3.2. No irreplaceable habitats have been identified in the baseline data.

2.4. LIMITATIONS AND ASSUMPTIONS

2.4.1. The following limitations and assumptions have been applied when using the above methodologies:

- Condition assessment of the former Thamesmead Golf Course was not completed at the time of the UKHab survey undertaken by EPR, and thus a further survey was undertaken to provide this data. However, all habitats identified by EPR were located by Proposed Scheme surveyors at the BNG Opportunity Area and condition for all habitats present was determined. Consequently, the separation of the two periods of data collection does not represent a limitation.
- The assessment of habitat condition at the BNG Opportunity Area was undertaken at the end of the summer, during September 2023, at a time when many flowering plants would not be in evidence. However, given the modified habitat types present and the plants that were in evidence, it was possible to be confident in the habitat types and conditions assigned to habitats, therefore the timing of the survey does not represent a limitation.
- Some parts of Crossness LNR were not assessable to surveyors who were limited to Public Rights of Way (PRoW) in some cases (e.g. around Pond 6 and woodland habitat in the southern area of the Site). However, data collected through habitat and botanical survey was considered sufficient to assess condition of habitats within the Site, and therefore access is not considered a limitation.
- Intertidal mudflat area adjacent to the River Thames at the north western side of the Site could not be accessed due to health and safety concerns (steep river wall, preventing access), hence the species composition and condition were assessed from the PRoW on the river wall (England Coast Path (FP3/NCN1)), with supplementary intertidal data collected for the marine biodiversity assessment (see **Chapter 8: Marine Biodiversity (Volume 1)** for further details) considered. This approach is considered sufficient to accurately determine the condition of the mudflat, coupled with the precautionary principle, and consequently is not considered a limitation.

- Artificial hard structures associated with the Belvedere Power Station Jetty (disused) have not been given an area in the Metric as detailed information on the extent of the existing and proposed vertical habitat area was not available. This is a consistent approach between baseline and post development, however if the Belvedere Power Station Jetty (disused) is to be removed which results in a loss of intertidal artificial hard structure, this can be compensated with the construction of the Proposed Jetty.

3. QUANTITATIVE ASSESSMENT: BASELINE

3.1. CONDITION

3.1.1. Condition of habitats was assessed using the Biodiversity Metric condition assessment sheets[9] which provide the criteria for assigning condition scores to habitats of: Low; Moderate; or High. Completed condition sheets for each habitat are provided in **Annex B: Condition Assessment Sheets**.

3.2. STRATEGIC SIGNIFICANCE

3.2.1. The desk study identified the formally designated sites within the Site. Full details of the desk study results are provided within **Chapter 7: Terrestrial Biodiversity (Volume 1)** and its associated appendices. The following designated sites and their constituent habitats of relevance were identified within the Site:

- **Crossness LNR** – comprising a network of ditches and open water, reedbed, scrub and areas of coastal and floodplain grazing marsh;
- **River Thames and tidal tributaries Site of Importance for Nature Conservation (SINC)** – the River Thames and the tidal sections of creeks and rivers which flow into it comprise mudflats, shingle beach, intertidal vegetation, islands and river channel;
- **Erith Marshes SINC** – one of the few remaining examples of the Thames-side grazing marshes and ditches; and
- **Belvedere Dykes SINC** – the drainage dykes comprising reedbed, wet woodland and grassland habitats.

3.2.2. Where located within the above identified areas the following habitats have been assigned to the strategic significance category *'within area formally identified in local strategy*' within the Metric[1]:

- coastal floodplain and grazing marsh;
- reedbeds;
- ditches and water bodies;
- lowland mixed deciduous woodland;
- open water within the River Thames; and
- littoral mud within the River Thames.

3.2.3. An area of open mosaic habitat on previously developed land is present in Gannon within the Site. This is outside the boundary of Crossness LNR and the SINC identified above, but constitutes a HPI under the NERC Act 2006 and provides supporting value to the adjacent designated sites. It has therefore been added to the *'location ecologically desirable but not within the local strategy*'[1] category within the Metric. No other habitats have been assigned to this category.

3.2.4. In addition, the BNG Opportunity Area at the former Thamesmead Golf Course is designated as Thamesmead Golf Course SINC, an area of grassland, woodland and small ponds with reedbeds. The SINC boundary encompasses the majority of habitats of the BNG Opportunity Area. Areas of 'developed land, sealed surface' and 'artificial unvegetated unsealed surfaces' forming the former golf course buildings and car parks fall outside the SINC, alongside some areas of other neutral grassland and mixed scrub. Habitats within the SINC have been assigned to the category '*within area formally identified in local strategy'*, and those outside '*area not in local strategy'* as defined in **Table 2-1** above.

3.3. ONSITE BASELINE BIODIVERSITY

3.3.1. The tabs within the accompanying Metric provide details on the habitat baseline and should be referred to for full details of the habitats present on Site. In this instance, please refer to **Annex C: Statutory Biodiversity Metric** tabs: A-1 Onsite Habitat Baseline and C-1 Onsite Watercourse Baseline. Onsite habitats are mapped in **Figure 1**.

3.3.2. Note, there are no hedgerows within the Site, and therefore tab B-1 Onsite Hedge Baseline has not been completed.

3.3.3. Baseline survey work identified 14 area habitat types and one linear habitat type. These are listed, along with their condition and overall area, in **Table 3-1** and **Table 3-2**. These tables are structured to show the split of habitats in the terrestrial parts of the Site (i.e. those landward of the River Thames floodwall) and those in the intertidal parts of the Site (i.e. those on the Thames-side of the flood defence), to aid alignment with **Chapter 7: Terrestrial Biodiversity (Volume 1)**. Narrative descriptions, including species used in classification, for each habitat type can be found in **Chapter 7: Terrestrial Biodiversity (Volume 1)** and its associated appendices.

3.3.4. Two parcels of land along Norman Road, known as Borax North and Borax South formerly supported open mosaic habitat, but have been cleared as part of the Riverside 2 development to provide a construction laydown area. Through the BNG process for Riverside 2, the loss of these habitat areas has been offset by offsite provision elsewhere, and they will not be restored following completion of Riverside 2. Thus, they have been identified in the Metric as '*Artificial unvegetated unsealed surface'* (as this does not score biodiversity units) and identified as '*Habitat already offset by Riverside 2 project'* within **Table 3-1**. These areas do not contribute biodiversity units to the baseline.

3.3.5. Further variables have been assigned as follows:

- **River Thames:** watercourse footprint of the river has been included in the area habitats of the Metric to represent the River Thames, which has been classified as a subtidal estuary where it coincides with the Site Boundary. It has thus been excluded from the Metric's watercourse units in line with the metric user guide;

- **Watercourse Encroachment (Watercourse Baseline), Ditches:** watercourse encroachment can be any feature that adversely affects the natural function of the watercourse, or results in localised changes in habitat, species and migratory pathways. This has been assigned as ‘‘Minor’’ for the whole ditch network to reflect the effect of culverts and other features that occur, whilst recognising such structures don’t occur on most of the length of the ditch network;
- **Riparian encroachment (Watercourse Baseline), Ditches:** riparian zone encroachment is any feature or intervention within the riparian zone that reduces the quantity, quality or ecological function of the riparian habitat. Few structures extend into the riparian zone of the ditch network, and therefore it has been assigned the ‘Minor/Minor’ riparian encroachment category.
- **Middleton Jetty –** this structure is primarily located within the subtidal Thames (excluded from the Metric as described above), but approximately two thirds of the gantry linking it to Riverside 1 lie over mudflat, where 20 piers are located, each being estimated to be 1m in diameter for the purposes of this assessment. Thus, for this area mudflat habitat has been recorded in the Metric with the area of the piers included as developed land;
- **Belvedere Power Station Jetty (disused) –** this disused structure is located over mudflat habitat. It has not been possible to measure the area taken up by its supporting piers due to the complexity of the structure, but they have been estimated to cover approximately a quarter of the area of the Belvedere Power Station Jetty (disused) as a whole. Thus, a combination of mudflat and developed land has been recorded in the metric for the area covered by this structure; and
- **Mudflat Condition –** data to inform a condition assessment for intertidal mudflat habitat in line with that required by the Metric was limited at the time of this assessment. Condition has been inferred with relation to the Metric’s condition assessment criteria for this habitat, alongside observation from field surveys, and has been assigned to ‘Moderate’.

3.4. OFFSITE BASELINE BIODIVERSITY

3.4.1. The tabs within the accompanying Metric **(Annex C: Statutory Biodiversity Metric)** provide details on the offsite habitat baseline within the BNG Opportunity Area and should be referred to for full details on the habitats present. In this instance, refer to the tab D-1 Offsite Baseline. Offsite habitats are mapped in **Figure 2**.

3.4.2. Note, there are no hedgerows or linear watercourses within the BNG Opportunity Area, so tab E-1 Offsite Hedge Baseline and F-1 Offsite Watercourse Baseline have not been completed.

3.4.3. Baseline survey work identified 10 area habitat types. These are listed, along with their condition and overall area, in **Table 3-3**. Narrative descriptions, including species used in classification, for each habitat type can be found in **Annex A: EPR Preliminary Ecological Appraisal**.

Table 3-1: Onsite Baseline Area Habitats

Habitat Type	Area (ha)	Condition	Strategic Significance	% of Site Area
TERRESTRIAL				
Reedbeds	4.954	Moderate	Formally identified in local strategy	6.4
Other neutral grassland	2.197	Moderate	Area not in local strategy	2.8
Other neutral grassland	1.538	Poor	Area not in local strategy	2.0
Coastal floodplain and grazing marsh	14.429	Poor	Formally identified in local strategy	18.7
Modified grassland	1.771	Poor	Area not in local strategy	2.3
Bramble scrub	2.238	N/A	Area not in local strategy	2.9
Ponds and Standing Water (Priority Habitat) (Crossness LNR ponds and Waterbodies including Pond 6)	2.076	Good	Formally identified in local strategy	2.7
Open mosaic habitat on previously developed land	0.982	Poor	Location ecologically desirable but not in local strategy	1.3
Developed land; sealed surface (including buildings and hardstanding)	9.799	N/A	Area not in local strategy	12.7
Artificial unvegetated unsealed surface (footpaths, gravel surfaces etc)	0.176	N/A	Area not in local strategy	0.2
Habitat already offset by Riverside 2	2.364	N/A	Area not in local strategy	3.1
Introduced Shrub	0.038	N/A	Area not in local strategy	<0.1

Habitat Type	Area (ha)	Condition	Strategic Significance	% of Site Area
Lowland mixed deciduous woodland	1.479	Poor	Formally identified in local strategy	1.9
Watercourse footprint – Ditches	1.193	N/A	N/A	1.5
Sub-total	**45.234**			**58.6***
MARINE				
Littoral mud	6.131	Moderate	Formally identified in local strategy	7.9
Developed land; sealed surface (Middleton Jetty and Belvedere Power Station Jetty (disused) piers/supports)	0.218	N/A	Formally identified in local strategy	0.3
Intertidal hard structures (Middleton Jetty and Belvedere Power Station Jetty (disused))	-	Poor	Formally identified in local strategy	0.0
Watercourse footprint – Sub-tidal River Thames	25.569	N/A	N/A	33.1
Sub-total	**31.918**			**41.4***
TOTAL	**77.152**			**100**
*** Sub-total has been rounded to one decimal point.**				

Table 3-2: Onsite Baseline Watercourse Habitats

Habitat Type	Length (km)	Condition	Strategic Significance	Watercourse Encroachment	Riparian Encroachment
TERRESTRIAL					
Ditches	4.8	Poor	Formally identified in local strategy	Minor	Minor/Minor
TOTAL	**4.8**				

Table 3-3: Offsite Baseline Area Habitats

Habitat Type	Area (ha)	Condition	Strategic Significance	% of Site Area
Reedbeds	0.264	Moderate	Formally identified in local strategy	1.6
Modified grassland	0.925	Poor	Formally identified in local strategy	5.7
Other neutral grassland	7.671	Poor	Formally identified in local strategy	46.9
Other neutral grassland	2.219	Poor	Area/compensation not in local strategy/no local strategy	13.6
Bramble scrub	0.667	N/A	Formally identified in local strategy	4.1

Habitat Type	Area (ha)	Condition	Strategic Significance	% of Site Area
Mixed scrub	1.954	Poor	Formally identified in local strategy	11.9
Mixed scrub	0.123	Poor	Area/compensation not in local strategy/no local strategy	0.8
Ponds and standing water (priority habitat)	0.262	Moderate	Formally identified in local strategy	1.6
Artificial unvegetated, unsealed surface	0.463	N/A	Area/compensation not in local strategy/no local strategy	2.8
Developed land; sealed surface	0.397	N/A	Area/compensation not in local strategy/no local strategy	2.4
Other coniferous woodland	0.04	Poor	Formally identified in local strategy	0.2
Other woodland; broadleaved	1.378	Poor	Formally identified in local strategy	8.4
TOTAL	**16.363**			**100**

4. QUANTITATIVE ASSESSMENT: POST-DEVELOPMENT BIODIVERSITY

4.1. ONSITE

4.1.1. The post-development habitats expected onsite after construction are based on current landscaping plans (see **Section 2.2**) and are shown as UKHab habitat types on **Figure 3**. Onsite baseline habitats will be lost, retained or enhanced, and these elements of post-development biodiversity are quantified in **Table 4-1** for area habitats, and **Table 4-2** for watercourses, which summarise data from the A-1 Onsite Habitat Baseline, A-3 Onsite Habitat Enhancement, C-1 Onsite Watercourse Baseline, and C-3 Onsite Watercourse Enhancement tabs of the Metric.

4.1.2. New habitats will also be created onsite, as detailed in **Table 4-3** and **Table 4-4**, which summarise data from the A-2 Onsite Habitat Creation and C-2 Onsite Watercourse Creation tabs of the Metric respectively. These details are provided at **Annex C: Statutory Biodiversity Metric**.

4.1.3. The Proposed Jetty will primarily be located within the subtidal Thames (habitats below mean low water springs are currently excluded from the BNG Metric, however, the Proposed Scheme will aim to reduce impacts within the subtidal Thames), but approximately a half of the Access Trestle that would link it to Riverside 1 lies over mudflat, where approximately 16 pier supports are proposed, each being 0.9m in diameter. Thus, this area of mudflat habitat has been recorded in the Metric (with the area of the pier supports included) as developed land.

4.1.4. Retention of the Belvedere Power Station Jetty (disused) has been assumed for the purposes of assessment of post-development biodiversity. As this scenario presents the greatest area of shaded intertidal habitat, it has been adopted as a ‘worst case’ approach.

4.1.5. The Proposed Scheme will lead to loss of 9.235ha of area habitat within the Site Boundary as detailed within **Annex C: Statutory Biodiversity Metric**. In addition, 0.4km of ditch habitat will be lost. Losses will be balanced by the following habitat creation and enhancement measures (as detailed in **Figure 7-7: Proposed Habitat Creation and Enhancements (Volume 2)** and **Figure 3 - Onsite Post Development Landscaping**) in the Mitigation and Enhancement Area and in the Carbon Capture Facility, as set out in the **Outline LaBARDS (Document Reference 7.9)**:

- Creation of new floodplain grazing marsh of Moderate condition within Norman Road Field, and enhancement of existing grazing marsh within Crossness LNR to Moderate condition. These measures will be achieved primarily through engineered changes to the hydrology of these areas to increase the amount of water they receive over a longer period of the year. Additional measures would

include planting and modification of the grazing regime as necessary to achieve the goal condition.

- Creation of new neutral grassland of Moderate condition, and enhancement of Poor condition neutral grassland to Moderate condition through seeding and management.
- Creation of new woodland habitat of Poor condition, and enhancement of the woodland barrier along the A2016 Eastern Way/Picardy Manorway from Poor to Moderate condition by implementation of a woodland management regime.
- Creation of new reedbed habitat.
- Enhancement of 0.2km of ditch habitat from Poor to Moderate condition through changes to management and planting as necessary.

4.1.6. It is assumed that the majority of habitat creation and enhancement work, both onsite and offsite, will take place concurrently with construction of the Carbon Capture Facility (further detail is provided in **Chapter 2: Site and Description of the Proposed Scheme (Volume 1)**. However, woodland and other neutral grassland creation within the Carbon Capture Facility will follow the completion of construction work and begin alongside facility commissioning, which is anticipated to result in a delay of two years.

4.2. OFFSITE

4.2.1. Habitat plans for the BNG Opportunity Area are yet to be finalised. Deficits identified by the Metric resulting from construction of the Proposed Scheme have allowed identification of broad proposals for actions offsite currently intended to be located at the former Thamesmead Golf Course. These will involve conversion of the disused gravel car park and 0.660ha of Poor condition neutral grassland habitat to a combination of open mosaic habitat and reedbed, and the improvement of 7.650ha of neutral grassland from Poor to Moderate condition. Elements of offsite post-development biodiversity are quantified in **Table 4-5** for area habitats, which summarise data from the D-1 Offsite Habitat Baseline and D-3 Offsite Habitat Enhancement, tabs of the Metric. Habitat creation is detailed in **Table 4-6**, which summarises data from the D-2 Offsite Habitat Creation tab of the Metric (**Annex C: Statutory Biodiversity Metric**). This will be delivered pursuant to a Section 106 obligation.

4.3. FURTHER MEASURES

4.3.1. In addition to the onsite and offsite measures specified above, the following commitments have been made by the Proposed Scheme in relation to BNG (as shown in D-3 offsite habitat enhancement tab of the Metric (**Annex C: Statutory Biodiversity Matrix**), but have not been tied to a specific site or project:

- enhancement of 0.05ha of intertidal mudflat habitat within the River Thames corridor to offset construction of the Proposed Jetty Access Trestle over existing mudflat habitat. Enhancement proposals have not been finalised at this stage, but could include direct interventions within the Site to improve the condition of the mudflat, such as a commitment to remove debris and litter, or pollution remediation. It could also comprise a contribution to an established enhancement scheme within the River Thames, such as that run by Thames21 [10].

4.3.2. The Environment Agency has an aspirational measure for the rock revetment between the mudflat and tidal defence at a nearby location to be ecologically enhanced. This states: *"Riverside to Fishers Way - At end of life, undertake technical study to review options for armour replacement and opportunities to improve habitat".* This measure, amongst other options will be considered during the detailed design and the post consent BNG process.

4.4. QUANTITATIVE ASSESSMENT OUTCOME

4.4.1. The overall net change in biodiversity in the terrestrial and intertidal environments is 10.01% for area habitats, and 13.71% for watercourses. Trading rules are satisfied, such that net gain is achieved both within terrestrial parts of the Site and habitats within the River Thames. This result utilises a combination of habitat creation and enhancement within the Site Boundary, at the offsite BNG Opportunity Area and as further habitat improvements proposed to mudflat within the River Thames corridor to achieve a net gain for biodiversity.

4.4.2. The current government guidance on what developments can count towards BNG[11], state that if a project is providing offsite mitigation and compensation for protected sites and species this may count towards the BNG, however, the project needs to achieve at least 10% of the BNG through other activities such as onsite habitat creation and enhancement.

Table 4-1: Onsite Area Habitats Retained, Enhanced and Lost

Habitat Type	Strategic Significance	Area Retained (ha)	Area Enhanced (ha)	Area Lost (ha)	Enhancement Condition
TERRESTRIAL					
Reedbeds	Formally identified in local strategy	4.581	0.000	0.373	N/A
Other neutral grassland (Moderate Condition)	Area/compensation not in local strategy/no local strategy	1.532	0.000	0.665	N/A
Other neutral grassland (Poor Condition)	Area/compensation not in local strategy/no local strategy	1.455	0.046	0.037	Moderate
Coastal floodplain and grazing marsh	Formally identified in local strategy	5.398	6.989	2.042	Moderate
Modified grassland	Area/compensation not in local strategy/no local strategy	0.654	0.000	1.117	N/A
Bramble scrub	Area/compensation not in local strategy/no local strategy	1.333	0.000	0.905	N/A
Ponds and standing water (Priority Habitat) (Crossness LNR ponds and Waterbodies including Pond 6)	Formally identified in local strategy	2.076	0.000	0.000	N/A
Open mosaic habitat on previously developed land	Location ecologically desirable but not in local strategy	0.000	0.000	0.982	N/A

Habitat Type	Strategic Significance	Area Retained (ha)	Area Enhanced (ha)	Area Lost (ha)	Enhancement Condition
Developed land; sealed surface (including buildings and hardstanding)	Area/compensation not in local strategy/no local strategy	9.182	0.000	0.617	N/A
Artificial unvegetated unsealed surface (footpaths, gravel surfaces etc)	Area/compensation not in local strategy/ no local strategy	0.135	0.000	0.041	N/A
Habitat already offset by Riverside 2	Area/compensation not in local strategy/no local strategy	0.000	0.000	2.364	N/A
Introduced Shrub	Area/compensation not in local strategy/no local strategy	0.038	0.000	0.000	N/A
Lowland mixed deciduous woodland	Formally identified in local strategy	0.481	0.998	0.000	Moderate
Watercourse footprint – Ditches	Formally identified in local strategy	1.102	(See **Table** 4-2)	0.091	(See **Table** 4-2)
Subtotal		**27.967**	**8.033**	**9.234**	

Habitat Type	Strategic Significance	Area Retained (ha)	Area Enhanced (ha)	Area Lost (ha)	Enhancement Condition
MARINE					
Littoral mud	Formally identified in local strategy	6.130	0.000	0.001	N/A
Developed land; sealed surface (Middleton Jetty, Belvedere Power Station Jetty (disused) and Proposed Jetty piers/supports)	Area/compensation not in local strategy/no local strategy	0.218	0.000	0.000	N/A
Intertidal hard structures (Middleton Jetty, Belvedere Power Station Jetty (disused) and Proposed Jetty piers/supports)	Formally identified in local strategy	0.000	0.000	0.000	N/A
Watercourse footprint – Sub-tidal River Thames	Formally identified in local strategy	25.569	0.000	0.000	N/A
Subtotal		**31.917**	**0.000**	**0.001**	
TOTALS		**59.884**	**8.033**	**9.235**	
		77.152			

Table 4-2: Onsite Watercourse Habitats Retained, Enhanced and Lost

Habitat Type	Length Retained (km)	Length Enhanced (km)	Length Lost (km)	Enhancement Condition
Ditches	4.2	0.2	0.4	Moderate
TOTAL	**4.8**			

Table 4-3: Onsite Area Habitat Creation (Terrestrial and Marine)

Habitat Type	Area Created (ha)	Condition	Strategic Significance	Delay in Starting Habitat Creation (Years)
Other neutral grassland	1.738	Moderate	Area/compensation not in local strategy/no local strategy	2
Floodplain wetland mosaic and CFGM	0.672	Moderate	Formally identified in local strategy	0
Developed land; sealed surface	5.365	N/A - Other	Area/compensation not in local strategy/no local strategy	0
Reedbeds	0.505	Moderate	Formally identified in local strategy	0
Watercourse footprint – Ditches	0.176	N/A - Other	Formally identified in local strategy	0
Lowland mixed deciduous woodland	0.738	Poor	Formally identified in local strategy	2
Artificial unvegetated, unsealed surface	0.039	N/A - Other	Area/compensation not in local strategy/no local strategy	0

Habitat Type	Area Created (ha)	Condition	Strategic Significance	Delay in Starting Habitat Creation (Years)
Developed land; sealed surface (Proposed Jetty piling in mudflat)	0.001	N/A - Other	Area/compensation not in local strategy/no local strategy	0
TOTAL	**9.234**			

Table 4-4: Onsite Watercourse Habitat Creation

Habitat Type	Length (km)	Condition	Strategic Significance	Watercourse Encroachment	Riparian Encroachment	Delay in Starting Habitat Creation (Years)
Ditches	1.3	Poor	Formally identified in local strategy	Minor	Minor/Minor	0
TOTAL	**1.3**					

Table 4-5: Offsite Area Habitats Retained, Enhanced and Lost

Habitat Type	Strategic Significance	Area Retained (ha)	Area Enhanced (ha)	Area Lost (ha)	Enhancement Condition
Reedbeds	Formally identified in local strategy	0.264	0.000	0.000	N/A
Modified grassland	Formally identified in local strategy	0.925	0.000	0.000	N/A
Other neutral grassland	Formally identified in local strategy	1.530	6.141	0.000	Moderate
Other neutral grassland	Area/compensation not in local strategy/ no local strategy	0.000	1.559	0.660	Moderate
Bramble scrub	Formally identified in local strategy	0.667	0.000	0.000	N/A
Mixed scrub	Formally identified in local strategy	1.954	0.000	0.000	N/A
Mixed scrub	Area/compensation not in local strategy/no local strategy	0.123	0.000	0.000	N/A
Ponds and standing water (priority habitat)	Formally identified in local strategy	0.262	0.000	0.000	N/A
Artificial unvegetated, unsealed surface	Area/compensation not in local strategy/no local strategy	0.031	0.000	0.432	N/A
Developed land; sealed surface	Area/compensation not in local strategy/no local strategy	0.397	0.000	0.000	N/A
Other coniferous woodland	Formally identified in local strategy	0.040	0.000	0.000	N/A
Other woodland; broadleaved	Formally identified in local strategy	1.378	0.000	0.000	N/A
TOTALS		**7.571**	**7.700**	**1.093**	
		16.364			

Table 4-6: Offsite Area Habitat Creation

Habitat Type	Area Created (ha)	Condition	Strategic Significance	Delay in Starting Habitat Creation (Years
TERRESTRIAL				
Open mosaic habitat on previously developed land	0.882	Moderate	Formally identified in local strategy	0
Reedbeds	0.210	Moderate	Formally identified in local strategy	0
TOTAL	**1.092**			

5. QUALITATIVE ASSESSMENT

5.1.1. **Table 5-1** sets out the qualitative assessment against the BNG Principles to determine if wider BNG obligations (i.e. in addition to the measurable net gain) have been met. The Proposed Scheme as assessed achieves, qualitative scheme-wide adherence to the BNG Principles.

Table 5-1: Evidence of Proposed Scheme Compliance with BNG Good Practice Principles

Principle	Description	Evidence	Current Outcome
1. Apply the mitigation hierarchy	Do everything possible to first avoid and then minimise impacts on biodiversity. Only as a last resort, and in agreement with external decision makers where possible, compensate for losses that cannot be avoided. If compensating for losses within the development footprint is not possible or does not generate the most benefits for nature conservation, then offset biodiversity losses by gains elsewhere.	The assessment of impacts within **Chapter 7: Terrestrial Biodiversity (Volume 1)** has applied the mitigation hierarchy to proposals, incorporating mitigation for ecological features present (i.e. avoidance of effects through construction practices and planning, mitigation such as translocation and captive breeding then release of water voles, and compensatory habitat creation/enhancement). The **Terrestrial Site Alternatives Report (Document Reference 7.5)** sets out the site selection process and explains how it has not been possible, given the limited space available for the Proposed Scheme, to avoid effects on Crossness	Achieved

Principle	Description	Evidence	Current Outcome
		LNR. However, effects have been compensated for by improvements onsite - to the remaining area of the Crossness LNR and Norman Road Field, through the creation of improved habitats in the Mitigation and Enhancement Area and habitat creation in the Carbon Capture Facility area, and enhancement of an offsite area (BNG Opportunity Area) and incorporation. Similarly, it was not possible to avoid impacts on other habitats such as intertidal mudflat and terrestrial habitats. Therefore, these habitats will be compensated for by the creation of terrestrial habitats onsite and offsite and intertidal habitats, the location of which is to be determined. Habitats created will be maintained through the Proposed Scheme's **Outline LaBARDS (Document Reference 7.9)** for duration of at least 30 years.	

Principle	Description	Evidence	Current Outcome
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	Avoid impacts on irreplaceable biodiversity – these impacts cannot be offset to achieve No Net Loss or Net Gain.	No irreplaceable habitats will be impacted by the Proposed Scheme.	Achieved
3. Be inclusive and equitable	Engage stakeholders early, and involve them in designing, implementing, monitoring and evaluating the approach to Net Gain. Achieve Net Gain in partnership with stakeholders where possible and share the benefits fairly among stakeholders.	Stakeholders have been involved to date through consultation, including those who own (Thames Water) and manage (Friends of Crossness Local Nature Reserve) the Crossness LNR and own and manage mitigation land and TGC (Peabody Trust). London Borough of Bexley (LBB) has also been consulted through statutory consultation and informally, on the proposed approach. The BNG outcome will be shared with relevant stakeholders through the DCO application. Stakeholders will be able to review the results of this BNG assessment and its associated metric and provide comments and queries as part of this process. The benefits in terms of biodiversity through the enhancement to habitats both on and offsite will be available to the	Achieved

Principle	Description	Evidence	Current Outcome
		main stakeholders, those who use the nature reserve, as well as the general public in the wider area.	
4. Address risks	Mitigate difficulty, uncertainty and other risks to achieving Net Gain. Apply well accepted ways to add contingency when calculating biodiversity losses and gains in order to account for any remaining risks, as well as to compensate for the time between the losses occurring and the gains being fully realised.	This BNG assessment has used the Metric[1] and its associated legally recognised risk multipliers. These multipliers account for uncertainty with creating new habitats. Contingency is added according to the level and type of uncertainty, to increase the amount of habitat needed to achieve a net gain in biodiversity. Creation and implementation of the measures in the **Outline LaBARDS (Document Reference 7.9)**, secured by a requirement of the **Draft DCO (Document Reference 3.1)**, will further reduce risk to habitat creation and establishment.	Achieved
5. Make a measurable Net Gain contribution	Achieve a measurable, overall gain for biodiversity and the services ecosystems provide while directly contributing towards nature conservation priorities.	The Proposed Scheme will lead to a net gain in biodiversity of area-based and linear habitats. This is confirmed through the outcome of the Biodiversity Metric	Achieved

Principle	Description	Evidence	Current Outcome
		calculations **(Annex C: Statutory Biodiversity Metric)**.	
6. Achieve the best outcomes for biodiversity	Achieve the best outcomes for biodiversity by using robust, credible evidence and local knowledge to make clearly justified choices when: • delivering compensation that is ecologically equivalent in type, amount and condition, and that accounts for the location and timing of biodiversity losses; • compensating for losses of one type of biodiversity by providing a different type that delivers greater benefits for nature conservation; • achieving Net Gain locally to the development while also contributing towards nature conservation priorities at local, regional and national levels; • enhancing existing or creating new habitat; and	This BNG assessment has used the most recent data and followed a rigorous method and Quality Assurance process. Trading rules have been met as habitats to be created are of equal or higher value than the baseline, and it has been possible to compensate for the loss of biodiversity units fully, as demonstrated by the Statutory Biodiversity Metric calculations **(Annex C: Statutory Biodiversity Metric)**. On balance, the best outcome for biodiversity has been achieved as there will be a quantitative net gain in both area and linear habitats, and the habitats proposed will contribute towards nature conservation priorities at a local and greater London level.	Achieved

Principle	Description	Evidence	Current Outcome
	• enhancing ecological connectivity by creating more, bigger, better and joined areas for biodiversity.		
7. Be additional	Achieve nature conservation outcomes that demonstrably exceed existing obligations.	Habitat areas included within the Proposed Scheme's Mitigation and Enhancement Area would not have been delivered in any other way (e.g. for habitat banking or for another scheme). Double counting of habitats has been avoided during the QGIS (as detailed in **Section 2.2** of this report) and Statutory Biodiversity Metric calculations. The BNG process has resulted in proposed creation and enhancement of habitats beyond what would have been required for protected species or protected site mitigation/compensation.	Achieved
8. Create a Net Gain legacy	Ensure Net Gain generates long term benefits by: • engaging stakeholders and jointly agreeing practical solutions that secure Net Gain in perpetuity;	Benefits of habitats created through landscaping will be secured through the following processes: • *Stakeholders* –Stakeholders have been involved to date through consultation, including those who own (Thames Water) and manage	Achieved

Principle	Description	Evidence	Current Outcome
	• planning for adaptive management and securing dedicated funding for long term management; • designing Net Gain for biodiversity to be resilient to external factors, especially climate change; • mitigating risks from other land uses; • avoiding displacing harmful activities from one location to another; and • supporting local-level management of Net Gain activities.	(Friends of Crossness Local Nature Reserve) the Crossness LNR and own and manage mitigation land and TGC (Peabody Trust). London Borough of Bexley (LBB) has also been consulted on the proposed approach. • *Management and Resilience* – The current habitat proposals for the Proposed Scheme are supported by the measures set out in the **Outline LaBARDS (Document Reference 7.9)** to maintain the on and offsite habitats through re-flooding of grassland and long term management of Norman Road Field. The proposed approach brings the opportunity to reset the Crossness LNR management regime and extend it across Norman Road Field. *Other land uses and harmful activities* – Given both the onsite and offsite habitats, including those retained and created, will primarily be managed as	

Principle	Description	Evidence	Current Outcome
		nature reserves (Crossness as an LNR, Thamesmead Golf Course as a SINC), it is not expected that other land uses, or displacement of harmful activities would affect habitats created within it. The habitat proposals within the operational Proposed Scheme will be maintained such that its condition is secured in the long term (i.e. at least 30 years period). • *Local-level management* – Will be secured through implementation of the measures within the **Outline LaBARDS (Document Reference 7.9)**.	
9. Optimise sustainability	Prioritise BNG and, where possible, optimise the wider environmental benefits for a sustainable society and economy.	The Proposed Scheme will provide additional ecosystem services benefits such as including access to nature for the public and aesthetic value (e.g. by woodland screening of the Proposed Scheme through landscaping). As noted in respect of Principle 8, the habitats and layouts have been	Achieved

Principle	Description	Evidence	Current Outcome
		considered to ensure Net Gain generates long term benefits with regards to ongoing management and maintenance.	
10. Be transparent	Communicate all Net Gain activities in a transparent and timely manner, sharing the learning with all stakeholders.	The BNG outcome is to be shared with relevant stakeholders through delivery of the Proposed Scheme via the DCO application. Information on loss and proposals for mitigation and gain have been communicated during pre-application consultation.	Achieved

6. CONCLUSIONS

6.1.1. This BNG assessment does not cover requirements of the Proposed Scheme to mitigate potential impacts on protected species and designated sites. This information can be found in **Chapter 7: Terrestrial Biodiversity (Volume 1)**.

6.1.2. This BNG assessment has demonstrated that the Proposed Scheme will result in an overall net gain for biodiversity, when applying habitat creation and enhancements both onsite and offsite, achieving a 10.01% increase in AHBU and 13.71% increase in WBU.

6.1.3. This assessment has demonstrated that the Proposed Scheme will achieve a quantitative scheme-wide BNG.

6.1.4. The qualitative assessment has concluded that the Proposed Scheme will meet all ten BNG Principles. It is therefore also demonstrated that the Proposed Scheme will achieve a qualitative scheme-wide BNG.

7. FIGURES

7.1.1. The following figures are presented overleaf:

- Figure 1 – Onsite Baseline
- Figure 2 – Offsite Baseline
- Figure 3 – Onsite Post-development Landscaping

LEGEND:

- Site Boundary
- Other neutral grassland
- Coastal and flooplain grazing marsh
- Modified grassland
- Lowland mixed deciduous woodland
- Bramble scrub
- Reedbeds
- Open mosaic habitats on previously developed land
- Developed land, sealed surface
- Developed land, sealed surface (buildings)
- Artificial unvegetated unsealed surface
- Introduced shrub
- Ponds and standing water
- Ditches
- Subtidal River Thames
- River Thames under jetty
- Intertidal mudflats
- Intertidal mudflats under jetty
- Habitat offset by Riverside 2 scheme

STATUS:

FINAL

CORY

Cory Environmental Holdings Ltd

PROJECT:

Cory Decarbonisation Project

TITLE:

On Site Biodiversity - Baseline

SCALE @A3:	DRAWN:	APPROVED:
1:8,000	PJ	MM
VERSION:	DATE:	DATE:
1	17/01/24	17/01/24
PROJECT No:	DRAWING No:	
70090329	Figure 1	

C:\TEMP\Cory CCUS GIS\Ecology_GIS.qgz

LEGEND:

- Other neutral grassland
- Modified grassland
- Other woodland-broadleaved
- Other coniferous woodland
- Mixed scrub
- Bramble scrub
- Reedbeds
- Developed land. sealed surface
- Developed land. sealed surface (buildings)
- Artificial unvegetated unsealed surface
- Ponds and standing water

STATUS:

FINAL

Cory Environmental Holdings Ltd

PROJECT:

Cory Decarbonisation Project

TITLE:

Off Site Biodiversity - Baseline

SCALE @A3:	DRAWN:	APPROVED:
1:5,649	PJ	MM
VERSION: 1	DATE: 17/01/24	DATE: 17/01/24
PROJECT No: 70090329	DRAWING No: Figure 2	

C:\TEMP\Cory CCUS GIS\Ecology_GIS.qgz

LEGEND:

- Site Boundary
- Other neutral grassland
- Coastal and floodplain grazing marsh
- Coastal and flooplain grazing marsh, integrated wate
- Modified grassland
- Lowland mixed deciduous woodland
- Bramble scrub
- Reedbeds
- Developed land. sealed surface
- Developed land, sealed surface (buildings)
- Artificial unvegetated unsealed surface
- Introduced shrub
- Ponds and standing water
- Ditches
- Subtidal River Thames
- River Thames under jetty
- Intertidal mudflats
- Intertidal mudflats under jetty

STATUS:

FINAL

CORY

Cory Environmental Holdings Ltd

PROJECT:

Cory Decarbonisation Project

TITLE:

On Site Biodiversity - Post-development

SCALE @A3:	DRAWN:	APPROVED:
1:8,000	PJ	MM
VERSION:	DATE:	DATE:
1	17/01/24	17/01/24
PROJECT No:	DRAWING No:	
70090329	Figure 3	

C:\TEMP\Cory CCUS GIS\Ecology_GIS.qgz

Annex A

EPR PRELIMINARY ECOLOGICAL APPRAISAL

EPR

ECOLOGICAL EXPERTISE, EVOLVED

Crossness Park

Ecological Appraisal

Prepared on behalf of

Sustrans

Draft Report

12 September 2022

22/34-1A

Crossness Park
Ecological Appraisal

Report Release Sheet

Draft/Final:	Draft Report
Issue Number:	22/34-1A
Date:	12 September 2022
Client:	Sustrans 244-254 Cambridge Heath Road London E2 9DA
Main Author(s):	Sean Manley BSc (Hons)
Contributors/Surveyors:	Sean Manley BSc (Hons) Dave W. Smith BSc (Hons) PhD MCIEEM James Mitchell BSc (Hons) Holly Pay BSc (Hons) MSc
Report Prepared for Issue by:	[redacted] …… Sean Manley BSc (Hons)
Report Approved for Issue by:	[redacted] David W. Smith BSc (Hons) PhD MCIEEM

Ecological Planning & Research Ltd, The Barn, Micheldever Station, Winchester, Hampshire, SO21 3AR

t. 01962 794720 **e.** info@epr.uk.com **w.** www.epr.uk.com

Company registration number: 8592380

Crossness Park
Ecological Appraisal

Contents

MAPS

APPENDICES

Executive Summary

Ecological Planning & Research Limited conducted an update Ecological Appraisal of land at Crossness Park, London Borough of Bexley to inform the emerging proposals for an accessible park on the former Thamesmead golf course.

The Site comprises previously managed golfing greens, fairways, and rough grasslands. The grassland habitat now includes a mosaic of wet and dry grassland alongside mixed scrub and ruderal species. Ecological features of potential importance are: the neutral grassland, the wet grassland, the woodland and scrub mosaic, ponds, reedbeds and associated inundation vegetation; the assemblage of invertebrates, amphibians, reptiles, birds, mammals, and bats.

Given that the proposals are at an early stage and that is are no fixed design, recommendations are based on the ecological mitigation hierarchy, where impacts are first avoided, and when this is not possible, mitigation, compensation and enhancement measures are applied. For design purposes this could be summarised into a 'Protect, Restore, Create' framework.

- **Protect**: the permanent and seasonal wetland habitats, certain areas of grassland to the west and all on-site woodland areas.
- **Restore**: the grasslands on the sandy and acidic soils, and other on-site grassland habitats. The existing ponds and mixed wetland mosaic should be restored; and
- **Create**: New habitat for invertebrates, reptiles, small mammals, and bats through the creation of wood piles, hibernacula, and installation of bat boxes. The option to create bee banks for solitary bees and other invertebrates should also be considered.

It is difficult to fully determine a recommended scope of further ecology survey work at this stage of design, and the extent and need for other ecology survey work will depend on the emerging proposals. It may be possible to 'design out' most of the significant negative impacts. In turn this will reduce the extent of survey work and mitigation.

Further botanical survey work of the grassland habitats is strongly recommended. This survey work would also inform the emerging proposals, future on-site habitat management and Biodiversity Net Gain calculations that may be required.

If any impacts to the former club house or on-site trees are anticipated, further bat survey work will be required. This is likely to include a detailed internal and external inspection of the club house and more detailed inspections of trees requiring works. Verbal communication with Katie Roberts, of Sustrans, indicated that the project is investigating the illumination of pathways. If the proposals do require an increase of on-site illumination, further bat activity surveys are likely to be required. Any lighting scheme should be bat friendly and based on the Bat Conservation Trust's Bats and Artificial Lighting in the UK document.

The Site has the potential to become a Biodiversity Net Gain (BNG) bank and could generate income if enough 'BNG' credits can be created for market sale.

1. INTRODUCTION

1.1 Ecological Planning & Research Limited (EPR) was commissioned by Sustrans to carry out an update Ecological Appraisal of land at Crossness Park, London Borough of Bexley. The aim of the project is to create an accessible park on the former golf course.

1.2 During the site visit on-site habitats were appraised for their suitability to support protected and priority species. The ecological importance of the Site, habitats, and surrounding area with the Zone of Influence (ZoI) were also assessed.

1.3 An initial high-level UK Habitats Survey (Butcher *et al.,* 2020a) (Butcher *et al.,* 2020b) was also conducted, but this did not include a detailed botanical survey. Therefore, some habitats have not been mapped beyond their broad habitat type e.g., 'grassland,' and further survey is needed to better categorise these habitats.

Site Location and Context

1.4 **Map 1** shows the location of the Site, which comprises the former golf course at Thamesmead. The Thames Path lies to the north, and the A2016 Eastern Way lies to the south. The Site is 'sandwiched' between the Crossness Pumping Station and Sewage works to the east and Thamesmead housing development to the west.

1.5 The Site comprises approximately 16.6ha of land previously managed as a golf course, with mown greens and fairways, and 'rough grassland' edges, planted woodland and natural regeneration woodland. Since the current landowner purchased the Site, it has been left unmanaged Consequently, the Site now supports a mosaic of rough grassland habitats, former sand bunkers, ponds, successional scrub, and woodland.

Relevant Legislation, Policy, and Guidance

1.6 The legislation, planning policy and guidance referred to in this report is summarised in **Appendix 1**.

1.7 Those of relevance are detailed below:

- The Environment Act 2021;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000 (as amended);
- The Natural Environment and Rural Communities (NERC) Act 2006 (as amended);
- The Protection of Badgers Act 1992 (as amended);
- National Planning Policy Framework (NPPF) 2021;

- Circular 06/05: Biodiversity and Geological Conservation;
- Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018);
- The documents that make up the Bexley Development Plan, including The Core Strategy (adopted in February 2012). Local policy of relevance includes; Policy CS 17 Green Infrastructure, and Policy CS 18 Biodiversity and Geology. As well as the Bexley Local Plan Regulation 18 Consultation paper for publication (February 2019).
- Bexley's Development Plan includes the Mayor's London Plan 2021;
- Bexley Local Plan Regulation 19, May 2021. Policy SP9(b), SP9(d) and SP9(f); and
- The London Plan 2021. Chapter 8 Green Infrastructure and Natural Environment - The policies of relevance include; Policy G1 '*Green infrastructure*', Policy G4 '*Open Space*', Policy G5 '*Urban Greening*', Policy G6 '*Biodiversity and access to nature'* and Policy G7 '*Trees and woodlands.*'

The Study Area

National Character Area (NCA)

1.8 The study area is located within Natural England's Greater Thames Estuary NCA (Number 81). The area forms the eastern edge of the London Basin and encompasses the coastlines of South Essex and North Kent, as well as a narrow strip of land following the path of the Thames into East London. Large areas of the NCA are unsettled supporting a landscape of shallow creeks, estuaries, mudflats, saltmarsh, and reclaimed grazing marsh. This contrasts with the busy urban and industrial areas towards London, where the population density is high and development pressures are increasing. Sea defences protect large areas of grazing marsh and brownfield sites support priority open mosaic habitat and its associated nationally rare invertebrate species.

1.9 Within each NCA, there are associated Statements of Environmental Opportunity (SEO). Consideration of these SEOs has been made with respect to the potential biodiversity net-gains that the proposals at Crossness Park could deliver. The SEOs for NCA 81 are:

- SEO 1: Maintain and enhance the expansive, remote coastal landscape – with its drowned estuaries, low islands, mudflats, and broad tracts of tidal salt marsh and reclaimed grazing marsh – maintaining internationally important habitats and their wildlife, and underlying geodiversity, while addressing the impacts of coastal squeeze and climate change and considering dynamic coastal processes.
- SEO 2: Work with landowners and managers to incorporate measures to improve biodiversity, geodiversity, pollination, water quality, soil quality and climate adaptation and to prevent soil erosion in this important food providing landscape, while maintaining its historic character.
- SEO 3: Ensure that the tranquil and remote character of the estuary is maintained by conserving and enhancing important coastal habitats and distinctive historic and geological features, while providing increased opportunities for recreation and enjoyment of the landscape.
- SEO 4: Encourage a strategic approach to development that is informed by and makes a positive contribution to local character, incorporates green infrastructure which

provides ecosystem services where they are needed most, and promotes recreation and addresses climate change, while maintaining important open mosaic and coastal habitats, and historic and geological features.

Thamesview Golf Course Site of Importance for Nature Conservation (SINC):

1.10 The Site falls within Thamesview Golf Course SINC, which is of Borough 'Grade 1' Importance, (ref: BxBI14). See **Map 1**.

1.11 The citation states:

"The golf course is an area of mostly heavily mown semi-improved acid to neutral grassland, with areas of planted woodland dominated by poplar (Populus sp.) and small ponds with reedbeds. The ponds support a number of common dragonfly species. Notable plants include bird's-foot (Ornithopus perpusillus) and hare's-foot clover (Trifolium arvense). Breeding birds include green and great spotted woodpeckers, reed warbler, coot and moorhen. A good diversity of birds visit in winter and on passage, including kingfisher, meadow pipit, snipe and a wide variety of warblers. Invertebrates include the wasp spider (Argiope bruennichi)".

Local Conservation Strategies

Bexley Biodiversity Action Plan (BAP) (2010-2015)

1.12 Whilst this document has not been updated, it is the most current document that outlines the vision for the wildlife and natural habitats for Bexley.

1.13 Habitats that are included in the Bexley BAP, and are therefore of relevance to the Site include:

- Parks and Open Spaces: Vital green oases for people and wildlife;
- Ponds: Important havens for wildlife, providing habitat for amphibians, waterbirds, aquatic plants and invertebrates;
- Reed Bed: Numerous birds and invertebrates rely on reed beds and they can support populations of Water Vole; and
- Woodland: Woodlands are important for certain key species and provide a brilliant space for people.

1.14 Species that are included in the Bexley BAP and of relevance include:

- Bat Species: At least nine species of bat have recorded recently in Bexley. All of Britain's bats have suffered declines due to a loss of roosting sites, declines in insect numbers and diversity;
- Stag beetle *Lucanus cervus*: a scarce species with a locally stable population. Also, a flagship species; and
- Water Vole *Arvicola amphibius:* A nationally declining species. Bexley supports strong populations of water voles within its marshes, rivers, and lakes.

1.15 The project proposals provide an opportunity to contribute to the Bexley Biodiversity Action Plan, the London Biodiversity Action Plan and London's Living Landscapes. For example, there are

opportunities to improve the quality acid and neutral grasslands, reedbeds, ponds and woodland. This in turn, alongside other measures, could benefit bats, reptiles, birds and Water Vole.

1.16 The Site also sits within the area covered by the Shrill Carder Bee *Bombus sylvarum* Conservation Strategy (Page *et al.,* 2019) (Page *et al.,* 2020) because the Thames Estuary is one of five key areas for this priority species. Shrill Carder Bee requires flower-rich landscapes.

1.17 Historically, the Site fell within RSPB's Greater London Futurescapes initiative (now superseded by the Priority Landscapes initiative), and in 2012 the Greater Thames was awarded Government funding as one of 12 Nature Improvement Areas (NIAs) in England.

2. ASSESSMENT METHODOLOGY

2.1 The assessment approach used within this report has been informed by guidelines provided within *BS 42020:2013: Biodiversity: Code of practice for planning and development* (BSI, 2013).

2.2 Of relevance is Section 5.5 of this guidance, which states:

> *'The work involved in preparing and implementing all ecological surveys, impact assessments and measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development.'*

2.3 The approach to the Ecological Appraisal has also been informed by the guidance presented in the Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland* (CIEEM, 2018).

2.4 This Ecological Appraisal has been reported on in the format of an initial Ecological Impact Assessment (EcIA). It will need to be updated prior to formal planning submission (if relevant) when the project proposals are better known.

2.5 Consequently, some of the potentially significant ecological effects arising from the proposal are not fully understood at the time of producing this report. Therefore, this assessment should be updated once the proposals have been fixed and recommended further survey work and assessment have been completed. However, this assessment does provide information on the most important ecological considerations to inform the project.

2.6 In summary, this assessment considers the following step-wise approach to the assessment and makes recommendations (if necessary) on how the emerging proposals can be further improved for biodiversity:

- Prediction of the activities associated with a proposed scheme that are likely to generate biophysical changes that may lead to significant effects (either positive or negative) upon ecological features of importance;
- Identification of the likely Zone of Influence (ZoI) of those activities;
- Scoping to select the ecological features (habitats, species, ecosystems, and their functions/processes) that are likely to fall within the predicted ZoI and be affected by the activities;
- Initial evaluation of the ecological features likely to be affected (both negatively and positively) to determine their potential level of importance and likely sensitivity;
- Identification of likely impacts (positive and negative) on important ecological features that might be present, together with an assessment of the geographic scale at which they are likely to be significant;
- Description of potential impact avoidance and mitigation measures to inform the emerging scheme to address potential negative effects on important ecological features, and enhancements to deliver net gains in biodiversity; and

- Advice on conformance with applicable nature conservation related legislation and policy.

2.7 Finally, the report structure and content are informed by guidance provided within CIEEM's Guidelines for Ecological Report Writing (CIEEM, 2015). CIEEM 2015 states:

> *'It is important to remember that the structure and content of a report should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development. Authors should only provide information that is relevant, necessary, and material to the purpose identified, while at the same time ensuring that adequate details are provided for the intended reader and / or audience….'*

Likely Biophysical Changes and Zone of Influence

2.8 Biophysical change means an *"alteration in biological and/or physical conditions of the environment (e.g. changes in the atmospheric concentration of carbon dioxide, altered soil pH or change in the frequency of a plant species in an area)"* (CIEEM, 2018).

2.9 The ZoI of a proposed development is defined by the EcIA Guidelines (CIEEM, 2018) as *"…the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities."*

2.10 The activities associated with the proposed development that are likely to lead to biophysical changes, and could accordingly give rise to ecological impacts, are set out in **Table 2.1** below, which is drawn from Box 9 of the EcIA Guidelines (CIEEM, 2018).

2.11 The ZoIs predicted in **Table 2.1** are based on the construction and operational phase of the proposals. Potential effects are likely to extend to different areas, and thus potentially impact upon different ecological receptors, depending upon the spatial extent of the relevant biophysical change (e.g., habitat loss and disturbance during construction).

Table 2.1: *Summary of predicted changes and Zone of Influence. This is not an exhaustive list at this stage.*

Activity	Potential Impact	Zone of Influence
Site Clearance and Construction Phase		
Access and travel on / off site	Noise / visual / lighting disturbance of sensitive species	Site and immediate surrounds.
Assembly and storage areas for machines and materials; construction compounds	Loss and fragmentation of habitats Noise / visual / lighting disturbance to sensitive species	Site and immediate surrounds in most cases but potentially up to 4km to capture any bats roosting within the wider landscape that may use the Site for foraging and/or commuting.
Vegetation clearance and ground works	Loss, damage, and fragmentation of habitats Direct harm to sensitive species	Site and immediate surrounds in most case but potentially up to 4km to capture any bats roosting within the wider landscape

Activity	Potential Impact	Zone of Influence
	Noise / visual / vibration / lighting disturbance to sensitive species	that may use the Site for foraging and/or commuting.
Lighting of work area	Disturbance to sensitive species	Site and immediate surrounds in most case but potentially up to 4km to capture any bats roosting within the wider landscape that may use the Site for foraging and/or commuting.
Drainage	Change of ground and surface water flows Change of water quality in ground and surface water Change in habitats fed by ground and surface water flows	Proposed development site and immediate surrounds and downstream water bodies.
Creation of new habitats	Beneficial impacts on flora and fauna	The creation of new habitats will benefit a range of species, including invertebrates, birds and foraging bats. Therefore, the ZoI will be mainly within 300-400m, but potentially up to 4km.
Operational Phase		
Implementation of habitat management plans	Enhancement of existing boundary habitats and creation/improvement of new habitats.	Habitat management will benefit a range of species, including invertebrates, birds and foraging bats. Therefore, the ZoI will be mainly within 300-400m, but potentially up to 4km.
Potential increase in footfall.	An increase in disturbance to vulnerable species caused by mixed recreational use. Degradation of existing habitats and sensitive ground flora by trampling and footfall.	Site and immediate surrounds.

2.12 Most of the activities and resultant biophysical changes listed in **Table 2.1** are unlikely to have an effect beyond the site boundary and the immediate surrounding area. There are some exceptions to this, which are described below.

2.13 Due to their mobile nature, the ZoI for bats is likely to extend further afield. For the most common and larger bat species that are most likely to occur in the landscape surrounding the Site (e.g. Noctule *Nyctalus noctula*) this could potentially be up to 4km. The 4km distance is based on Bat Conservation Trust CSZs (BCT, 2016).

2.14 It is generally considered that Great Crested Newt will use terrestrial habitat within 250m (English Nature, 2004; Langton et al., 2001), and potentially up to 500m from a breeding pond (English Nature (now Natural England), 2001). Therefore, Great Crested Newt in any pond

within 500m of the Site and not isolated by barriers to movement could be affected by the proposed development in the absence of mitigation. However, surveys at a distance greater than 250m from a pond are necessary only when the following conditions are met (Natural England, 2015):

- Maps, aerial photos, walk-over surveys, or other data indicate that the pond(s) has potential to support a large Great Crested Newt population;
- The footprint contains particularly favourable habitat for Great Crested Newt, especially if it constitutes the majority available locally;
- The development would have a substantial negative effect on that habitat; and
- There is an absence of dispersal barriers.

2.15 However, Great Crested Newts are most commonly found within 100m of water bodies, and in particular at distances of 50m or less from ponds (English Nature, 2001, 2004; Natural England 2015). Furthermore, the likelihood of newts being present in terrestrial habitat decreases as the distances from a water body increase beyond 100m. Some studies indicate the probability of Great Crested Newts being present markedly decreases at distances beyond 150m (Jehle and Arntzen, 2000) and/or at distances of 200m (English Nature, 2004). Therefore this, and the Survey Guidance Table contained within the Great Crested Newt method statement, which is used when making an application for a European Protected Species Licence (EPSLs), has also been used to inform the need and scope of any Great Crested Newt survey work that might be needed to support a planning application.

2.16 Major roads (such as motorways and major A-roads) are likely to act as dispersal barriers to Great Crested Newt (Oldham *et al*., 2000). Therefore, ponds and other waterbodies on the opposite side to the Site can be 'scoped out' from further survey work even when they are within the 250m distance above. However, Burton Lane and Andrews Lane are not likely to act as major dispersal barriers because the road traffic is significantly less compared to a major road.

2.17 If rivers and streams are present, they are also likely to act as dispersal barriers to Great Crested Newt (Oldham *et al.,* 2000).

2.18 In view of the above, Great Crested Newt are unlikely to be present within the ZoI and do not need to be considered further by the project due to the lack of records historically and presently within 500m of the site. Though on-site habitats do present suitable habitat for Great Crested Newt the surrounding environment presents a significant barrier to dispersal to any nearby Great Crested Newt populations.

2.19 If reptiles are present, and if Grass Snake *Natrix Helvetica* is also present the ZoI may extend further than 300m to 400m because this species has a relatively large home range.

Method of Ecological Valuation

2.20 The evaluation method uses the following geographical scale of importance:

- International and European;
- National;
- Regional;

- County/Metropolitan;
- District/Borough;
- Local; and
- Within the ZoI.

2.21 To define the level of importance of an important ecological feature more accurately within this initial assessment, it has partially reverted back to the original 2006 version of the Guidelines for Ecological Impact Assessment to separate out Local importance further to include District/Borough and Within the ZoI as additional values of importance. However, given that this report details results from an initial Ecological Appraisal, it is not possible to accurately evaluate all ecological features.

2.22 Important ecological features that are initially valued at below 'Local' importance are not considered to be sufficiently important for an impact to be considered "significant" in this assessment. This approach is based on CIEEM guidance.

2.23 Where an important ecological feature is below Local importance (and is therefore below the threshold at which impacts are considered "significant" in this assessment), but where there are associated legal risks associated with the legislation outlined in **Appendix 2**, the feature is considered further to determine appropriate measures to ensure compliance with relevant legislation.

2.24 Determining the importance of ecological features makes use of any European, national, and local government and specialist organisation identified sites, habitats and species that provide the key focus for biodiversity conservation in the UK, supported by policy and legislation. The determination of importance may also be based on expert judgement taking into consideration various characteristics such as rarity, naturalness, diversity, functionality, fragility, and typicalness.

Desktop Study

2.25 A desktop study has been included as part of this Ecological Appraisal. This allows existing information about features of nature conservation priority (within the predicted ZoI) to be considered. The desk study included an interrogation of online resources such as aerial images and current and historical maps, as well as Multi Agency Geographic Information for the Countryside (MAGIC) maps.

2.26 A biological records data search was commissioned from Greenspace Information for Greater London (GiGL) as part of the appraisal. These records are discussed in **Section 3**.

Field Survey Methodology

2.27 The Ecological Appraisal field survey was conducted on 25th July 2022 by Sean Manley BSc (Hons), David W. Smith BSc (Hons) PhD MCIEEM and Holly Pay BSc (Hons), MSc. Features of ecological importance were mapped using target notes. A summary of the methodology is described in **Appendix 2**.

Survey Constraints and Limitations

2.28 An Ecological Appraisal only provides an initial assessment of the ecological importance of the Site and those areas beyond that fall within the potential ZoI of the proposals. It does not constitute a detailed survey of flora or fauna and reflects the conditions of habitats at the time the survey work was conducted.

2.29 The survey was conducted outside of the optimal survey window for grassland habitats and after/during a significant drought. Therefore, the number of detectable forbs and grasses was significantly reduced and affected the surveyor's ability to accurately define the habitat types.

2.30 Furthermore, because leaves were still on trees, potential roosing features for bats may have been hidden.

2.31 The results of the site survey and desk study indicate that the grassland habitat has been subject to historic changes in management. Specifically, it was previously managed as a golf course with fairways and rough grassland. However, it is now largely unmanaged and consequently the botanical composition is steadily shifting. As such, botanical and habitat survey results are indicative of the specific time the survey work was conducted, and after a period the results are likely to be different.

2.32 EPR were unable to access the golf club structure and surrounding area including the driving range because it was enclosed by fencing. Therefore, the habitats were examined via binoculars and information was collected where possible.

3. RESULTS

Site Context

Geology and Soils

3.1 The British Geological Survey's Open Geoscience Viewer indicates the north-west of the Site is underlain by Thanet Formation – Sand; consisting of more freely draining sandy soils. The south-east of the Site is underlain by Lambeth Group - Clay, silt and sand. This consists of poorly draining clayey soils associated with the London Basin.

3.2 One superficial deposit overlays the bedrock on Site; Alluvium – Clay, Silt and Sand. This is associated with the fertile river deposits of the Thames.

3.3 The Cranfield Soil and Agrifood Institute Soilscapes describes the soils within the Site as loamy and clayey soils of coastal flats with naturally high groundwater, typical of wet brackish coastal flood meadows.

3.4 The above geological and soil characteristics should be considered when deciding on the most appropriate habitat restoration or creation measures.

Hydrology

3.5 The Governments 'Flood Map for Planning' website indicates that the Site is within Flood Zone 3 and has high probability of flooding. However, it is protected by flood defences.

3.6 Frequency of flooding should be considered when deciding on the most appropriate habitat restoration or creation measures and habitat management practices.

Topography and other Context

3.7 The Site lies on a gentle slope and has a maximum elevation of 6m towards northern boundary. The Site gently slopes down to 3m along the southern edge. The whole site gently undulates along several valleys. This may, in part, be because of the previous use as a golf course.

3.8 Just beyond the survey area, the red-line boundary appears to extend into an area of scrub in the north-west, which lies in an area on the opposite side of the seawall to the Site. This habitat appears to be above the high-tide mark of the River Thames and is at the edge of a remnant area of saltmarsh and mud-flat. This feature is a successional part of the saltmarsh habitats adjacent to the Thames. This habitat was not accessed, but visual inspections of the scrub found it to be dominated by Blackthorn *Prunus spinosa*.

Ecological History

3.9 The Site appears to have undergone significant change because of the creation of the Thamesmead Golf Course in 1991. Prior to its creation, evidence on historical maps OS six Inch, 1888-1913 indicate the Site was part of the grazing marshland landscape around Erith Marshes.

3.10 From 1991 the Site functioned as an active golf course until its closure in 2013. Since 2013 the Site has been left largely unmanaged. This has allowed an extensive mosaic of rough grassland and scrub to form.

3.11 Areas of the Site are prone to seasonal flooding, particularly surrounding the on-site ponds. There is evidence of this from historic aerial images taken in 2020 and 2021.

Designated Site of Nature Conservation Importance

3.12 **Map 1** shows those sites that designations because of their ecological importance.

Statutory Designated Sites

3.13 There are no designated nature conservation sites within 2km of the Site boundary that are of ecological importance at the international level (i.e., Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites). Nor are there any sites of ecological importance at the national level, such as Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR).

3.14 Two Local Nature Reserves (LNRs) are within 2km of the Site. These are:

- Crossness Nature Reserve – 880m to the east. A habitat mosaic of ditches, open water, scrub, and rough grassland. The Site supports a variety of terrestrial and aquatic invertebrates as well as Water Voles and several bird species; and
- Ripple Nature Reserve – 1840m to the north (on the opposite side of the Thames). A mosaic of birch woodland, scrub, and alkaline grassland. This site supports pyramidal and southern marsh orchids, grey club rush and wild basil. Water Vole is also present.

3.15 LNRs are of ecological importance at the **Local** level.

Non-statutory Designated Sites

3.16 11 SINCs and two proposed SINCs are within 1km of the Site and can be seen in **Appendix 3**.

3.17 These sites have been recognised based on three tiers of importance;

- Sites of Metropolitan Importance (SMIs);
- Sites of Borough Importance (SBIs); and
- Sites of Local Importance (SLIs).

3.18 One non-statutory site is located within the Site's red-line boundary, which is Thamesview Golf Course, SINC (Borough Grade I). When the Site was a gold course it supported heavily mown semi-improved acid to neutral grassland with areas of poplar plantation woodland. The small ponds, with marginal reedbeds, are still present, and a range of bird species have been recorded within the Site.

3.19 A further 10 SINCs are within 1km of the Site:

- River Thames and tidal tributaries, SINC (of **Metropolitan** importance) (central grid reference TQ 302 806), adjacent to the Site;
- Erith Marshes, SINC (of **Metropolitan** importance) (central grid reference TQ 485 803), 880m east;
- Goresbrook and the Ship and Shovel Sewer, SINC (of **Borough (Grade I)** importance) (central grid reference TQ 486 838), <1,000m north (but other side of Thames);
- Crossways Lake Nature Reserve and Thameside Walk Scrub, SINC (of **Borough (Grade I)** importance) (central grid reference TQ 476 813), 517m west;
- Tump 53 Nature Park, SINC (of **Borough (Grade I)** importance) (central grid reference TQ 467 803), 1,608 south-west;
- Southmere Park and Yarnton Way/Viridion Way (of **Borough (Grade II)** importance) (central grid reference TQ 479 799) 893m south-west;
- Crossness Sewage Treatment Works Pond (of **Borough (Grade II)** importance) (central grid reference TQ 484 808), 252m east;
- Ridgeway in Greenwich (of **Borough (Grade II)** importance) (central grid reference TQ 461 795), through Greenwich to Bexley and passes adjacent to the Site;
- Crossway Park and Tump 52 (of **Local** importance) (central gride reference TQ 476 806), 845 south-west; and
- The Ridgeway (of **Local** importance) (central grid TQ 477 803), through Greenwich to Bexley and passes adjacent to the Site.

Ancient Semi-Natural and Ancient Replanted Woodland

3.20 There are no ancient semi-natural and ancient replanted woodland listed on Natural England's Provisional Ancient Woodland Inventory within the Site boundary. Nor are there any within 1km of the Site.

Habitats and Flora

3.21 **Map 2** details the location and types of habitats within the Site.

3.22 The Site is predominantly a collection of previously managed golfing greens, fairways and rough grassland that were previously frequently mown but are no longer.

3.23 The grassland habitat includes a mosaic of mixed scrub and ruderal species, the latter of which have colonised areas of the Site that were historically the most likely to have been intensively disturbed and/or that were regularly inundated with water in the winter. Specifically, ruderal vegetation is dominant around the borders of the on-site ponds and depressions to the east (see below and **Map 2**).

3.24 The grassland has become dominated by tussocky species because of the lack of management. Grass species present include False Oat Grass *Arrhenatherum elatius* in the driest areas. Common Couch Grass *Elymus repens* and Creeping Bent *Agrostis stolonifera* dominate the fertile lower slopes and depressions where the ground is seasonally inundated.

3.25 The north-west of the Site supports a disused building and associated hard standing.

3.26 The Sites boundaries comprise scrub, scattered trees, and fence lines.

Grassland

3.27 Grassland is the primary habitat type present within the Site. The grasses present were somewhat varied but locally dominant and this was often reflective of the topography and hydrology of the Site. The grassland habitat on-site is dominated by semi-improved grassland (UK Habitats Classification: *'Other Neutral Grassland - g3c'*) (see **Map 2**). It appears that the grassland habitat is in a state of transition from swards characteristic of g4 grassland to that characteristic of unmanaged g3c, particularly in areas previously managed as golfing fairways, putting greens, and driving ranges.

3.28 The *g3c* vegetation community is generally rich in grass species and poor in associated forbs. The grasslands present is often locally dominated by tussocky False Oat Grass, Common Couch or Creeping Bent.

3.29 Herbs present within the drier grassland along the upper slopes of the Site include, Yarrow *Achillea millefolium,* Ribwort Plantain *Plantago lanceolata* and Cinquefoil *Potentilla reptans*. Frequent ruderal species within the grassland include Mugwort *Artemisa vulgaris*, Creeping Thistle *Cirsium arvense* and Spear Thistle *Cirsium vulgare*. These herb-poor, False Oat-Grass dominated grasslands are referable to *'Arrhenatherum neutral grassland – g3c5.'* However, the 'fit' with this community is not perfect because of the presence of patchy locally dominant Common Couch and paucity of forbs. This grassland type was most frequently found along the western half of the Site, to the south along the ridgeway and north where the driving range was located. The habitat has been mapped as '*Other Neutral Grassland - g3c'* until a detailed botanical survey can be conducted at an appropriate time of year and the results above are only indicative at this early stage.

3.30 The grassland along the lower slopes and depressions, particularly to the east, are dominated by Common Couch and Creeping Bent. This habitat is indicative of seasonally inundated grasslands with the wettest hollows supporting abundant and dense stands of Greater Willow Herb *Epiliobium hirsutum,* Purple Loosestrife *Lythrum salicaria*, Sea Club-rush *Bolboschoenus maritimus,* Creeping Thistle and rarely Celery-leaved Buttercup *Ranunculus sceleratus*. The herb-poor, grass dominated grasslands have been mapped as '*Other neutral grassland – g3c'* until a detailed botanical survey can be conducted at an appropriate time of year.

3.31 During the Site walkover the 'acid grassland' habitat described in the SINC was not identified. This could be because the cessation of management has allowed successional processes to dominate this habitat type to the point it is not present and/or clearly detectable. Alternatively, it could simply be because of the time of year the survey work was conducted. Therefore, further work is required at the appropriate time of year.

Evaluation of Grassland Habitat

3.32 The Site has been previously designated a SINC for its mosaic of acid and neutral grassland citing both Hare's-foot Clover and Bird's Foot. Neither of these plants were found during the survey and evidence of acid grassland was not recorded. However, there could be opportunities to restore this grassland type. Overall, it is of ecological importance at the **Local** level (at least) and further surveys may find remnant acid grassland, which could still be of ecological importance at the **Borough** level.

3.33 There could be opportunities to restore the acid, neutral and wet grassland areas, and the associated botanical assemblages. Further survey work is needed to inform how this could be best achieved.

Tall Herb and Ruderal

3.34 Patchy areas of tall herb and ruderal vegetation dominate areas of the grassland habitat (see **Map 2**). The vegetation communities are widespread and frequent throughout the on-site grasslands and are difficult to separate from the grassland mosaic.

3.35 Tall herbs are most dominant towards the east of the Site within the seasonally wet hollows and grasslands adjacent to the ponds. Here dense stands consist of Creeping Thistle, Spear Thistle, Nettle *Urtica dioica* and Hogweed *Heracleum spondylium*. Along the drier slopes dominant stands of Mugwort and Hemlock *Conium maculatum* are present, whilst Teasel *Dipsacus fullonum*, Ragwort *Jacobea vulgaris* and Common Mallow *Malvus sylvestris* are frequently dispersed throughout the grasslands and along heavily disturbed edge habitats.

3.36 The tall herb and ruderal habitat are of limited ecological importance and are of ecological importance at the **within ZoI** level.

Woodland, Scrub and Treelines

Woodland

3.37 There are three broadleaved plantation woodland blocks present (see **Map 2**). To the north of the Site the plantation woodland is dominated by Poplar species *Poplar sp*., and this block is lacking structural diversity and supports a poor shrub layer. The habitat has been mapped as '*Other woodland, broadleaved – w1g*'.

3.38 The plantation woodland to the south and west of the Site appears to be composed of typical mixed woody species planting. The woodland parcel to the south comprises a range of broadleaved species including mature Field Maple *Acer campestre*, Norway Maple *Acer platanoides*, Ash *Fraxinus excelsior* and Cherry *Prunus avium*. The understory of the woodland is dominated by Bramble *Rubrus fruticosus agg* and ruderals such as Cow Parsley *Anthriscus sylvestris*. The habitat has been mapped as '*Other woodland, broadleaved – w1g*'.

3.39 The plantation woodland at the centre of the Site has been historically dominated by Poplar. The woodland is planted on a north-east to south-west ridge, where the lowest lying areas to the east appear to be seasonally inundated. In these locations several mature Poplar trees have failed, which has left abundant standing deadwood with woodpecker holes. In the wettest areas to the east stands of young Alder *Alnus glutinosa,* Grey Willow *Salix cinerea* and Poplar species are developing forming a patchy 'shrubby' interface. The understory supports a range of wetland species including Purple Loosestrife, Common Reed *Phragmites Phragmites australis*, Greater Willow Herb, Sea Club-rush, and Celery-leaved Buttercup. Large areas of the woodland are now seasonally inundated grassland and willow scrub. The western half of the woodland on the drier bund is composed of mature Poplar and occasional Hawthorn *Crataegus monogyna*. The woodland habitat has been mapped as a mixture of '*Broadleaved, mixed and yew woodland - w1'* and '*Other neutral grassland - g3c'* with the key sub codes '*11- Scattered trees*', '*57 – Young trees – self-set*' and '*120 – wet*'. This area appears to be developing into a form of 'wet woodland,' however further botanical surveys are required to accurately define the habitat type.

3.40 The dry woodland *'w1g'* habitat is likely to be of ecological importance at the **Local** level, but further survey work is required to confirm this.

3.41 The developing wet woodland and grassland mosaic mapped as '*w1*' is also likely to be of ecological importance at the **Local** level or above. Further botanical survey is needed to confirm this.

Scrub

3.42 Within the Site there are extensive areas of '*Mixed Scrub – h3h*' and '*Bramble Scrub – h3d*'.

3.43 The majority of mixed scrub habitat is confined to the periphery and consists of a diverse range of woody species planted for screening purposes. The species mix includes Dog Wood *Cornus sanguinea*, Elder *Sambucus nigra*, Hawthorn, Whitebeam *Sorbus aria*, Norway Maple, Cherry, Blackthorn, *Cotoneaster sp.,* and Field Maple. Occasional stands of semi-mature Scots Pine *Pinus sylvestris* are also present. The scrub edge with the grassland is formed by patchy Bramble scrub and ruderals including Nettle, Hogweed, Black Horehound *Ballota nigra*, Creeping Thistle and Cleavers *Galium aparine*.

3.44 Extensive self-set scrub can be found to the south of the Site following the 'Ridgeway Path' and along the eastern boundary of the Site. This scrub consists of extensive areas of low Bramble, with a range of associated tall ruderals including, Nettle, Creeping Thistle, Hogweed and Teasel. The woody scrub to the south is dominated by Hawthorn and Blackthorn with rare Apple *Malus sp.,* and Pear *Pyrus sp*. The 'Ridgeway Path' to the south of the Site passes through areas of low bramble scrub supporting occasional glades of tussocky False-oat Grass dominated grassland with Yarrow, Cinquefoil, Wild Carrot *Daucus carota* and Perforate St Johns Wort *Hypercium perforatum*.

3.1 The scrub habitat is of ecological importance at the **ZoI Level** only.

Treelines and Scattered Trees

3.2 There are few treelines present within the Site. One line of mature Poplars is present in the south-east of the Site, adjacent to the off-site sport centre car park.

3.3 A short line of mature Willows *Salix sp.* is present centrally within the Site.

3.4 A short line of and Leyland Cypress *Cupressus x leylandii* trees is present to the south of the old clubhouse.

3.5 Scattered trees can be found throughout the Site and consist largely of mature Willows and Poplars with occasional semi-mature Lime *Tilia sp.,* and Leyland Cypress trees.

3.6 These habitats are of ecological importance at the **ZoI Level**.

Standing Open Water, Reedbeds and Seasonally Inundated Areas.

3.7 At the time of survey, south-east England was experiencing a significant drought. The water in the ponds were therefore at a low water level, but not dry.

3.8 Five ponds '*standing open water and canals – r1*' are present (see **Map 2**). Visual inspections of these found no aquatic vegetation present and they appeared to be eutrophic with significant litter and debris present.

3.9 The northern most ponds **1** and **2** are hydrologically linked via a narrow deep ditch. Four of the ponds supported marginal vegetation dominated by Common Reed *'reedbeds – f2e'*. Occasional Greater Reedmace *Typha latifolia* is also present.

3.10 The northern most of the four ponds appear to be hydrologically linked via several depressions and wide ditches to the east of the Site. These depressions appear to become intermittently inundated and an analysis of historic aerial imagery confirmed that areas around the ponds have flooded occasionally since 2014. The east of pond **4** supports extensive inundation vegetation, particularly within two north-south linear depressions between ponds **2** and pond **4**. These depressions have been described above and supports a mixture of seasonally inundated Willow scrub, dense ruderals, wet grassland, and dense marginal vegetation such as Sea Club-rush. Further botanical survey work of the seasonally inundated area should be conducted to identify the range of wetland plants present.

3.11 The ponds and associated wetland habitats are likely of ecological importance at the **Local** level.

Other Developed Land and Buildings

3.12 An area of hardstanding and buildings is present in the north-west of the Site. The old clubhouse has remained abandoned since the golf courses closure. At the time of survey access was not obtained to the hard standing or area around the buildings. The habitats around the structure have been mapped as '*other developed land – u1b6'* and '*buildings – u1b5'*.

3.13 Areas of ornamental planting have been mapped as *'suburban mosaic of developed/natural surfaces – u1d'* and appeared to consist of a mixture of shrub and tree planting. A small area of hard standing is present in the south-west and comprises an area of road and parking.

3.14 The hard standing and buildings are not likely to be of ecological importance in themselves. However, the habitat mosaic on some of the old car parking areas could be of ecological importance because it may provide suitable habitat for ephemeral waste ground preferring plant species, including Bird's-foot, which was listed under the SINC citation. Further botanical survey work should be considered if the emerging proposals are likely to impact it. However, this could easily be picked up if further surveys of the grassland areas are conducted (see **Section 5**).

Fauna

Invertebrates

Desktop Study

3.15 The biological records search returned records of several Section 41 invertebrate species. See **Appendix 3** for details.

Field Survey

3.16 The grassland habitat, which sits on clay and sands is dominated by grasses with relatively few flowering forb species for invertebrate pollinators. However, there are areas of friable bare ground in the west of the Site and this type of habitat can be important for terrestrial invertebrates.

3.17 Furthermore, the presence of large ant mounds also indicates the Site could be of value to invertebrate species with longer life-cycles (such as some grassland butterfly species), as well as to ant species.

3.18 The mosaic of seasonally inundated habitat and ponds are likely to also support a range of invertebrates too. However, the ponds appear to be eutrophic, and this may therefore limit the diversity of the invertebrate assemblage.

3.19 The planted woody habitats (including mixed scrub, poplar plantations and scattered mature trees) are likely to provide habitat of moderate quality for invertebrates, including those associated with deadwood (i.e. saproxylic invertebrates, which are dependent on dead or decaying wood) such as the more common and widespread Clearwing Moths *Sesiidae sp* associated with Poplars and Stag Beetle *Lucanus cervus*.

Evaluation

3.20 Without further survey work it is not possible to determine the ecological importance of the on-site invertebrate assemblage.

Recommendations Relating to Further Work

3.21 No further invertebrate survey work is recommended because impacts to grassland, scrub, wetland and planted woodland can largely be avoided through maintaining the current location of pathways and improving upon them.

3.22 If the proposed impacts extend beyond the present pathways, invertebrate surveys are recommended to inform mitigation and habitat restoration works. These measures could be incorporated into an Ecological Management Plan for the entire Site.

Great Crested Newt and other Amphibians

Desktop Study

3.23 The biological records search returned no records of Great Crested Newt *Triturus cristatus*. The nearest Great Crested Newt licence records shown on MAGIC are approximately 3.5km north-east of the Site (on the opposite side of the Thames).

3.24 Common Toad *Bufo bufo* was recorded last within 268m of the Site in 2002. Common Frog *Rana temporaria* was recorded last within 678m of the Site in 1999.

3.25 There are five ponds within the Site boundary (**Map 3**) and several others within 250m of the Site.

Field Survey

3.26 The grass fields provide moderate quality terrestrial habitat for amphibians, and the woodlands, tree lines and scrub provide high-quality terrestrial habitat. The rubbish piles, low bramble scrub and other habitats also provide suitable terrestrial habitat.

3.27 Hand searches of suitable refugia during the Site visit did not record any amphibians.

Evaluation

3.28 Given the lack of amphibian records within 500m of the Site and the fact that the nearest record of Great Crested Newt is on the opposite side of the River Thames, it is unlikely that Great Crested Newt is present within the ZoI of the proposals.

3.29 It is possible other, more common and widespread amphibians may be present within the ZoI of the proposals. If present, the amphibian assemblage is only likely to be of ecological importance at the **Within the ZoI** level.

Recommendations Relating to Further Work

3.30 No further survey is recommended because Great Crested Newt are unlikely to be present and impacts on any other amphibian species can either be avoided or is likely to be negligible based on the known proposals to date.

3.31 If an Ecological Management Plan is produced, opportunities to improve the Site for amphibians should be considered.

Reptiles

Desktop Study

3.32 The biological records search returned records of Grass Snake *Natrix Helvetica* (in 2021) and Common Lizard *Zootoca vivipara* (in 2011) within 1km of the Site.

Field Survey

3.33 The extensive mosaic of grassland, wetland, and scrub within the Site provides suitable habitat for reptiles.

3.34 During the initial visit natural refugia were searched, but no reptiles were found. However, this search effort is insufficient to determine the likely absence of reptiles.

3.35 Community feedback boards at the entrance of the Site include incidental sightings of Grass Snake and Slow Worm *Anguis fragilis* within the Site.

Evaluation

3.36 It is not possible at this initial stage to determine if reptiles are present, what species might be present or the associated population class. However, there are reports of reptiles on-site and consequently the assemblage is likely to be of ecological importance the **Local** level at least.

Recommendations Relating to Further Work

3.37 No further survey work is recommended because impacts to grassland, scrub, wetland, and woodland can be largely avoided by maintaining the current routes of existing pathways and improving the surface of them.

3.38 If an Ecological Management Plan is produced, opportunities to improve the Site for reptiles should be considered. This should include the creation of habitat piles, grass piles and hibernacula.

3.39 If the project intends to complete works that would impact upon suitable reptile habitat (excluding that small area adjacent to existing paths), then a presence / likely absence survey in the period April to September (inclusive), and ideally targeting the optimum months of April, May and/or September, is recommended.

Birds

Desktop Study

3.40 Interpreting bird data returned from biological records centres is challenging because it is hard to differentiate birds that use the site for foraging/breeding from birds are passage migrants and/or vagrants. It is also, possibly more than other groups, heavily bias by recording efforts of local enthusiasts and the location of nearby 'hotspots' (such as the nearby Crossness Sewage Works, where 150 species have been recorded on the eBird recording system). Therefore, this assessment has not completed a detailed assessment of bird records.

3.41 However, eBird has 43 bird species associated with Thamesview Golf Centre (the Site), including records of displaying Green Woodpecker *Picus viridis* and Cetti's Warbler *Cettia cetti.*

Field Survey

3.42 During the site visit, Dr David W. Smith recorded 25 bird species in 2.5hrs on the Site and surround area (including species on the nearby mudflats.

3.43 The Site is likely to provide foraging opportunities for common and widespread red status bird species, such as House Sparrow *Passer domesticus*, Song Thrush *Turdus philomelos* and Startling *Sterna vulgaris*. These species are also Species of Principal Importance (i.e S41 species).

Evaluation

3.44 It is not possible to accurately determine the ecological importance of the Site for birds based on the current level of information.

Recommendations Relating to Further Work

3.45 No further survey work is recommended because impacts to grassland, scrub, wetland, and woodland can be largely avoided by maintaining the current routes of existing pathways and improving the surface of them.

3.46 If an Ecological Management Plan is produced, opportunities to improve the Site for birds should be considered. This should include beneficial wetland, scrub, and woodland habitat management. It could also include some bird boxes, for species such as Kestrel *Falco tinnunculus*. However, standard bird boxes for common hole nesting species are not recommended because there are many existing opportunities for these species.

Bats

Desktop Study

3.47 Bat records within 1km of the Site were obtained from GiGL and included records of the following species:

- Common Pipistrelle *Pipistrellus pipistrellus;*
- Soprano Pipistrelle *Pipistrellus pygmaeus;*
- Noctule *Nyctalus noctula*; and
- Leisler's *Nyctalus leisleri*.

3.48 No details of bat roosts were returned in the records search.

Field Survey: Habitats

3.49 The suitability of habitats and features for bats was assessed using categories set out within the Bat Conservation Trust's Bat Surveys Good Practice Guidelines (2016).

3.50 The grassland, scrub, wetland, and pond mosaic provide habitat that is likely to be of moderate to good suitability for foraging bats. Furthermore, these habitats are not currently illuminated (compared to the illuminated surrounds), and consequently the Site provides a 'dark' refuge for the local bat assemblage.

Field Survey; Trees

3.51 Many of the on-site trees provide potential roosting features (PRFs) for bats. Features include woodpecker holes, flaking/loose bark, and rot holes.

Field Survey; Buildings

3.52 The on-site club house was not accessible during the Site visit. Despite this a visual inspection of the building was conducted, using binoculars.

3.53 The building appears to be constructed from metal sheeting, with flat metal roofing. Metal often provides unstable thermal conditions, which is not suitable for roosting bats. Therefore, based on this and on-site observations the building is likely to be of either Low or Negligible suitability for roosting bats. A more detailed inspection is required to better determine the suitability of the building for roosting bats.

Evaluation

3.54 It is not possible at this stage to accurately determine the ecological importance of the Site for bats.

Recommendations Relating to Further Work

3.55 If impacts or works to former club house or on-site trees are anticipated, further survey work will be required. This is likely to include a detailed internal and external inspection of the club house and more detailed inspections of trees requiring works (this might include a climb inspect survey). Tree inspections are best conducted in the winter when there are no remaining leaves.

3.56 Verbal communication with Katie Roberts, of Sustrans, indicates that one proposal being investigated is the illumination of pathways. However, unmitigated the inclusion of lighting within a 'dark refuge' could adversely affect foraging and commuting bats. Therefore, if the proposals do require an increase of on-site illumination, further bat activity surveys are also likely to be required. Activity surveys are conducted between April and October (inclusive).

3.57 Furthermore, any lighting scheme that is required should be bat friendly and based on the Bat Conservation Trust's (BCT) Bats and Artificial Lighting in the UK (BCT, 2018) document, and include measures such as:

- No lighting should be provided along important bat features (as determined by survey work). This is likely to include woodland, wetland, hedgerows, tree lines, scrub, and rough grassland edges unless there are overriding needs of public health and safety, which cannot otherwise be addressed;
- The use of LED lights where possible because they enable increased control and improve colour definition (they also save on energy);

- A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component and luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Bat Conservation Trust 2018);
- Luminaires should be designed and oriented to restrict light directionality only to those areas necessary. This should, where possible, include double asymmetrical luminaires and full horizontal cut-off designs to prevent light spill;
- In pedestrian or cycleway areas, lights should be low-level and of a cowled lighting design;
- Minimisation of the temporal extent of lighting through the use of timers and PIRs, where appropriate; and
- The use of hoods, cowls, louvres, and shields to further reduce light-spill where needed.

3.58 If an Ecological Management Plan is produced, opportunities to improve the Site for bats should be considered. This should include beneficial grassland, wetland, scrub, and woodland habitat management. It should also include the provision of bat boxes.

Hazel Dormouse, Water Vole and Badger

Desktop Study

3.59 The biological records search returned no records of Hazel Dormouse *Muscardinus avellanarius.*

3.60 The biological records search returned several records of Hedgehog *Erinaceus europaeus* within 500m of the Site, and records of Water Vole *Arvicola amphibius* less than 400m from the Site (in 2020). No records of Badger *Meles meles* were returned.

Field Survey

3.61 The Site provides suitable, but very isolated, habitat for Hazel Dormouse. Suitable habitat includes mixed scrub, low bramble scrub and some of the woodland areas.

3.62 The Site supports a connected series of ponds, ditches and seasonally inundated areas with associated ruderals and marginal vegetation, particularly to the east of the Site. The diverse range in habitats and vegetation could support Water Vole; however, the habitats are small in extent.

3.63 Given the small area of suitable on-site habitat, any Water Vole on-site are likely to be associated with nearby populations within Crossness Sewage Treatment Works Pond, which directly adjoins the Site to the east. Further records of Water Vole have also been made at several parks around Thamesmead.

3.64 No field evidence of Badger was recorded during the Site visit, although the habitats are suitable for this species.

3.65 The Site supports suitable habitat for Hedgehog.

Evaluation

3.66 It is not possible to accurately determine the ecological importance of the Site for Water Vole, Badger or Hedgehog based on the current level of information.

3.67 Hazel Dormouse are unlikely to be present on-site given the isolated nature of the Site.

Recommendations Relating to Further Work

3.68 No further survey work is recommended because impacts to grassland, scrub, wetland, and woodland can be largely avoided by maintaining the current routes of existing pathways and improving the surface of them.

3.69 However, further survey in the period April to September (inclusive) work might be needed to inform habitat management works associated with the production of an Ecological Management Plan, and in particular any wetland habitat management improvement works should be informed by further survey work for Water Vole. In general, opportunities to secure beneficial grassland, wetland, scrub, and woodland habitat management should be investigated and implemented.

Japanese Knotweed

3.70 Japanese Knotweed *Reynoutria japonica* is listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) and as 'Controlled Waste' by the Environment Protection Act 1990 (as amended). See **Appendix 1** for further information.

3.71 Previous surveys conducted by Land Use Consultants LTD in December 2017 identified two stands of Japanese Knotweed within the Site boundary. The stands were located north-east and south-west of the Site. The previous survey work indicated these above-ground stands were dead after treatment works. This does not mean; however, the below ground rhizomes are dead and/or unviable.

3.72 The Site visit did not locate either of the known Knotweed stands. However, a new area was identified to the south of the Site, along the Ridgeway path (see **Map 2**). This stand consisted of several stems, approximately 3m deep and 7m wide.

Recommendations Relating to Further Work

3.73 The need for further survey work, as well as the extent and/or need of mitigation will depend on the design of the proposed scheme.

4. DESIGN IMPLICATIONS

Planning Policy, the Ecological Mitigation Hierarchy and Habitats of High Ecological Importance

4.1 It is unclear at this stage whether planning will be required for the proposals.

4.2 If planning is required, then Paragraph 180(d) of the National Planning Policy Framework states:

"*When determining planning applications, local planning authorities should apply the following principles… (d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate*."

4.3 Given that the primary purpose of the project is to enhance public access to nature and greenspaces, alongside the introduction of beneficial management for ecology, there is a strong planning argument (at least on ecology grounds) to restore the Site's habitats and improve access.

4.4 The primary consideration of any emerging design will be to follow best practice guidance, and specifically the ecological mitigation hierarchy detailed by CIEEM (2018).

4.5 This advocates an approach where impacts are avoided where possible, and when this is not possible, mitigation, compensation and enhancement measures are then applied. For design purposes this could be summarised into a 'Protect, Restore, Create' framework.

4.6 As such the emerging proposals should:

- **Protect**: the permanent and seasonal wetland habitats, certain areas of grassland to the west and all on-site woodland areas.
- **Restore**: the grasslands on the sandy and acidic soils, as well as the other on-site grassland habitats. The existing ponds and associated mixed wetland mosaic should also be restored; and
- **Create**: New habitat for invertebrates, reptiles, small mammals, and bats through the creation of wood piles, hibernacula, and installation of bat boxes. The option to create bee banks for solitary bees and other invertebrates should also be considered.

4.7 The emerging proposals can Protect, Restore and Create habitats, which in turn will benefit flora and fauna, by:

- Focusing path and access improvements on existing routes, which in turn protects existing habitats elsewhere on-site;
- Avoid management practices that will impact on the existing ant hills;
- Introducing grazing (horses, goat or cattle) and/or a scheduled grass cutting management regime. The details of which should be informed by further botanical survey work and detailed in an Ecological Management Plan;

- Commencing an 8 to 15-year rotational scrub management scheme. The precise details should be included in an Ecological Management Plan;

- Introducing management practices that improve the species richness of flowering plants, which in turn would benefit invertebrate pollinators (such as the Shrill Carder Bee present locally (Page *et al.,* 2019)). The details of management should be informed by further botanical survey work. In general, this may also include the import of wildflower seed-rich green hay from a nearby local donor site (or seed if a donor site cannot be found); and

- Introducing beneficial woodland management, for example in some areas localised, small-scale coppicing. The recommended botanical surveys will help inform the precise details of management.

Legal Considerations

Bats

4.8 Bats are afforded legal protection by the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

4.9 Therefore, the emerging proposals should avoid, wherever possible, impacts on trees supporting PRFs. If this is not possible, further survey work and/or advice is likely to be required.

Reptiles, Water Vole and Nesting Birds

4.10 All four common reptile species, nesting birds and Water Vole afforded legal protection by the Wildlife and Countryside Act 1981 (as amended).

4.11 Given the legal protection afforded to reptiles, careful consideration must be given to the timings and methods of habitat management. For example, the type and density of any stock used for grazing and/or the timing and height of any grass cutting.

4.12 Given the legal protection afforded to nesting birds, their nests, eggs, and chicks; vegetation clearance should be conducted during the period mid-September to February (inclusive), which is outside of the bird nesting season (but see caveat below).

4.13 If this is not possible (perhaps because of the risks to other protected species, such as reptiles) and vegetation clearance is required within the bird nesting season (March to mid-September, inclusive), a nesting bird check will need to be undertaken by a suitably experienced ecologist prior to the commencement of vegetation clearance. If any active nests are discovered, these will need to be retained and protected in situ until they are no longer in use by nesting birds.

4.14 Given the legal protection afforded to Water Vole and their habitat, two survey visits might be required to inform the type and timing of wetland and pond habitat management works. The first survey visit should be in the period April to June (inclusive) and the second in the period July to September (inclusive).

Badger and Other Mammals

4.15 Badger is afforded legal protection by the Protection of Badgers Act 1992 (as amended). In the event an active Badger sett is found on-site prior to or during works (or field evidence indicating the presence of them), works within 30m of any potential sett should cease immediately because of the nature of the legal protection afforded to these species, and a suitably qualified ecologist should be contacted for advice.

4.16 All Wild Mammals receive some protection under the Wild Mammals (Protection) Act 1996 (as amended). This Act includes offences of crushing and asphyxiation of any wild mammal with intent to inflict unnecessary suffering.

4.17 The above legislation may be of particular importance if there is likely to be significant ground works. Therefore, an EcIA should be produced once the details of the emerging proposals are known. This will determine whether further survey work and/or mitigation will be required to address legal risks associated with the legislation detailed above.

4.18 However, by maintaining and improving the existing paths and/or frequently mown pathways, risks of impact are reduced.

5. RECOMMENDATIONS AND CONCLUSIONS

5.1 At this early stage, it is difficult to fully determine a recommended scope of further ecology survey work. The extent and need for other survey ecology survey work will greatly depend on the emerging proposals and discussions with stakeholders. However, this report has already detailed when further survey work might be needed.

5.2 Further botanical survey work is strongly recommended because it is important to get a more detailed understanding of the current grassland habitats and to examine whether any acid grassland areas remain. This survey work would also inform the emerging proposals, future on-site habitat management and any Biodiversity Net Gain calculations that may be required.

5.3 This botanical survey work should be completed between late/April/early-May and mid-June (inclusive) and it may include two visits, with one at the start and end of this recommended survey period.

5.4 The Site has the potential to become a Biodiversity Net Gain (BNG) bank and could generate income if enough 'BNG' credits can be created for market sale.

5.5 Any proposal to improve the Site for wildlife and people is likely to significantly beneficial. If people use and care for the Site, improvements for wildlife are more likely to succeed.

6. REFERENCES

Bat Conservation Trust (2016). *Core Sustenance Zones: Determining zone size*. Bat Conservation Trust, London.

Bat Conservation Trust (2018). *Bats and Artificial Lighting in the UK. Bats and the Built Environment Series*. Bat Conservation Trust, London.

Butcher, B., Carey, P., Edmonds, R., Norton, L and Treweek, J. (2020). *UK Habitat Classification – Habitat Definitions V1.1 at* http://ukhab.org

Butcher, B., Carey, P., Edmonds, R., Norton, L and Treweek, J. (2020). *UK Habitat Classification – User Manual Version 1.1 at* http://ukhab.org

Chartered Institute of Ecology and Environmental Management (CIEEM) (2018). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.1. Chartered Institute of Ecology and Environmental Management, Winchester*.

Collins, J. (ed). (2016) *Bat Surveys for Professional Ecologists - Good Practice Guidelines. 3nd Edition*. Bat Conservation Trust, London.

Department for Environment, Food and Rural Affairs (DEFRA) (2011). *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*. London, DEFRA.

Defra (undated). Multi-agency Geographic Information for the Countryside (MAGIC) Map (http://magic.defra.gov.uk/MagicMap).

Elmeros, M., Madsen, A.B., and Prang, A. (2005). Home range of the badger (*Meles meles*) in a heterogeneous landscape in Denmark. *Luta*, **48**, 35-44.

English Nature, (2001). *Great Crested Newt Mitigation Guidelines*. Peterborough.

English Nature (2004). An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt *Triturus crisatus*. Report 576. English Nature, Peterborough.

Geology - British Geological Society: [redacted]

Harris, S., Cresswell, W.J., Fordge, P.G., Trewhekka, W.J., Woodlard, T., and Wray, S. (1990). Home-range analysis using radio-tracking data – a review of problems and techniques particularly as applied to the study of mammals. *Mammal Review*, **20**, 97-123.

HM Government (2018). *A Green Future: Our 25 Year Plan to Improve the Environment*.

Johnson, D.D.P., Jetz, W., and Macdonald, D.W. (2002). Environmental correlates of badger social spacing across Europe. *Journal of Biogeography*, **29**, 411–425.

Langton, T.E.S.; Beckett, C.L. & Foster, J.P. (2001) *Great Crested Newt Conservation Handbook*. Froglife, Halesworth.

Ministry of Housing, Communities and Local Government (2021) *National Planning Policy Framework.*

Ministry of Housing, Communities and Local Government. *Planning Practice Guidance*. Available from: https://www.gov.uk/government/collections/planning-practice-guidance

Natural England (2013). *Natural Character Area Profile: 81 Greater Thames Estuary*.

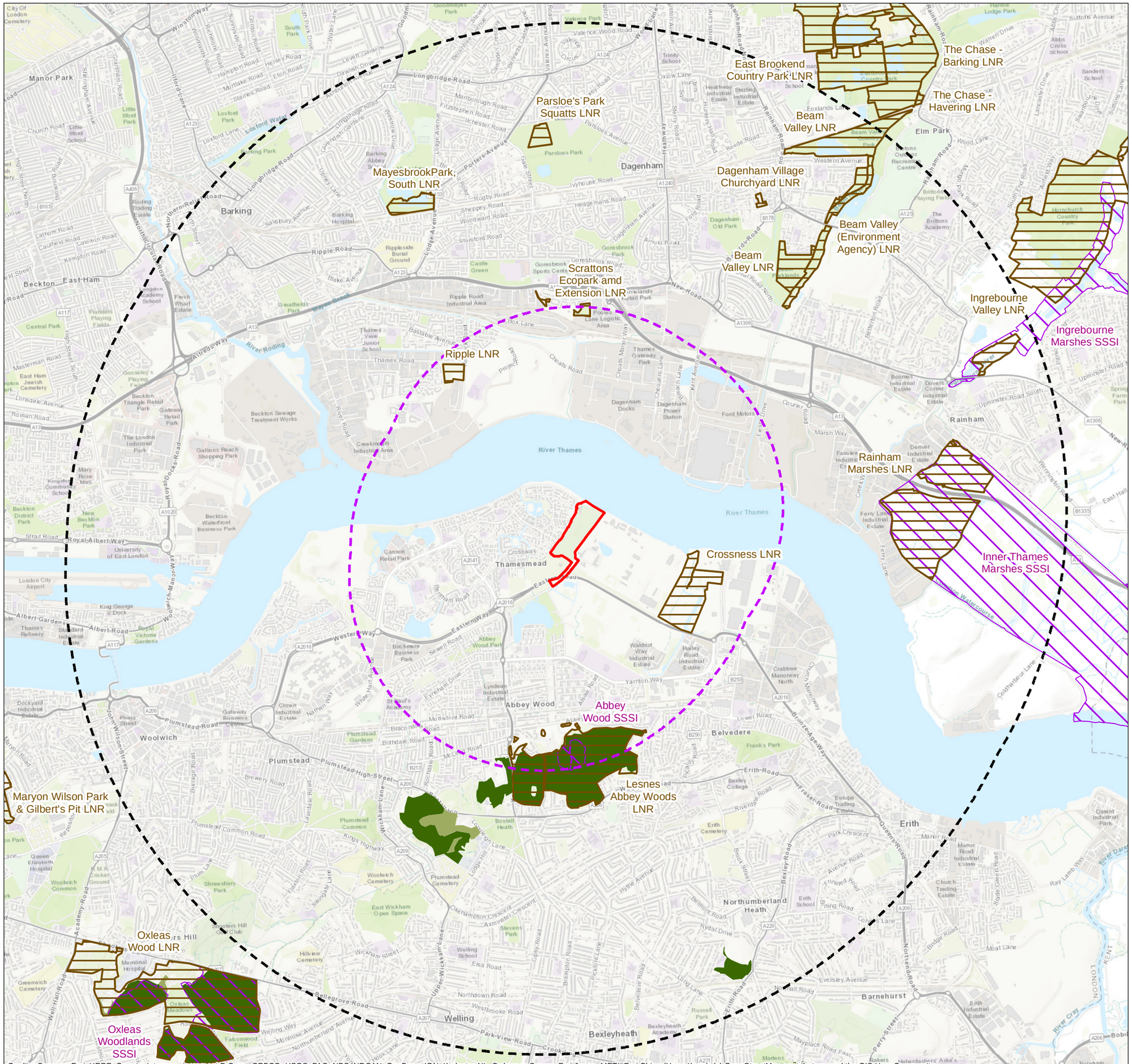
Natural England. 2015*. Template for Method Statement to support application for licence under Regulation 53(2)e of The Conservation of Habitats and Species Regulations 2010 (as amended) in respect of great crested newts Triturus cristatus*. Form WML-A14-2

Page, S., Comont, R., Lynch, S and Wilkins, V (2019) *Species Knowledge Review: Shrill carder bee Bombus sylvarum in England and Wales*. Bumblebee Conservation Trust, Stirling, Scotland UK

Page, S., Lynch S., Wilkins, V. and Cartwright, B (2020) *A Conservation Strategy for the Shrill carder bee Bombus sylvarum in England and Wales, 2020–2030*. Bumblebee Conservation Trust, Stirling, Scotland UK

Stace, C. (2010) *New Flora of the British Isles*. 3rd edition. Cambridge University Press, Cambridge.

Maps



MAP 1 Site Location & Nature Conservation Designations

KEY

- Site boundary
- 2km linear distance from site boundary
- 5km linear distance from site boundary

Natural England's Provisional Ancient Woodland Inventory

- Ancient & Semi-Natural Woodland
- Ancient Replanted Woodland

Statutory Sites

- Sites of Special Scientific Interest (SSSI)
- Local Nature Reserves (LNR)

SCALE: 1:40,000 at A3

0 500 1,000 1,500 2,000 Metres

EPR

CLIENT: Sustrans

PROJECT: Crossness Park

DATE: 25 August 2022

Y:\Crossness Park 2234\GIS\Eco App\Map1_Site_Local_Designations_P2234_1831_250822.mxd

MAP 2 Habitats and Features

KEY

- Site boundary
- Stand of Japanese Knotweed
- h2b - Other hedgerows
- w1g6 - Line of trees
- Inaccessible area - not surveyed
- f2e - reedbeds
- g - grassland
- g3 - neutral grassland
- g3c - other neutral grassland
- h3d - Bramble scrub
- h3h - Mixed scrub
- r1 - standing open water and canals
- u1b - developed land, sealed surface
- u1b5 - buildings
- u1b6 - other developed land
- u1c - artificial unvegetated unsealed surface
- u1d - suburban mosaic of developed/natural surfaces
- w1 - broadleaved, mixed and yew woodland
- w1g - other woodland, broadleaved
- w2c - other coniferous woodland

Secondary codes:

10	Scattered scrub
11	Scattered trees
16	Tall herb
17	Ruderal/ ephemeral
19	Ponds (Priority Habitat)
36	Plantation
39	Freshwater - man-made
47	Native
48	Non-native
57	Young trees - self-set
66	Frequently mown
75	Active Management
77	Neglected
80	Unmanaged
113	Sea wall
117	Dry
119	Seasonally wet
120	Wet
140	Anthills
161	Tall or tussocky sward
350	Abandoned ruderal and derelict areas
351	Vacant/ derelict land
421	Walking/cycling route

SCALE: 1:3,500 at A3

0 50 100 150 200 Metres

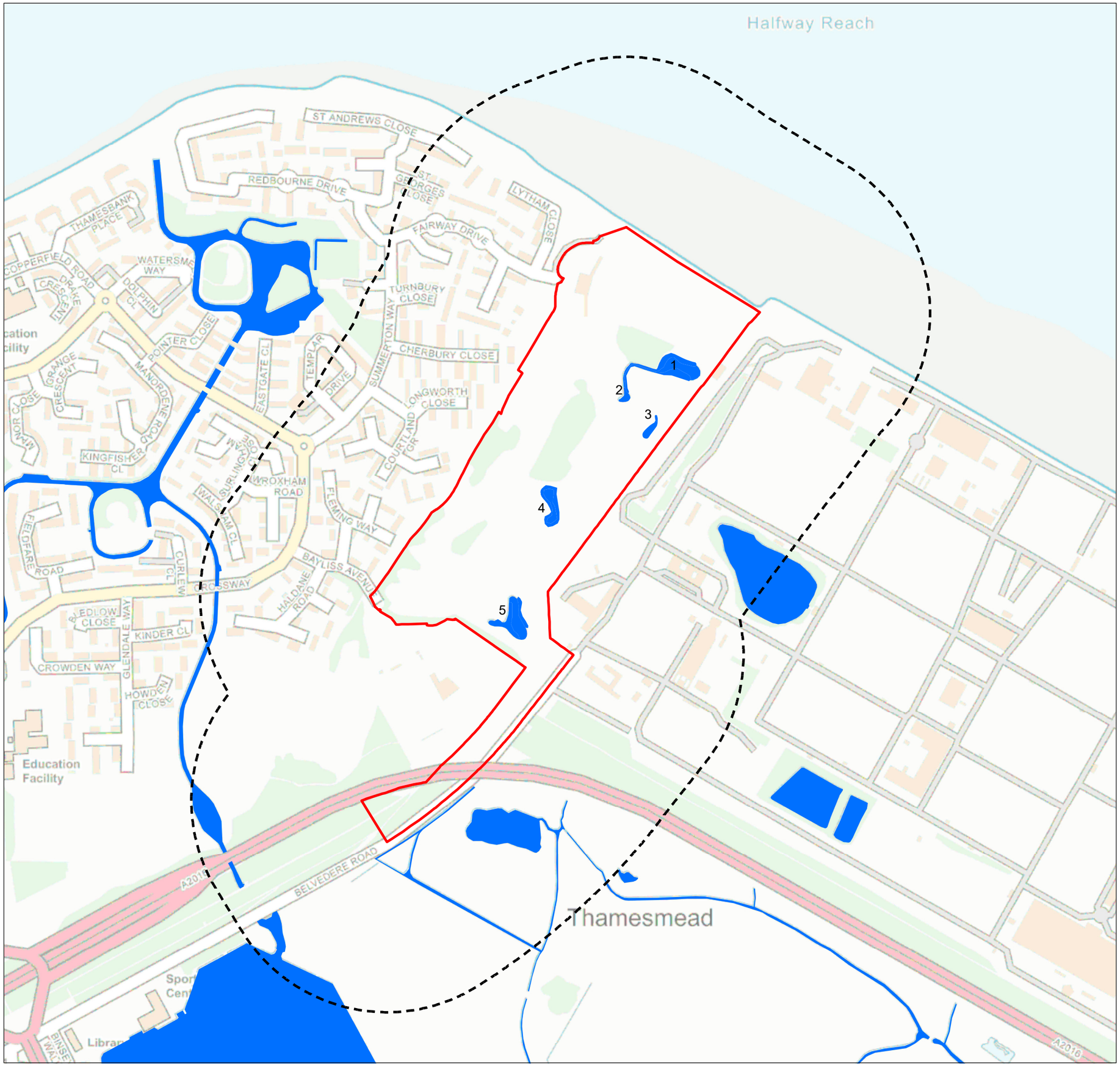
EPR

CLIENT: Sustrans

PROJECT: Crossness Park

DATE: 25 August 2022

Y:\Crossness Park 2234\GIS\Eco App\Map2_UKHabitats_P2234_1803_250822.mxd



MAP 3 Locations of Waterbodies

KEY

- Site boundary
- 250m linear distance from site boundary
- Waterbodies

SCALE: 1:5,500 at A3

0 50 100 150 200 Metres

N

EPR

CLIENT: Countryside Properties (Uk) Ltd

PROJECT: Woodend Farm

DATE: 25 August 2022

Y:\Crossness Park 2234\GIS\Eco App\Map3_Waterbody_Locations_P2234_1831_250822a.mxd

P22/06

Appendix 1
Summary of Relevant Legislation and Policy

The Environment Act 2021

The Environment Act 2021 places a requirement on the Secretary of State to make regulations setting out long-term targets for air quality, water, biodiversity, resource efficiency and waste reduction. It also requires the Government to produce an Environmental Improvement Plan, to report on progress towards its goals annually, to meet the targets that are set in relation to the improvement of the natural environment and to produce remedial plans should this not be achieved.

In relation to water quality, the Act places new duties on the Government, Environment Agency and sewerage undertakers to reduce the frequency and harm of discharges from storm overflows on the environment, and for monitoring the quality of watercourses affected by those overflows.

It also includes a requirement for an independent Office for Environmental Protection (OEP) to be established, with responsibilities for monitoring and reporting on progress against environmental improvement plans and targets. The OEP will also have investigation and enforcement powers against public authorities failing to comply with environmental law when exercising their functions.

The Act makes provisions for 10% biodiversity gain to become a condition of planning permission in England, through amendments to the Town and Country Planning Act 1990. This will be measured through a biodiversity metric to be published by the Secretary of State. The Act also establishes Biodiversity Net Gain as a requirement for Nationally Significant Infrastructure Projects (NSIPs).

The Act also strengthens the biodiversity duty placed on public authorities through amendments to the Natural Environment and Rural Communities Act 2006 Section 40, requiring such authorities to not only conserve but also enhance biodiversity when exercising their functions. Public authorities will also be required to publish summary reports of actions taken under Section 40 at least every five years.

The Act provides the legal basis for the creation of Local Nature Recovery Strategies (LNRSs) for England (including specifying their content), and the preparation and publication of species conservation strategies and protected sites strategies.

It also creates a new legal vehicle known as a ‘Conservation Covenant’ which is a voluntary, legally binding private agreement between landowners and responsible bodies (the latter designated by the Secretary of State) which conserve the natural or heritage features of the land, enabling long-term conservation. Conservation Covenants are designed to ‘run with the land’ when it is sold or passed on and are intended to eventually become a primary mechanism for the delivery of Biodiversity Net Gain (BNG).

The Act provides new powers for the Government to amend in future Regulation 9 and Part 6 of the Conservation of Habitats and Species Regulations 2017 (as amended) (the ‘Habitats Regulations’) – but “only if satisfied that the regulations do not reduce the level of environmental protection provided by the Habitats Regulations”.

Several aspects of protected species licencing have also been adjusted by the Act. These include the removal of several inconsistencies between the Habitats Regulations and the Wildlife & Countryside Act

1981 (as amended), ensuring that licences issued under the former piece of legislation also apply under the latter, and making it now possible for licences to be issued under Section 16(3) of the Wildlife & Countryside Act 1981 (as amended) for purposes of overriding public interest. The maximum term of a licence that can be issued by Natural England has also been extended from 2 to 5 years.

All biodiversity-related commitments and requirements (as set out in Part 6 of the Act) will come into force upon the adoption of secondary legislation and regulations, following a period of consultation. Timescales are to be confirmed, but this is currently expected to be around late 2023.

The Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (known as the "Habitats Regulations") were originally drawn up to transpose the European Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the "Habitats Directive") into UK legislation. Following the UK's exit from the European Union, the Habitats Regulations – as amended by Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 – remain in force until such a time as they are superseded by new or updated domestic legislation.

The Habitats Regulations provide for the designation of both Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) in the UK, which previously formed part of the Natura 2000 network of protected areas across Europe and are now part of the UK's "National Sites Network". New National Sites may be designated under the Regulations.

The Regulations also prohibit certain actions relating to European Protected Species (EPS), which include *inter alia* Hazel Dormouse *Muscardinus avellanarius*, Great Crested Newt *Triturus cristatus*, European Otter *Lutra lutra* and all native species of bat.

Further information on SPAs, SACs and European Protected Species is provided in the relevant sub-sections of this Appendix.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 is the principal mechanism for the legislative protection of wildlife in Great Britain. Various amendments have occurred since the original enactment. Certain species of bird, animal, and plant (including all of the European Protected Species listed above) are afforded protection under Schedules 1, 5 and 8 of the Act. Reference is made to the various Schedules and Parts of this Act (**Table A1.1**) in the section of this Appendix dealing with Legally Protected Species. The Act also contains measures for the protection of the countryside, National Parks, Sites of Special Scientific Interest (SSSIs) and public rights of way as well as preventing the establishment of invasive non-native species that may be detrimental to native wildlife.

Table A1.1: Relevant Schedules of the Wildlife & Countryside Act 1981 (as amended)

Schedule	Protected Species
Schedule 1 Part 1	Protects listed birds through special penalties at all times
Schedule 1 Part 2	Protects listed birds through special penalties during the close season
Schedule 5 Section 9.1 (killing/injuring)	Protects listed animals from intentional killing or injuring
Schedule 5 Section 9.1 (taking)	Protects listed animals from taking
Schedule 5 Section 9.2	Protects listed animals from being possessed or controlled (live or dead)
Schedule 5 Section 9.4a	Protects listed animals from intentional damage or destruction to any structure or place used for shelter or protection
Schedule 5 Section 9.4b	Protects listed animals from intentional disturbance while occupying a structure or place used for shelter or protection
Schedule 5 Section 9.5a	Protects listed animals from being sold, offered for sale or being held or transported for sale either live or dead, whole or part
Schedule 5 Section 9.5b	Protects listed animals from being published or advertised as being for sale
Schedule 8	Protects listed plants from: intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Schedule 9	Prohibits the release of species listed in the Schedule into the wild.
Schedule 9a	Allows environmental authorities to issue species control orders to landowners, obliging them to control/eradicate invasive and/or non-native species.

Further information on legally protected species, designated wildlife sites and invasive non-native species is provided in the relevant sub-sections of this Appendix.

Countryside & Rights of Way Act 2000

Many of the provisions of the Countryside and Rights of Way (CRoW) Act 2000 have been incorporated as amendments into the Wildlife and Countryside Act (1981) and some provisions have now been superseded by later legislation such as The Natural Environment and Rural Communities Act (2006).

The most relevant changes provided by the CRoW Act include the added protection given to SSSIs and other important sites for nature conservation. Importantly, under the Act it became a criminal offence to "recklessly disturb" Schedule 1 nesting birds and species protected under Schedule 5 of the Wildlife and Countryside Act. It also enabled heavier penalties on conviction of wildlife offences.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities (NERC) Act 2006 was intended to raise the profile of biodiversity amongst all public authorities (including local authorities, and statutory undertakers) and to make biodiversity an integral part of policy and decision-making processes. The NERC Act also improved wildlife protection by amending the Wildlife and Countryside Act 1981.

Section 40 (S40) of the Act places a 'Biodiversity Duty' on all public bodies to have regard to the conservation of biodiversity when carrying out their normal functions. This includes giving consideration to the restoration and enhancement of species and habitats.

Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of Principal Importance for the conservation of biodiversity in England. This was published in 2007 and is commonly referred to as the "S41 list". Public authorities have a responsibility to give specific consideration to the S41 list when exercising their normal functions. For planning authorities, consideration for Species and Habitats of Principal Importance will be exercised through the planning and development control processes. Further information on Species and Habitats of Principal Importance is provided in the relevant sub-sections of this Appendix.

The Water Environment Regulations 2017

Currently, the overriding legislation relating to freshwater is the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. The Regulations set out objectives to deliver a better water environment based upon achieving a 'good status' for freshwater bodies. The concept of 'good status' is a more rigorous measure of environmental quality than previous measures, which now takes into account not just the chemical status but also the ecological health and the extent of artificial physical modification to rivers.

The Regulations are based upon the concept of protecting water through the management of river basin districts (RBDs) and require the implementation of River Basin Management Plans (RBMPs). Regulation 33 requires public bodies to 'have regard' to the RBMP when making planning decisions, for example through the granting of planning permission with appropriate planning conditions and/or obligations. These could require measures to be implemented (e.g. Sustainable Urban Drainage Systems (SUDS), grey water recycling etc.) or funds to be provided for habitat enhancement schemes.

The Regulations also affect planning policy through the implementation of Programmes of Measures for each river basin district. This involves bringing together funding from various sources and co-ordination of the activities of organisations with an interest in the use of land and water, including developers.

SITES DESIGNATED FOR THE CONSERVATION OF NATURE

There is a hierarchy of nature conservation sites which is based on the level of statutory (legal) protection and the administrative level of importance. Other features of nature conservation interest outside designated sites may also be a material consideration in the determination of planning applications.

Statutory Sites: International

Ramsar Sites, Special Areas of Conservation (SAC) and Special Protection Areas (SPA)

The Conservation of Habitats and Species Regulations 2017 (as amended) provide the primary legal basis for the protection of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK.

SACs are sites which support internationally important habitats and/or species listed as being of Community Importance in the Annexes of the European Habitats Directive 92/43/EEC. SPAs are sites which support internationally important numbers of bird species listed as being of Community Importance in the Annexes of the European Birds Directive 2009/147/EC. Following the UK's exit from the EU, these now form part of the "National Sites" network rather than the EU Natura 2000 network.

Ramsar sites are wetlands of international importance and although not covered under the Habitats Regulations they are, as a matter of national planning policy, subject to the same strict protection as SACs and SPAs. The majority of terrestrial Ramsar sites in England are also notified as SPAs and/or Sites of Special Scientific Interest (SSSIs).

To avoid confusion with the nationally designated sites described below, EPR refers to SACs and SPAs as 'International sites', given the reasons for their designation.

Any plan or project considered likely to affect an International site (SAC, SPA or Ramsar) must be subject to a Habitats Regulations Assessment (HRA), as set out under Regulation 63 (and Regulation 105 in respect of Land Use Plans) of the Habitats Regulations 2017 (as amended) and the National Planning Policy Framework (NPPF) 2021.

The local authority (or other 'competent authority') carries out the HRA, but the onus is on the developer to provide the necessary information to inform this process, usually in the form of a report.

Under the Habitats Regulations 2017 (as amended), the competent authority must determine in the first instance whether a proposed development is likely to have a significant effect on the SAC/SPA, either alone or in combination with other plans and projects. This stage of the HRA process is known as 'screening'.

If a likely significant effect cannot be precluded (screened out) on the basis of objective information, the competent authority must undertake an 'Appropriate Assessment' to fully assess these implications against the site's conservation objectives. A precautionary approach must be taken with respect to determining whether or not there would be a significant effect, and the appropriate nature conservation body (in most cases Natural England) should be consulted. Except in certain exceptional circumstances prescribed by the Regulations where there are imperative reasons of overriding public interest for allowing a development to proceed, the competent authority may not undertake or authorise the plan or project until they have established (based on the conclusions of the Appropriate Assessment) that the activity will not adversely affect the integrity of the SAC/SPA. This should be the case where no reasonable scientific doubt remains as to the absence of such effects.

Regulation 16A of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 sets out the management objectives of the National Site Network, which can be summarised as follows:

- to maintain or, where appropriate, restore habitats and species listed in Annexes I and II of the Habitats Directive within the UK's territory to a favourable conservation status (FCS); and

- 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 in meeting the above objectives, including breeding, moulting, staging and wintering areas for in the case of migratory bird species;

- their importance for the coherence of the national sites network; and

- the threats of degradation or destruction (including deterioration and disturbance of protected features) on SPAs and SACs.

Government guidance[1] also states that competent authorities have a duty to help protect, conserve and restore the designated features of SACs and SPAs when carrying out their statutory work, including taking decisions that might affect a site. They also have a duty to consider how they can help to prevent the deterioration of the site's habitats from human activity or natural changes, including habitats that support designated species, and prevent significant disturbance of the site's designated species from human activity or natural changes.

Competent authorities include (but are not limited to) local planning authorities, councillors, planning committee members and statutory agencies such as Natural England.

Statutory Sites: National

Nationally important sites include Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs). A development proposal that is likely to affect a nationally important site will be subject to special scrutiny by the local planning authority and Natural England. Certain operations may be permitted. Any potentially damaging operations that could have an adverse effect directly or indirectly on the special interest of the site will not be permitted unless the reasons for the development clearly outweigh the nature conservation and/or geological value of the site itself and the national policy to safeguard such sites, as set out in Section 15 of the National Planning Policy Framework (NPPF).

Sites of Special Scientific Interest

The Wildlife and Countryside Act 1981 (as amended) and the CRoW Act 2000 provide the primary legal basis for the protection of Sites of Special Scientific Interest (SSSIs). These sites have been designated to capture the best examples of England's flora, fauna, geological or physiographical diversity.

Public bodies have a duty to take reasonable steps to conserve and enhance the special features of sites of special scientific interest (SSSIs) when carrying out their statutory duties and giving others permission for works, such as reviewing planning applications.

[1] https://www.gov.uk/guidance/duty-to-protect-conserve-and-restore-european-sites

National Nature Reserves

National Nature Reserves (NNRs) are declared under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981, as amended by the Environmental Protection Act 1990. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs represent the very best parts of England's SSSIs. The majority of NNRs also have European nature conservation designations.

Statutory Sites: Regional/Local

Local Nature Reserves

Local Nature Reserves (LNRs) are declared by local authorities under the National Parks and Access to the Countryside Act 1949 as living green spaces in towns, cities, villages and countryside. They provide opportunities for research and education, or for simply enjoying and having contact with nature. LNRs are usually protected from development through local planning documents which may be supplemented by local by-laws.

Non-Statutory Sites

Local Wildlife Sites

Local planning authorities may designate non-statutory sites for their nature conservation value based on important, distinctive and threatened habitats and species within a national, regional and local context. These sites are not legally protected but are given some protection through the planning system. These sites may be declared as 'County Wildlife Sites', 'Sites of Importance for Nature Conservation' (SINCs), or 'Sites of Nature Conservation Importance' (SNCIs) in local and structure plans. Non-statutory sites are a material consideration when planning applications are being determined. The precise amount of weight to be attached, however, will take into account the position of the site in the hierarchy of sites as set out above. Further information is typically provided in local level planning policy.

Nature Conservation in Areas Outside Designated Sites

Various other features exist outside designated sites that are important for the conservation of nature and which are a material consideration in the planning system.

Habitats of Principal Importance in England

Fifty-six habitat types have been identified as Habitats of Principal Importance for the conservation of biodiversity in England under Section 41 of the NERC Act 2006. Although these habitats are not legally protected, the NPPF, Government Circular 06/05, good practice guidance and the NERC Act place a clear responsibility on planning authorities to further the conservation of these habitats. They can be a material consideration in planning decisions, and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent their net loss and to enhance them where possible. Additional guidance to developers is typically provided in local level planning policy.

The S41 list also includes species as explained below under 'Species of Principal Importance in England'.

Networks of Natural Habitats

Networks of natural habitats link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Examples include rivers with their banks, traditional field boundary systems (such as hedgerows), ponds and small woods. Local planning authorities are encouraged through the NPPF to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through planning, policies and development control.

Hedgerows

Hedgerows can act as wildlife corridors that are essential for migration, dispersal and genetic exchange of wild species. Hedgerows that qualify as a Habitat of Principal Importance under S41 of the NERC Act 2006 are a material consideration in the planning system.

Under the Hedgerow Regulations 1997, it is an offence to remove a hedgerow classed as 'important' under the criteria set out by the Regulations without submitting a notice to the Local Planning Authority and waiting for their decision. The Regulations are aimed at countryside hedges and do not apply to hedges around private dwellings or where planning permission has been granted for a project that includes hedge removal. Hedgerows that satisfy wildlife, archaeological, historical or landscape criteria qualify as 'important' under the Regulations. If a hedgerow is not important, the Local Planning Authority may not prevent its removal; however, Local Planning Authorities are required under the Regulations to protect and retain important hedgerows unless satisfied that the circumstances justify their removal.

Tree Preservation Orders

Tree Preservation Orders (TPOs) may be declared under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999 to protect individual trees and woodlands from development and cutting. TPOs are primarily put in place to preserve amenity or for landscape conservation reasons. The importance of trees as wildlife habitat may be taken into account, but alone is not sufficient to warrant a TPO. For this reason, TPOs do not fit comfortably under the remit of nature conservation and are generally dealt with by an arboricultural consultant rather than an ecologist. Further guidance on TPOs in relation to development is available from the Department for Communities and Local Government.

Ancient Woodland & Veteran Trees

Ancient woodlands are defined as areas continuously wooded since at least 1600 AD. Even an ancient wood which has been replanted may still have remnants of ancient woodland wildlife and historical features and has potential to be restored. Ancient woodland is not a statutory designation and does not provide legal protection, but local authorities are advised under the NPPF and National Planning Practice Guidance (NPPG) not to grant planning permission for any development that would result in the loss or deterioration of ancient woodland, ancient trees or veteran trees unless there are 'wholly exceptional reasons' and 'a suitable compensation strategy in place'. Local Planning Authorities must take into account Natural England and the Forestry Commission's *Standing Advice for Ancient Woodland and Veteran Trees,* available on the www.gov.uk website.

Surface & Ground Waters

Surface waters (including flowing and standing water) and ground water can directly and indirectly impact upon the conservation of nature.

Guidance on pollution prevention is hosted on the Government's website and focuses on regulatory requirements. This covers topics including the prevention of pollution if you are a business, managing business and commercial waste, oil storage, working on or near water, and managing water on land. Careful planning and the application of these guidelines can help reduce the risk of construction and maintenance work causing pollution to surface and ground waters. Some activities with the potential to impact watercourses or groundwater may require consent under the Water Resources Act 1991.

Water Resources Act (WRA) 1991

Under the WRA there is strict regulation of discharges (including sediment, chemicals, nutrients) to rivers, lakes, estuaries and groundwaters. It also aims to ensure that polluters cover the costs associated with pollution incidents.

SPECIES PROTECTION

Legally Protected Species

The species listed in the following subsections are protected by law in England. When preparing a planning application, it is essential to determine the presence or likely absence of legally protected species and the extent to which they may be affected by a proposed development. This can best be achieved by undertaking surveys early in the planning process. Avoidance and/or mitigation measures may be required to address any predicted impacts upon protected species and may necessitate a licence. The Government website offers standing advice from Natural England and DEFRA which can be applied to planning applications that affect protected species.

Bats

There are 18 species of bat in the UK, seven of which are Species of Principal Importance in England. All bats and bat roosts are protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Bats are also a European Protected Species protected under the Habitats Regulations 2017 (as amended). It is an offence to:

- Intentionally or deliberately kill, injure or capture bats;
- Intentionally, deliberately or recklessly disturb bats in such a way as to be likely to significantly affect the ability of any significant group of bats to survive, breed, or rear or nurture their young or the local distribution of or abundance of a species of bat;
- Intentionally, or recklessly damage, destroy or obstruct any place used for shelter or protection (i.e. bat roosts) or intentionally or recklessly disturb a bat whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a bat; and
- Possess, sell or transport a bat, or anything derived from it.

Development proposals affecting bats or their roosts require a European Protected Species mitigation licence from Natural England.

Great Crested Newt

The Great Crested Newt *Triturus cristatus* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Great Crested Newts;
- Intentionally, deliberately or recklessly disturb Great Crested Newts in such a way as to be likely to significantly affect the ability of any significant group of Newts to survive, breed, or rear or nurture their young or the local distribution of or abundance the species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Great Crested Newts for shelter or protection, or intentionally or recklessly disturb a Great Crested Newt whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Great Crested Newt; and
- Possess, sell or transport a Great Crested Newt, or anything derived from it.

Development proposals affecting the Great Crested Newt require a European Protected Species mitigation licence from Natural England.

Intentional or reckless behaviour leading to an offence being committed as detailed above may result in maximum penalties of:

- Up to £5,000 fine per offence committed;
- A custodial sentence of up to six months instead of, or in addition to, a fine; and/or
- Items of equipment involved in committing the offence may be seized and detained.

In addition to the above penalties, it is likely that any EPS mitigation licence obtained for a site will be revoked whilst any wildlife offence is investigated. This will lead to immediate temporary and, depending on investigation outcomes, possible permanent restrictions on site works, as well as associated cost.

Hazel Dormouse

The Hazel Dormouse *Muscardinus avellanarius* is a Species of Principal Importance in England. It is legally protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and is afforded significant further protection as a European Protected Species under the Habitats Regulations 2017 (as amended). Collectively, this legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Dormice;
- Intentionally, deliberately or recklessly disturb Dormice in such a way as to be likely to significantly affect the ability of any significant group of Dormice to survive, breed, or rear or nurture their young or the local distribution of or abundance of the species;
- Intentionally or recklessly damage, destroy or obstruct access to places used by Dormice for shelter or protection (whether occupied or not) or intentionally or recklessly disturb a Dormouse whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Dormouse;

- Possess or transport a Dormouse (or any part thereof) unless under licence; and
- Sell or exchange Dormice.

Development proposals affecting the Dormouse require a European Protected Species mitigation licence from Natural England.

Reptiles

All four of the widespread British species of reptile, namely the Common Lizard *Zootoca vivipara,* Slow-Worm *Anguis fragilis*, Grass Snake *Natrix helvetica (*previously *Natrix natrix)* and Adder *Vipera berus*, are Species of Principal Importance in England. They are protected under Schedule 5 (Sections 9.1, 9.5a, 9.5b) of the Wildlife & Countryside Act 1981 (as amended) from intentional killing, injury and trade. The habitat of the four widespread reptiles is not legally protected; however the replacement of habitat lost through development may be required through the planning system. Mitigation for these species is not subject to licensing by Natural England but should nonetheless be planned to minimise disturbance and potential project delays.

The Smooth Snake *Coronella austriaca* and the Sand Lizard *Lacerta agilis* are the rarest reptile species in Britain. In addition to the protection that is afforded to the widespread species of reptile listed above, these species are protected further under Schedule 5 (Sections 9.4b and 9.4c) of the Wildlife and Countryside Act 1981 (as amended). They are also European Protected Species protected under the Habitats Regulations 2017 (as amended). This legislation makes it an offence to:

- Intentionally or deliberately kill, injure or capture Sand Lizards or Smooth Snakes;
- Intentionally, deliberately or recklessly disturb Sand Lizards or Smooth Snakes in such a way as to be likely to significantly affect the ability of any significant group of Sand Lizards or Smooth Snakes to survive, breed, or rear or nurture their young or the local distribution or abundance of either species;
- Intentionally or recklessly damage, destroy or obstruct any place used by Sand Lizards or Smooth Snakes for shelter or protection, or intentionally or recklessly disturb a Sand Lizard or Smooth Snake whilst it is occupying such a place;
- Damage or destroy a breeding site or resting place of a Sand Lizard or Smooth Snake;
- Keep, sell, or exchange Sand Lizards or Smooth Snakes or their eggs; and
- Deliberately take or destroy their eggs.

Development proposals affecting Smooth Snake or Sand Lizard require a European Protected Species mitigation licence from Natural England.

Birds

49 species of bird are listed as Species of Principal Importance in England. All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence, with certain exceptions (e.g., game birds), to intentionally kill, injure or take any wild bird and to take, damage or destroy their nests or eggs.

Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) affords extra protection for certain species and applies harsher penalties for offences. Any intentional or reckless disturbance of a Schedule 1 bird, whilst it is nesting or rearing dependent young, constitutes an offence.

Regulation 10 of the Conservation of Habitats and Species Regulations 2017 (as amended) requires appropriate authorities and conservation bodies, in the exercise of their functions, to take such steps that they consider appropriate in order to secure "*the preservation, maintenance and re-establishment of a sufficient diversity and area of habitat for wild birds in the United Kingdom, including by means of the upkeep, management and creation of such habitat (…)*".

European Badger

The Protection of Badgers Act 1992 (as amended) offers considerable protection to both Badgers and Badger setts. This legislation was enacted to protect the European Badger *Meles meles* against baiting and not as a means of species recovery as it is common in England. It is an offence to cruelly treat, kill or take Badgers, but it is also illegal to intentionally or recklessly damage or disturb a Badger sett while it indicates signs of current use by a Badger.

The Government website contains information to help developers and their proponents avoid sett disturbance and to identify setts that are in current use. It is important to maintain adequate foraging territory in development proposals affecting Badgers as the destruction or severance of large areas of foraging territory could also be taken to include habitat loss. Licences to disturb Badgers and their setts in respect of development may be issued by Natural England provided provisions are made to minimise disturbance.

Wild Mammals

All wild mammals are protected against cruelty under the Wild Mammals (Protection) Act 1996, which makes it an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Licences for Development

Licences are required to permit activities prohibited under wildlife legislation, namely the disturbance or capture of protected species or damage to their habitats. Natural England is the licensing authority in England. Licences are only issued for certain purposes, which are set out in the legislation, and only where there is a valid justification. The licences most relevant to development scenarios are discussed below.

European Protected Species Mitigation Licences

A European Protected Species mitigation licence (EPSL) is required from Natural England to undertake any development that is reasonably likely to result in an offence in respect of a European Protected Species protected under Schedule 2 of the Habitats Regulations 2017 (as amended); including *inter alia* all species of bats, Hazel Dormouse, Great Crested Newt and European Otter. Natural England must be satisfied that the following three tests are satisfied before it will issue a licence covering a European Protected Species:

1. The proposal is necessary to preserve public health or public safety, or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment;

2. There is no satisfactory alternative; and
3. The proposal will have no detrimental effect to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Conservation Licences

In the context of development, conservation licences are normally only relevant to mitigation involving the capture of Water Voles or White-Clawed Crayfish. Conservation licences are granted to permit the trapping and translocation of these species on the condition that the development activity is properly planned and executed and thereby contributes to the conservation of the population of the species.

Badger Licences

Licences to disturb Badgers and their setts in respect of development may be issued by Natural England, provided provisions are made to minimise disturbance.

Species of Principal Importance in England

943 species have been identified as being of Principal Importance for the conservation of biodiversity in England under Section 41 (S41) of the NERC Act 2006. The S41 list includes species found in England which have been identified as requiring action under the now superseded UK Biodiversity Action Plan 2007 (plus the Hen Harrier). While many of these species may not be legally protected (some are protected under the legislation described above), there is a clear responsibility on local planning authorities to further their conservation. These species can be a material consideration in development control decisions and so developers are advised to take reasonable measures to avoid or mitigate impacts to prevent the net loss of these species, and to enhance their habitats where possible. Additional guidance to developers is typically provided in local level planning policies.

Invasive Non-Native Species

There are a number of species not ordinarily resident in the UK, such as Japanese Knotweed. Those which pose a significant threat, if uncontrolled, to our ecology and economy are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). For an offence to be committed, a species must be released or allowed to escape into the wild. For example, if a plant listed on Schedule 9 is not adequately controlled by a land owner, once they are aware that it is present, and the species is allowed to spread into adjoining areas, then this could constitute an offence.

Japanese Knotweed is also classed as ‘controlled waste’ under the Environment Protection Act 1990 (as amended) and if taken off site it must be disposed of safely at a licensed landfill site. Soil containing rhizome material should also be regarded as contaminated and treated accordingly.

Species Control Orders

A new schedule 9A was inserted into the Wildlife and Countryside Act 1981 (as amended) by Sections 23 to 25 of the Infrastructure Act 2015. This gives environmental authorities (in England the Secretary of State, Environment Agency, Natural England and the Forestry Commission) the power to offer ‘species control agreements’ to landowners in respect of invasive and/or non-native species, such as Japanese Knotweed. If the landowner does not comply with a species control agreement, or refuses to enter into one, the environmental authority may issue a ‘species control order’, requiring the owner to

eradicate or control the species, or to allow the environmental authority access to carry out these operations themselves.

If the owner does not comply with the species control order, the maximum penalty if convicted is a fine of up to £40,000 and/or imprisonment for up to 51 weeks. The environmental authority can also recover costs for carrying out the necessary work themselves.

PLANNING POLICY & GUIDANCE

This section set out the main planning policy and government guidance that relates to the conservation of nature at all levels of government.

National Level

National Planning Policy Framework 2021

The National Planning Policy Framework (NPPF) 2021 sets out the Government's planning policies for England and how these should be applied in local-level policy and decision making. The NPPF has a clear "presumption in favour of sustainable development" (paragraph 11), with economic, social and environmental objectives. This presumption does not apply where a plan or project has failed the 'appropriate assessment' test under the Habitats Regulations (paragraph 182).

Section 15 of the NPPF provides guidance on conserving and enhancing the natural environment through the planning system, as summarised below.

Firstly, planning policies and decisions should contribute to and enhance the natural and local environment by applying the following key principles:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland; and
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability.

Section 15 also requires planning policies and decisions to limit the impact of artificial light pollution on nature conservation.

Secondly, when determining planning applications, local planning authorities should apply the following key principles:

- if significant harm resulting from a development cannot be avoided, adequately mitigated or (as a last resort) compensated for, then planning permission should be refused;
- proposed development that is likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should normally be refused;
- planning permission should normally be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and ancient or veteran trees, unless there are 'wholly exceptional reasons' and a suitable compensation strategy exists; and
- development whose primary objective is to conserve or enhance biodiversity should be supported, while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

In the case of SSSIs and irreplaceable habitats, exceptions may be made if it can be clearly demonstrated that the benefits of the development, in that location, clearly outweigh the costs in terms of loss or adverse impacts.

Section 15 specifies that listed or proposed Ramsar sites, potential European sites, and sites identified or required as compensatory measures for adverse effects on designated/listed or potential/proposed European and Ramsar sites should be given the same protection as designated European sites.

Section 15 includes the following text on air quality:

- Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas;
- Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications; and
- Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan.

The NPPF also sets out principles for plan-making, including the allocation of land with the least environmental or amenity value, and taking a strategic approach to maintaining and enhancing networks of habitats and green infrastructure by identifying, mapping and safeguarding components of local wildlife-rich habitats, wider ecological networks, wildlife corridors and stepping stones, and those areas identified by national and local partnerships for habitat management, enhancement, restoration or creation.

Government Circular 06/05: Biodiversity and Geological Conservation

The Government produced Circular 06/05 to provide guidance on the application of the law to the conservation of nature. Although the document is in the process of being updated, Paragraphs 98 and 99 remain relevant as they set out the following principles and obligations:

- The presence of protected species is a material consideration when determining a development proposal;
- Local authorities should consult with Natural England before granting permission, and consider imposing planning conditions or obligations to secure the long-term protection of the species;
- The presence of protected species, and the extent to which thy may be affected by the proposed development, must be established before permission is granted;
- Given the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development.

MHCLG Planning Practice Guidance

Revised and updated Planning Practice Guidance (PPG) was launched by the Department for Communities and Local Government (now the Ministry of Housing, Communities and Local Government, MHCLG) as a web-based tool in March 2014 to accompany the NPPF. The webpages are set out in a Q&A format. The PPG consolidates and supersedes existing guidance on a range of planning-related topics, clarifies some of the statements made in the NPPF, and provides links to relevant legislation and other sources of advice.

The Guidance outlines a number of important principles in relation to nature conservation and biodiversity, including the need to integrate biodiversity into all stages of the planning process and to consider opportunities to enhance biodiversity and contribute to the Government's commitments and targets set out in *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*.

The guidance also requires that "an ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate", and recommends that "local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development."

Other guidance

In addition to the Planning Practice Guidance, various other forms of guidance and standards are available in relation to biodiversity and the development process. Of particular note is *British Standard BS42020:2013 Biodiversity – Code of practice for planning and development*, published in August 2013, which replaces *Planning to Halt the Loss of Biodiversity (PAS 2010): Biodiversity conservation standards for planning in the United Kingdom*.

This document is designed to complement the NPPF and is aimed at organisations concerned with ecological issues throughout the planning process, including local authorities, developers, planners and ecological consultants. It sets out step-by-step recommendations on how to incorporate biodiversity considerations at all stages of the planning process, with a focus on the provision of consistent, high

quality and appropriate ecological information, effective decision making, and high standards of professional conduct and competence.

Regional Level

Regional plans including the London Plan 2021, of particular interest is Chapter 8 – Green Infrastructure and Natural Environment of particular note are the following policies;

- Policy G1 Green Infrastructure – This policy details how London's network of green and open spaces and green features in the built environment, should be protected and enhanced. Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.
- Policy G4 Open Space – This policy details how development should 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. Ensure that open space, particularly green space, included as part of development remains publicly accessible and where development proposal should not result in the loss oof protected and publicly accessible open space.
- Policy G6 Biodiversity and access to nature – This policy outlines how Sites of Importance for Nature Conservation (SINCs) should be protected. 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 impact. First avoid damaging the significant ecological features of the site. Second minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site. Third deliver off-site compensation of better biodiversity value. 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. Finally, proposals which reduce deficiencies in access to nature should be considered positively.
- Policy G7 Trees and woodland - 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. 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.

Local Level

The Site is within the administrative area of Bexley District Council. The documents of relevance and that make up the Bexley Development Plan, include the:

- The Bexley Core Strategy (adopted in February 2012)

- Policy CS17 *Green Infrastructure* – this policy details how the protection, enhancement and promotion of Bexley's green infrastructure (including open spaces and waterways) will be achieved.
- Policy CS18 *Biodiversity & Geology* – this policy details how development will not adversely affect the integrity of designated European Sites of Nature Conservation Importance (such as SACs, SPAs and RAMSAR sites). It also promotes the protection, conservation and enhancement of Sites of Special Scientific Interest (SSSI's) and Sites of Importance for Nature Conservation (SINC's). Controlled development will ensure that habitats and species are not affected, and that the natural habitat is protected and enhanced as far as practicable. Development that deliver targets for habitats and species identified in Bexley's Biodiversity Action Plan and the London Plan through enhancements are to be prioritised.

- Bexley Local Plan Regulation 18 Consultation paper for publication (February 2019).
- Bexley Biodiversity Action Plan (BAP) (2010-2015) - Though this document is yet to be updated it is the most current document that outlines the counties vision for the wildlife and natural habitats of the borough of Bexley.

Biodiversity Plans and Strategies

The NERC Act 2006 places a duty on local authorities to have due regard to biodiversity when exercising their normal functions, and the NPPF requires planning policies to "promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species and identify and pursue opportunities for securing measureable net gains for biodiversity" (paragraph 174). These targets are set out in a range of biodiversity plans and strategies from the international through to the district level.

An overview of the key biodiversity plans and strategies in the UK, and their implications for development, are set out below.

National level

The *UK Biodiversity Action Plan 2007* (UK BAP) has been superseded by the *UK Post-2010 Biodiversity Framewo*rk and individual national biodiversity strategies. The UK Framework sets out the overarching vision, strategic goals and priority activities for the UK's work towards international biodiversity targets (known as the 'Aichi Targets'), as agreed by 192 parties at the UN Convention on Biological Diversity in 2010.

In England, *Biodiversity 2020: A strategy for England's wildlife and ecosystem services* is the national biodiversity strategy, which has the stated mission "(…) to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people." To focus activity and assess performance in achieving this mission, Biodiversity 2020 sets out objectives relating to terrestrial and marine habitats and ecosystems, species and people.

Local Level

While BAPs at the national level have now been superseded by *the UK Post-2010 Biodiversity Framework* and *Biodiversity 2020: A strategy for England's wildlife and ecosystem services*, many county and district level BAPs still exist.

Bexley has a local BAP which is relevant to the Site that consists of targets for maintaining, restoring, and creating priority habitats, and a map of local Biodiversity Opportunity Areas which have been identified as priority areas for action.

Biodiversity Net Gain

The Environment Act 2021 makes provisions for 10% biodiversity gain, as measured by a metric (currently published by Defra), to become a condition of planning permission in England. This will come into force upon the adoption of secondary legislation and regulations. Timescales are to be confirmed, but this is currently expected to be around late 2023. A publicly accessible register of Biodiversity Gain Sites will be set up during this time, and the Secretary of State will publish and consult on the biodiversity metric to be used, as well as on the wording of the secondary legislation itself.

The Act specifies that biodiversity gain can be delivered on and/or offsite and establishes the basis for purchasing off-site credits to meet the 10% obligation if required. Land used to deliver biodiversity gain must be maintained for at least 30 years and planning conditions will require a biodiversity gain plan to be submitted to and approved by the planning authority prior to commencement of development.

It also clarifies that the baseline biodiversity value of a site should be taken from the date on which planning consent is granted, unless otherwise agreed with the LPA (but not before the secondary legislation comes into force). This excludes any activities undertaken without planning permission (or other relevant permissions) after 30 January 2020 which have had the effect of reducing the biodiversity value of the land. In such cases, "the pre-development biodiversity value is to be taken to be its biodiversity value immediately before the carrying on of the activities."

Biodiversity net gain (BNG) is already enshrined in the key principles of the NPPF, and some local planning policies already include a requirement to deliver a minimum net gain figure (typically 10% or 20%).

Enhancement measures may not just benefit biodiversity. There are many functional benefits to be won from strategically planned green infrastructure projects such as semi-natural urban green spaces, sustainable drainage schemes (SUDS) and green roofs.

Appendix 2
Assessment Methods

This Ecological Appraisal has considered and referred to the guidance in The Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland* (2018). Further work, such as field surveys and assessment will follow this guidance as the assessment process goes forward.

DESK STUDY METHODOLOGY

A desk study was carried out to gather and refer to existing biodiversity and contextual information with respect to the Zone of Influence and the wider area. This involved interrogation of internet resources, including the Multi-agency Geographic Information for the Countryside (MAGIC) and National Biodiversity Network (NBN), aerial photos, current Ordnance Survey maps and historical maps. Reference was also made to local planning policies, strategies and initiatives relating to biodiversity.

A biological records data search was commissioned from Greenspace Information for Greater London (GiGL) as part of the ecological appraisal. This, along with other information sources, such as that held by the National Biodiversity Network (NBN) atlas and nearby planning applications have been used when available.

FIELDWORK METHODOLOGY

The site walkover was completed by Sean Manley BSc (Hons), David W. Smith BSc (Hons) PhD MCIEEM and Holly Pay BSc Hons, MSc on 25th July 2022. Features of potential importance to wildlife and any evidence of, or potential for, protected or notable species or habitats were recorded. The broad methods used are described below.

Land Use, Habitat Types, Vegetation Communities and Flora
Within the Site the land use, habitat types and landscape features (such as hedgerows) were described. For each main habitat type the dominant vegetation communities were recorded, along with any priority or indicator plant species, (including Japanese Knotweed where present). A preliminary evaluation of the structure, quality and likely management of each habitat or feature was also carried out.

Fauna
The potential of habitats and features to support protected or priority species, or Species of Principal Importance (SPIs) for the purpose of conserving biodiversity, were recorded, as were any signs encountered. The following is a summary of the approach taken for this Ecological Appraisal.

Badgers

Consideration was given to the presence of habitat potentially suitable for supporting Badgers, including woodland and grassland. Potential evidence of the presence of Badgers was looked out for and noted, including earthworks that might be Badger setts, and signs such as dung pits, mammal pathways through ground vegetation and under fences, and hairs on fences.

Bats

The instructed work did not include an assessment of the existing building for its suitability to support a bat roost.

Existing trees within the footprint of the landscape proposals were assessed for Potential Roosting Features (PRFs). This preliminary assessment of the potential for these features to support bats was undertaken during the survey in accordance with categories set out within the Bat Conservation Trust's Bat Surveys Good Practice Guidelines (2016). Potential features associated with trees include woodpecker holes, splits in branches and peeling bark.

An evaluation was also undertaken of potential bat foraging habitat in the area, including woodland, pasture, hedges, and watercourses.

Hazel Dormouse

The type and quality of habitat with the potential to be suitable for supporting Hazel Dormice, such as woodland and hedgerows, was considered during the survey. In particular the presence of Oak, Hazel and berry-bearing shrubs was noted, and the connectivity of habitat recorded.

Birds

Any birds seen whilst carrying out the survey were recorded, and the type and quality of habitats available for birds was considered, including vegetation suitable for nesting, and habitat with the potential to support valued species, including breeding and wintering birds.

Amphibians

Consideration was given to the presence of habitat potentially suitable for supporting amphibians, including waterbodies (ponds, ditches), woodland, scrub and rough grassland, and features such as log piles that might provide hibernation areas.

Reptiles

The presence and quality of habitat considered potentially suitable for supporting reptiles was recorded. This included areas that provide basking and foraging opportunities, hibernation and breeding sites, such as rough grassland and scrub, banks, burrows, rubble piles, compost heaps, hedge banks and waterbodies.

Invertebrates

Habitats and features likely to support noteworthy groups and species were noted, for example herb-rich grasslands, areas of bare ground and deadwood habitats.

Water Voles

The presence and quality of watercourses with the potential to support Water Voles was recorded during the survey. Potential evidence of Water Voles, including burrows in the tops and vertical face of riverbanks, and feeding evidence was recorded where appropriate.

European Otter

Where watercourses are present, a preliminary evaluation of the quality of the riparian habitat for potentially supporting Otters was made. A preliminary search was made for signs of Otters, including spraints which are often left in prominent places on riverbanks, such as logs and bare patches of ground.

Appendix 3

Biological Records Search

Greenspace Information for Greater London CIC
the capital's environmental records centre

eCountability

An Ecological Data Search for Crossness Park

On behalf of
EPR

Report reference 12733aw

Prepared on 04 Jun 2022
by Alec Walker, eCountability Ltd.
enquiries@eCountability.co.uk

Prepared by eCountability Ltd (enquiries@ecountability.co.uk) on behalf of:
Greenspace Information for Greater London CIC Registered Office: 10 Queen Street Place, London EC4R 1BEA
community interest company limited by guarantee registered in England and Wales number 8345552
Post: C/O London Wildlife Trust, Dean Bradley House, 52 Horseferry Road, London SW1P 2AF
T: 020 7803 4285

Contents

1.0 Introduction

An ecological data search for Crossness Park and surrounding land to a 1000m radius on behalf of EPR.

The following report was compiled by eCountability Ltd on behalf of EPR, to provide ecological information for the above site for Conservation/land management. This report may include information on statutory sites, non-statutory sites, species records, habitat or open space information held by GiGL, as requested for the above search area. The boundaries of this search area are defined in the maps in Annex A and lie within the London Borough(s) of Barking & Dagenham, Bexley and Greenwich.

Important information about this report

The data provided within this report is for the **internal** use of EPR (which includes the client where applicable) to inform understanding of the site of interest for **1 year** in accordance with the terms and conditions agreed to on request of the search.

The data provided must not be distributed or published for an external or public audience, for example within the appendix of a report. Local Planning Authorities may request a copy of the data from GiGL either via their Service Level Agreement (most boroughs are GiGL partners) or as a data search.

The report is compiled using data held by GiGL at the time of the request. GiGL takes the accuracy of our data holdings very seriously and the Recorder Advisory Group is set up to help with this important task to ensure what we provide to you is the best data possible for your needs.

GiGL is constantly striving to improve the coverage and currency of its data holdings. We would be interested in hearing from you if you are able to submit species or habitat data arising from field surveys.

2.0 Statutory Sites and Local Nature Reserves

A desk-based search shows that there are no sites with European or National statutory designation within the search area and no LNRs.

Any citations currently available for the statutory sites within the search area can be seen on the following pages.

Statutory site designations:

- Special Area of Conservation (SAC)
- Special Protection Area (SPA)
- Ramsar sites
- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Local Nature Reserve (LNR)

For further explanations of the designations please see the “Supporting Information” annex. Please note that statutory citations are legal documents, the content of which is fixed and true at the time of designation. Species referred to in the citations may not be present on site today. Citations may have been written based on data not held by GiGL.

3.0 Non-Statutory Sites

A desk-based search shows that there are 11 SINCs, 2 Proposed SINCs and no RIGS/LIGS within the search area.

3.1 Sites of Importance for Nature Conservation

Introduction

Sites of Importance for Nature Conservation (SINCs) are recognised by the Greater London Authority and London borough councils as important wildlife sites.

There are three tiers of sites:

- Sites of Metropolitan Importance
- Sites of Borough Importance (borough I and borough II)
- Sites of Local Importance

The *London Plan* identifies the need to protect biodiversity and to provide opportunities for access to nature. The *London Environment Strategy* sets out the methodology and process for identifying such land for protection in Local Development Frameworks. A London Wildlife Sites Board (LWSB) has been established to provide support and guidance on the selections of SINCs.

The boundaries and site grades reflect the most recent consideration of each site, details of which are available from London borough councils. Note that boundaries and grades may change as new information becomes available. For further explanations of the designations please see the “Supporting Information” annex.

Areas of Deficiency (AoD) in Access to Nature are defined as built-up areas more than one kilometre actual walking distance from an accessible Metropolitan or borough site. AoD areas can be seen on the SINC map.

Citations

Citations currently available for SINCs within the search area can be seen on the following pages.

Please note that the content of SINC citations is reviewed periodically and that species referred to in the citations may not be present on site today. Citations may have been written based on data not held by GiGL.

Metropolitan

Site Reference: M031

Site Name: River Thames and tidal tributaries

Summary: The Thames, London's most famous natural feature, is home to many fish and birds, creating a wildlife corridor running right across the capital.

Grid ref: TQ 302 806

Area (ha): 2313.02

Borough(s): Barking and Dagenham, Bexley, City of London, Greenwich, Hammersmith and Fulham, Havering, Hounslow, Kensington and Chelsea, Kingston upon Thames, Lambeth, Lewisham, Newham, Richmond upon Thames, Southwark, Tower Hamlets, Wandsworth, Westminster

Habitat(s): Intertidal, Marsh/swamp, Pond/Lake, Reed bed, Running water, Saltmarsh, Secondary woodland, Vegetated wall/tombstones, Wet ditches, Wet grassland, Wet woodland/carr

Access: Free public access (part of site)

Ownership: Port of London Authority (Tidal banks) and Private (Riparian owners (non tidal banks))

Site Description:

The River Thames and the tidal sections of creeks and rivers which flow into it comprise a number of valuable habitats not found elsewhere in London. The mud-flats, shingle beach, inter-tidal vegetation, islands and river channel itself support many species from freshwater, estuarine and marine communities which are rare in London. The site is of particular importance for wildfowl and wading birds. The river walls, particularly in south and east London, also provide important feeding areas for the nationally rare and specially-protected black redstart. The Thames is extremely important for fish, with over 100 species now present. Many of the tidal creeks are important fish nurseries, including for several nationally uncommon species such as smelt. Barking Creek supports extensive reed beds. Further downstream are small areas of saltmarsh, a very rare habitat in London, where there is a small population of the nationally scarce marsh sow-thistle (Sonchus palustris). Wetlands beside the river in Kew support the only London population of the nationally rare and specially-protected cut-grass (Leersia oryzoides). The numerous small islands in the upper reaches support important invertebrate communities, including several nationally rare snails, as well as a number of heronries. Chiswick Eyot, one of the islands, is a Local Nature Reserve. The towpath in the upper reaches is included in the site, and in places supports a diverse flora with numerous London rarities, both native and exotic. Ninety per cent of the banks of the tidal Thames and its creeks are owned by the Port of London Authority, whereas the riparian owners are responsible for the non tidal (upriver) banks. The water is not owned by anybody. The River Thames upriver of the Thames Barrier is followed by the Thames Path National Trail.

Site first notified:	01/04/1986	**Boundary last changed:**	01/02/2018
Citation last edited:	01/07/2017	**Mayor Agreed:**	25/11/2002
Defunct:	N		
Last Updated:	17/12/2021		

Metropolitan

Site Reference: M041

Site Name: Erith Marshes

Summary: One of the very few remaining areas of Thames-side grazing marsh in London, supporting scarce birds, plants and insects.

Grid ref: TQ 485 803

Area (ha): 88.59

Borough(s): Bexley

Habitat(s): Brownfield, Pond/Lake, Reed bed, Roughland, Scattered trees, Scrub, Secondary woodland, Unimproved neutral grassland, Wader scrapes, Wet ditches, Wet grassland

Access: Access on public footpaths only

Ownership: Thames Water and Private

Site Description:

One of the few remaining examples of the Thames-side grazing marshes. The flora of the old sea walls includes several regionally scarce species: corn parsley (Petroselinum segetum), knotted hedge-parsley (Torilis nodosa) and narrow-leaved pepperwort (Lepidium ruderale). The wetland flora is also diverse, including horned pondweed (Zanichellia palustris), wild celery (Apium graveolens), lesser reedmace (Typha angustifolium), pink water-speedwell (Veronica catenata) and marsh and water docks (Rumex palustris, R. hydrolapathum), which are all rare in London. Although quite rank in places, the grassland is comprised of a characteristic Thames grazing marsh community, typified by abundant meadow barley (Hordeum secalinum). There are also extensive areas of scrub, tall herbs and ruderal vegetation within the Crossness Sewage Treatment Works. An area of brownfield habitat in the east of the site supports the London notable plants dittander (Lepidium latfolium) and narrow-leaved bird's-foot-trefoil (Lotus glaber) while soapwort (Saponaria officinalis) can be found along the footpath running along the southern edge of Crossness Sewage Treatment Works. Additional flora found across the site includes borrers saltmarsh grass (Puccinellia fasciculata), brackish water-crowfoot, (Ranunculus baudotii), hairlike pondweed (Potamogeton trichoides), trifid bur-marigold (Bidens tripartite) marsh yellow-cress (Rorippa palustris) and golden dock (Rumex maritimus). The site is also important for its breeding and wintering avifauna. Breeding species include barn owl, teal, lapwing, ringed plover, reed warbler, sedge warbler, reed bunting, linnet and skylark. Regular wintering birds include pintail, snipe, redshank, dunlin, black-tailed godwit and green sandpiper. The site serves as a commuting route for bats. The ditches also support an important population of the specially protected water vole, as well as the fish rudd and tench. Invertebrates include the common emerald damselfly (Lestes sponsa), roesel's bush-cricket (Metrioptera roeselii), shrill carder-bee (Bombus sylvarum), and brown banded carder bee (Bombus humilis). A variety of Red Data Book and notable invertebrates are also found on site.Part of the site to the north of Eastern Way is managed by Thames Water as a nature reserve. Public access to Erith Marshes is restricted to footpaths. There is permit access to the nature reserve, through Thames Water's Friends of Crossness Nature Reserve scheme. Thames Water opened a permissive footpath through Crossness Southern Marsh, south of Eastern Way, in 2006.

Other observations (published December 2016): Large areas of the site are managed for wildlife conservation. A number of notable species was not found during the survey but due to access issues to many of the wetland areas it cannot be determined whether they were still present or not. The species not seen are corn parsley and pink water-speedwell.

Site first notified:	19/09/1988	**Boundary last changed:**	11/12/2013
Citation last edited:	11/12/2013	**Mayor Agreed:**	25/11/2002
Defunct:	N		
Last Updated:	10/01/2022		

Borough Grade I

Site Reference: B&DBI07

Site Name: Goresbrook and the Ship & Shovel Sewer

Summary: The Goresbrook stream flows through Goresbrook Park, and joins the important ditch habitats of the Ship & Shovel Sewer.

Grid ref: TQ 486 838

Area (ha): 11.26

Borough(s): Barking and Dagenham

Habitat(s): Marsh/swamp, Running water, Tall herbs, Wet ditches

Access: Free public access (part of site)

Ownership: London Borough of Barking & Dagenham

Site Description:

The northern end of the Gores Brook begins life as a damp patch just north of the District Line. The area is planted with poplars (Populus spp) and willows (Salix spp). It continues southwards through allotments and Goresbrook Park, then through more built surrounds. The banks of the brook, particularly through the park, have been planted with trees such as willows, alder (Alnus glutinosa) and hawthorn (Crataegus monogyna) over tall herbs, dominated by Indian balsam (Impatiens glandulifera) and semi-improved neutral grassland. A number of wetland plants occur in the stream itself, including fool's watercress (Apium nodiflorum), branched bur-reed (Sparganium erectum), reed canary-grass (Phalaris arundinacea), galingale (Cyperus longus), lesser pond-sedge (Carex acutiformis) and yellow iris (Iris pseudacorus).

South of the railway the Gores Brook widens and as a result is quite sluggish. Plants characteristic of brackish water make an appearance including dittander (Lepidium latifolium), sea aster (Aster tripolium) and sea club-rush (Bolboschoenus maritimus). Common reed (Phragmites australis) is abundant and branched bur-reed frequent. In the water itself is fennel-leaved pondweed (Potamogeton pectinatus) and 'blanket-weed'.

The brook splits into two forks, which rejoin just before entering the River Thames. Within this area an island of reeds has formed. At the northern end succession is beginning with the reed being joined by tall herbs.

The Ship & Shovel Sewer joins the Gores from the west just south of the railway. It has a very modest flow and has been counted as 'standing water' here. It is the richest ditch in the borough. Wetland plants include common reed, gypsywort (Lycopus europaeus), common duckweed (Lemna minor), floating sweet-grass (Glyceria fluitans), reed sweet-grass, common club-rush (Schoenoplectus lacustris) and branched bur-reed. The western end of the Sewer has been planted with alder, willows and hawthorn over neutral grassland and tall herbs. Elsewhere naturally occurring scattered trees and scrub replace planted trees. The brooks support a population of the specially protected water vole, a priority species in both UK and London Biodivesity Action Plans, as well as interesting invertebrate communities.

Site first notified: 01/12/2002 **Boundary last changed:** 01/12/2002

Citation last edited: 31/01/2006 **Mayor Agreed:**

Defunct: N

Last Updated: 05/04/2006

Borough Grade I

Site Reference: BxBI01

Site Name: Crossways Lake Nature Reserve and Thameside Walk Scrub

Summary: A reed-fringed lake, valuable for water birds.

Grid ref: TQ 476 813

Area (ha): 5.1

Borough(s): Bexley

Habitat(s): Acid grassland, Pond/Lake, Reed bed, Ruderal, Scrub, Secondary woodland, Semi-improved neutral grassland

Access: Free public access (part of site)

Ownership: Peabody Housing Trust

Site Description:

Crossways Lake is a small, reed-fringed lake with a wooded island, at the north end of the Thamesmead canal system. It is managed as a nature reserve by Peabody Housing Trust. Grey herons have been reported nesting, and other breeding birds include reed warbler and a good range of common waterfowl. The Thameside Walk Scrub consists of a strip of land of scrub and some semi-improved grassland bordering the River Thames. It supports a number of common species but is of value to migrating birds such as the common whitethroat and lesser whitethroat.

Site name change (published December 2016): ‘Thameside Walk Scrub’ added to the site name.

Site first notified: 01/11/1991 **Boundary last changed:** 11/12/2016

Citation last edited: 11/12/2013 **Mayor Agreed:**

Defunct: N

Last Updated: 17/12/2021

Borough Grade I

Site Reference: BxBI14

Site Name: Thamesview Golf Course

Summary: An area of grassland and small ponds with reedbeds.

Grid ref: TQ 481 809

Area (ha): 14.94

Borough(s): Bexley

Habitat(s): Acid grassland, Pond/Lake, Reed bed, Ruderal, Scattered trees, Scrub, Secondary woodland, Semi-improved neutral grassland

Access: Free public access (part of site)

Ownership: Private

Site Description:

The golf course is an area of mostly heavily mown semi-improved acid to neutral grassland, with areas of planted woodland dominated by poplar (Populus sp.) and small ponds with reedbeds. The ponds support a number of common dragonfly species. Notable plants include bird's-foot (Ornithopus perpusillus) and hare's-foot clover (Trifolium arvense). Breeding birds include green and great spotted woodpeckers, reed warbler, coot and moorhen. A good diversity of birds visit in winter and on passage, including kingfisher, meadow pipit, snipe and a wide variety of warblers. Invertebrates include the wasp spider (Argiope bruennichi).

Site first notified: 01/11/1991 **Boundary last changed:** 11/12/2013

Citation last edited: 11/12/2013 **Mayor Agreed:**

Defunct: N

Last Updated: 17/12/2021

Borough Grade I

Site Reference: GrBI02

Site Name: Tump 53 Nature Park

Summary: A wetland site with extensive reedbeds and water voles.

Grid ref: TQ 467 803

Area (ha): 1.82

Borough(s): Greenwich

Habitat(s): Pond/lake, Reed bed, Scrub, Semi-improved neutral grassland

Access: Free public access (all/most of site)

Ownership: Gallions Housing Association

Site Description:

The reed beds are among the most extensive in Greenwich, and support a large population of reed warblers. While dominated by common reed (Pragmites australis), they also contain glaucous sweet-grass (Glyceria declinata), which is scarce in London, and several species of sedge (Carex spp). More open areas of water contain a diverse aquatic flora, including spiked water-milfoil (Myriophyllum spicatum), brooklime (Veronica beccabunga) and water-starwort (Callitriche sp). A rich assemblage of aquatic invertebrates includes the water stick-insect (Ranatra linearis). Water voles, a Priority species in the UK and London Biodiversity Action Plans, occur here. Grassland on the central island contains a good diversity of common wild flowers, and there are extensive areas of scrub of hawthorn (Crataegus monogyna) and elder (Sambucus nigra). There is free access to the site, which is well used for environmental education.

Site first notified: 01/01/1989 **Boundary last changed:** 01/09/2002

Citation last edited: 06/09/2005 **Mayor Agreed:**

Defunct: N

Last Updated: 29/01/2007

Borough Grade II

Site Reference: BxBII02

Site Name: Southmere Park &YarntonWay/Viridion Way

Summary: A large lake mainly used for recreation, with surrounding parkland, a poplar woodland and an accessible corridor of greenspace.

Grid ref: TQ 479 799

Area (ha): 39.35

Borough(s): Bexley

Habitat(s): Amenity grassland, Pond/Lake, Scattered trees, Scrub, Secondary woodland, Semi-improved neutral grassland, Wet ditches, Wet woodland/carr

Access: Free public access (all/most of site)

Ownership: Peabody Housing Trust and Private

Site Description:

Southmere is a large lake with artificial sides mainly used for recreation, its large size being of value to water birds including various gull species, mallard, pochard, cormorant, common tern, shoveler, coot, mute swan, great crested grebe and tufted duck. A large fish population includes bream, carp, perch and eels. The water quality appears high and there has been some habitat creation in areas. Extending south-east from Southmere Park, is Woodland Way, an area of woodland of hybrid black-poplar (Populus x canadensis), and black poplar (Populus nigra ssp betulifolia), a priority species in the London and Bexley BAPs. Much of the woodland is wet and follows the line of an old ditch. Additionally there are some small areas of semi-improved neutral grassland supporting a good mix of wildflowers that incudes ox-eye daisy (Leucanthemum vulgare), field scabious (Knautia arvensis) and agrimony (Agrimonia eupatoria). South of the lake a narrow corridor of predominantly amenity grassland and mature scattered trees known as Abbey Way links the site to Lesnes Abbey Wood to the south. The hybrid poplars are gradually being replaced by native trees, using appropriate mixes for the wet and drier areas. Species planted include black poplar (Populus nigra ssp betulifolia), a priority species in the London and Bexley BAPs.

Site name change (published December 2016): Site name changed from ‘Southmere Park and Woodland Way/Abbey’ Way to ‘Southmere Park and YarntonWay/Viridion Way’, to better reflect additional areas of SINC.

Site first notified: 01/11/1991 **Boundary last changed:** 11/12/2013

Citation last edited: 11/12/2013 **Mayor Agreed:**

Defunct: N

Last Updated: 17/12/2021

Borough Grade II

Site Reference: BxBII25

Site Name: Crossness Sewage Treatment Works Pond

Summary: A lake with good populations of common waterfowl.

Grid ref: TQ 484 808

Area (ha): 2.74

Borough(s): Bexley

Habitat(s): Acid grassland, Marsh/swamp, Pond/Lake, Ruderal

Access: No public access

Ownership: Thames Water

Site Description:

This large pond, within the grounds of Crossness Sewage Works, contains good populations of common waterfowl. Up to the late 1990s it used to support a heronry, the only one in the Borough of Bexley, but herons stopped nesting when the trees they used fell down. An artificial replacement structure provided by Thames Water has not so far been used for nesting, though herons and cormorants roost on it. In addition there are good stands of water dock (Rumex hydrolapathum), which is scarce in London. The lake supports numerous dragonflies and damselflies. The surrounding grassland is heavily grazed by waterfowl, but supports populations of bird's-foot (Ornithopus perpusillus). Strong anecdotal evidence suggests that the pond supports a population of water voles (Arvicola terrestris).

Other observations (published December 2016): Information about the habitats and species present on the site are supplied by Thames Water. Strong evidence of water voles presence was recorded on site by Thames Water: this included latrines, feeding stations and burrows.

Site first notified: 16/02/2004 **Boundary last changed:** 24/03/2006

Citation last edited: 11/12/2013 **Mayor Agreed:**

Defunct: N

Last Updated: 11/01/2022

Borough Grade II

Site Reference: GrBII06

Site Name: Ridgeway in Greenwich

Summary: A popular green walkway extending into Bexley.

Grid ref: TQ 461 795

Area (ha): 10.03

Borough(s): Greenwich

Habitat(s): Scrub, Semi-improved neutral grassland, Tall herbs

Access: Free public access (all/most of site)

Ownership: Thames Water

Site Description:

The bank covering the Southern Outfall Sewer forms a popular green walkway in the north-east of the borough, and extending across the boundary into Bexley. The banks are covered with a mosaic of rough grassland, tall herbs and scattered scrub. This provides valuable habitat for common birds (including flocks of linnets, a UK Biodiversity Action Plan priority species), butterflies and other invertebrates, and is an important green corridor. There is free public access.

Site first notified: 20/08/2002 **Boundary last changed:** 08/10/2002

Citation last edited: 06/09/2005 **Mayor Agreed:**

Defunct: N

Last Updated: 13/04/2006

Local

Site Reference: BxL07

Site Name: Crossway Park and Tump 52

Summary: Informal parkland with areas of woodland, scrub and wetlands.

Grid ref: TQ 476 806

Area (ha): 16.18

Borough(s): Bexley

Habitat(s): Amenity grassland, Canal, Pond/Lake, Scattered trees, Scrub, Secondary woodland

Access: Free public access (all/most of site)

Ownership: Peabody Housing Trust

Site Description:

Crossway Park is a sizeable area of informal parkland, with areas of planted woodland and scrub dominated by poplar (Populus sp) and willow (Salix spp), interspersed with rough grassland containing the locally scarce chicory (Cichorium intybus). A series of wetland habitats are linked by canals. The water and marginal areas support a fairly dense growth of aquatic plants, dominated by common reed (Phragmites australis) and coarse grasses, with occasional lesser water-parsnip (Berula erecta) and brooklime (Veronica beccabunga). The invasive floating pennywort (Hydrocotyle ranunculoides) is scattered across the site and requires control.

Other observations (published December 2016): Lesser water-parsnip and brooklime were not found during the survey but may still be present. Some of the wetland areas were difficult to access and view.

Site first notified: 01/11/1991 **Boundary last changed:** 11/12/2013

Citation last edited: 11/12/2013 **Mayor Agreed:**

Defunct: N

Last Updated: 17/12/2021

Local

Site Reference: BxL16

Site Name: The Ridgeway

Summary: An attractive linear walk with a good range of habitats.

Grid ref: TQ 477 803

Area (ha): 5.3

Borough(s): Bexley

Habitat(s): Roughland, Scrub, Secondary woodland, Tall herbs

Access: Free public access (all/most of site)

Ownership: Thames Water

Site Description:

The Ridgeway is a linear footpath on the bank of the Southern Outfall Sewer. It is vegetated with a mosaic of roughland, bramble, scrub and woodland, with more mature woodland on the embankment of Eastern Way. It supports good numbers of breeding birds, including blackcap, whitethroat, lesser whitethroat and chiffchaff. It is an important component of the wildlife habitat in this part of Thamesmead, and is surrounded by the SINCs of Erith Marshes, Southmere Park, Crossway Park and Thamesview Golf Course. Recent works adjacent to the site has improved access.

Other observations (published December 2016): Area has value for birds and other species but due to access improvements on the adjoining Crossway Park and an increase in tall herbs and scrub encroachment in places the site is less appealing for access (has an enclosed feel presenting safety and security issues). The site also has no formalised access route that goes anywhere in particular reducing its value as a local site. With improved access (which is proposed) the site could be upgraded to a Borough Grade II site in line with the rest of the Ridgeway in neighbouring Greenwich. There are further plans to enhance the walkway of the Ridgeway itself.

Site first notified: 30/09/2011 **Boundary last changed:** 11/12/2013

Citation last edited: 11/12/2013 **Mayor Agreed:**

Defunct: N

Last Updated: 17/12/2021

3.2 Proposed Sites of Importance for Nature Conservation

Introduction

Sites of Importance for Nature Conservation (SINCs) are recognised by the Greater London Authority and London borough councils as important wildlife sites. Proposed Sites of Importance for Nature Conservation (pSINCs) are sites that have entered Regulation 18 (public consultation), but have not yet been adopted in a Local Plan.

The absence of pSINCs in this report does not mean that there are no proposed sites within the search area. The GiGL pSINC dataset is not comprehensive across London, as some London boroughs will not have proposals at this time, while others may have proposals that are not yet available.

There are three tiers of sites:

- Sites of Metropolitan Importance
- Sites of Borough Importance (borough I and borough II)
- Sites of Local Importance

The *London Plan* identifies the need to protect biodiversity and to provide opportunities for access to nature. The *London Environment Strategy* sets out the methodology and process for identifying such land for protection in Local Development Frameworks. A London Wildlife Sites Board (LWSB) has been established to provide support and guidance on the selection of SINCs.

The boundaries and site grades reflect the most recent consultation of each proposed site, details of which are available from London borough councils. Note that boundaries and grades may change as new information becomes available. For further explanations of the designations please see the “Supporting Information” annex.

Citations

Citations currently available for pSINCs within the search area can be seen on the following pages.

Please note that the content of pSINC citations is reviewed periodically and that species referred to in the citations may not be present on site today. Citations may have been written based on data not held by GiGL.

Metropolitan

Site Reference: pM031

Site Name: River Thames and tidal tributaries

Summary: The Thames, London's most famous natural feature, is home to many fish and birds, creating a wildlife corridor running right across the capital.

Grid ref: TQ 302 806

Area (ha): 2304.92

Borough(s): Barking and Dagenham, Bexley, City of London, Greenwich, Hammersmith and Fulham, Havering, Hounslow, Kensington and Chelsea, Kingston upon Thames, Lambeth, Lewisham, Newham, Richmond upon Thames, Southwark, Tower Hamlets, Wandsworth, Westminster

Habitat(s): Intertidal, Marsh/swamp, Pond/Lake, Reed bed, Running water, Saltmarsh, Secondary woodland, Vegetated wall/tombstones, Wet ditches, Wet grassland, Wet woodland/carr

Access: Free public access (part of site)

Ownership: Port of London Authority and Private

Site Description:

The River Thames and the tidal sections of creeks and rivers which flow into it comprise a number of valuable habitats not found elsewhere in London. The mud-flats, shingle beach, inter-tidal vegetation, islands and river channel itself support many species from freshwater, estuarine and marine communities which are rare in London. The site is of particular importance for wildfowl and wading birds. The river walls, particularly in south and east London, also provide important feeding areas for the nationally rare and specially-protected black redstart. The Thames is extremely important for fish, with over 100 species now present. Many of the tidal creeks are important fish nurseries, including for several nationally uncommon species such as smelt. Barking Creek supports extensive reed beds. Further downstream are small areas of saltmarsh, a very rare habitat in London, where there is a small population of the nationally scarce marsh sow-thistle (Sonchus palustris). Wetlands beside the river in Kew support the only London population of the nationally rare and specially-protected cut-grass (Leersia oryzoides). The numerous small islands in the upper reaches support important invertebrate communities, including several nationally rare snails, as well as a number of heronries. Chiswick Eyot, one of the islands, is a Local Nature Reserve. The towpath in the upper reaches is included in the site, and in places supports a diverse flora with numerous London rarities, both native and exotic. Ninety per cent of the banks of the tidal Thames and its creeks are owned by the Port of London Authority, whereas the riparian owners are responsible for the non tidal (upriver) banks. The water is not owned by anybody. The River Thames upriver of the Thames Barrier is followed by the Thames Path National Trail.

Site first notified:	01/04/1986	**Boundary last changed:**	30/11/2005
Citation last edited:	13/04/2006	**Mayor Agreed:**	25/11/2002
Defunct:	N		
Last Updated:	16/02/2021		

Metropolitan

Site Reference: pM041

Site Name: Erith Marshes

Summary: One of the very few remaining areas of Thames-side grazing marsh in London, supporting scarce birds, plants and insects.

Grid ref: TQ 485 803

Area (ha): 88.59

Borough(s): Bexley

Habitat(s): Brownfield, Pond/Lake, Reed bed, Roughland, Scattered trees, Scrub, Secondary woodland, Unimproved neutral grassland, Wader scrapes, Wet ditches, Wet grassland

Access: Access on public footpaths only

Ownership: Thames Water and Private

Site Description:

This is one of the few remaining examples of Thames-side grazing marshes. The flora of the old sea walls includes several regionally scarce species: corn parsley (Petroselinum segetum), knotted hedge-parsley (Torilis nodosa) and narrow-leaved pepperwort (Lepidium ruderale). The wetland flora is also diverse, including horned pondweed (Zanichellia palustris), wild celery (Apium graveolens), lesser reedmace (Typha angustifolium), pink water-speedwell (Veronica catenata) and marsh and water docks (Rumex palustris, R. hydrolapathum), which are all rare in London.

Although quite rank in places, the grassland is comprised of a characteristic Thames grazing marsh community, typified by abundant meadow barley (Hordeum secalinum). There are also extensive areas of scrub, tall herbs and ruderal vegetation within the Crossness Sewage Treatment Works. An area of brownfield habitat in the east of the site supports the London notable plants dittander (Lepidium latfolium) and narrow-leaved bird's-foot-trefoil (Lotus glaber) while soapwort (Saponaria officinalis) can be found along the footpath running along the southern edge of Crossness Sewage Treatment Works. Additional flora found across the site includes borrers saltmarsh grass (Puccinellia fasciculata), brackish water-crowfoot, (Ranunculus baudotii), hairlike pondweed (Potamogeton trichoides), trifid bur-marigold (Bidens tripartite) marsh yellow-cress (Rorippa palustris) and golden dock (Rumex maritimus). A number of notable species were not found during a 2016 survey, including corn parsley and pink water-speedwell, but due to access issues to many of the wetland areas it cannot be determined whether they were still present or not.

The site is also important for its breeding and wintering avifauna. Breeding species include barn owl, teal, lapwing, ringed plover, reed warbler, sedge warbler, reed bunting, linnet and skylark. Regular wintering birds include pintail, snipe, redshank, dunlin, black-tailed godwit and green sandpiper. The site also serves as a commuting route for bats, while the ditches support an important population of the specially protected water vole, as well as the fish rudd and tench. Invertebrates include the common emerald damselfly (Lestes sponsa), roesel's bush-cricket (Metrioptera roeselii), shrill carder-bee (Bombus sylvarum), and brown banded carder bee (Bombus humilis). Wet ditch habitats around the periphery of the site support rare botanical communities associated with salt marsh such as dittander, water vole and reptiles, including commuting grass snakes. A variety of Red Data Book and notable invertebrates are also found on site.

Large areas of the site are managed for wildlife conservation, with part of the site to the north of Eastern Way managed by Thames Water as a nature reserve. Public access to Erith Marshes is restricted to footpaths and there is permit access to the nature reserve, through Thames Water's Friends of Crossness Nature Reserve scheme. In 2006 Thames Water opened a permissive footpath through Crossness Southern Marsh, south of Eastern Way.

Site first notified: 19/09/1988 **Boundary last changed:** 12/11/2021

Citation last edited: 01/12/2021 **Mayor Agreed:** 25/11/2002

Defunct: N

Last Updated: 11/01/2022

3.3 Important Geological/Geomorphological Sites

Introduction

The designation in planning documents of regionally important geological sites (RIGS) and locally important geological sites (LIGS) is one way of recognising and protecting important geodiversity and landscape features for future generations to enjoy. Geodiversity is defined as:

> '*the variety of rocks, fossils, minerals, landforms, soils and natural processes, such as weathering, erosion and sedimentation, that underlie and determine the character of our natural landscape and environment'* (London Plan).

RIGS are currently the most important designated places for geology and geomorphology outside statutorily protected land such as SSSIs. They are equivalent to Sites of Metropolitan Importance for nature conservation. In London, RIG Sites have been selected by South London RIGS, North West London RIGS and GeoEssex (voluntary organisations) but have yet to be formally designated in Greater London.

The London boroughs may also designate certain areas as being of local interest for their geodiversity - LIGS. The boundaries and site grades reflect the most recent consideration of each site. Details may change as new information becomes available.

More information can be found in the London Plan Supplementary Planning Guidance *London's Foundations* (March 2012) and the *London Geodiversity Action Plan*, both available from www.londongeopartnership.org.uk.

Citations

RIGS/LIGS are designated in four stages:

- **Potential RIGS/LIGS** are those recommended by the London Geodiversity Partnership and identified in *London's foundations*
- **Recommended RIGS** are those recommended by the London Geodiversity Partnership, identified in *London's foundations* and have been through a consultation process with the London boroughs and relevant landowners
- **Proposed RIGS/LIGS** are those included in draft Borough Development Plan Documents
- **Adopted RIGS/LIGS** are those identified in adopted Borough Development Plan Documents

Please note that the content of RIGS and LIGS citations is reviewed periodically by the London Geodiversity Partnership.

There are no RIGS or LIGS within the search area.

4.0 Species

Species from these categories can be seen on the following pages:

- Internationally or nationally protected species *
- London Priority Species
- Red Data List species
- Species of Conservation Concern in London
- London Invasive Species Initiative (LISI) species

Note that GiGL does not currently hold comprehensive species data for all areas. Even where data is held, a lack of records for a species in a defined geographical area does not necessarily mean that the species does not occur there – the area may simply not have been surveyed.

Distances and direction to each species record are calculated from the centre-point of a search area. Note that because the resolution of grid references varies between surveys the records with a low grid reference resolution are presented in the Vague Records table.

The species, listed by taxon name, were recorded from a broad range of surveys - from public and species specific surveys to formal surveys carried out during the GLA's rolling survey programme.

Please note: Records of bat sightings are presented in the report if found in the search area. If you require further information about bat sightings you can contact the London Bat Group directly: enquires@londonbats.org.uk or records@londonbats.org.uk.

If you would like further information regarding rare, notable and protected species please contact a relevant person listed in the Further Contacts section of this report.

* Protected species are those listed on EC Habitats Directive – Annexes II and IV, EC Birds Directive – Annex I, Conservation (Natural Habitats) Regulations 1994 – Schedules 2 & 5, NERC 2006 Section 41, Wildlife and Countryside Act 1981 (as amended) – Schedules 1, 5 & 8, Protection of Badgers Act 1992

4.1 Protected Species and Species of Conservation Concern

Records in this section come from a variety of planning and conservation designations and are presented here to provide a broad range of information about the search area. GiGL's Recorder Advisory Group have advised on the inclusion of each category and further information about the designations (legal and notable) can be found in the "Supporting Information" annex.

All records in this section were recorded to at least 100 m^2 accuracy (a six grid reference figure or higher). The total number of occurrences states the number of recorded instances for a species in the search area e.g. one recorded instance of fly orchid (*Ophrys insectifera*) could have a count of 10 individual plants. The maximum occurrence column records either that the species was present "P" or gives a numerical value of the highest count of species recorded in the search area where this is known.

Table 1 Red Data List designation abbreviations used in the species table. Further information on the designations can be found in the annex.

Designation short name	Designation full name	Designation short name	Designation full name
RL_DataDeficient	IUCN (2001) - Data Deficient	RL_LowerRisk	IUCN (2001) - Lower risk - near threatened
RL_CriticalEndangered	IUCN (2001) - Critically endangered	RL_Extinct	IUCN (2001) - Extinct
RL_Endangered	IUCN (2001) - Endangered	RL_ExtinctWild	IUCN (2001) - Extinct in the wild
RL_Vulnerable	IUCN (2001) - Vulnerable	RL_RegionExtinct	IUCN (2001) - Regionally Extinct

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Amphibians											
Bufo bufo	Common Toad	NERC Act Section 41 LPS Local Spp of Cons Conc	1	1	P	268	W	2001-2002	268	W	2001-2002
Rana temporaria	Common Frog	HSD5 LPS	1		P	678	S	1999	678	S	1999
Reptiles											
Natrix helvetica	Grass Snake	W&CA Sch5 Sec 9.1k/i NERC Act Section 41 LPS Local Spp of Cons Conc	8		2	268	W	2001-2002	979	E	22/04/2021
Zootoca vivipara	Common Lizard	W&CA Sch5 Sec 9.1k/i NERC Act Section 41 LPS Local Spp of Cons Conc	1		1	994	N	01/09/2011	994	N	01/09/2011
Birds											
Acanthis cabaret	Lesser Redpoll	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	36		40	523	W	30/06/1986	734	E	25/10/2015
Actitis hypoleucos	Common Sandpiper	LPS	1282		159	79	NE	14/08/2015	790	E	29/09/2021
Alauda arvensis	Skylark	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	332	1	200	336	N	25/04/2000	774	SE	12/04/2021
Alcedo atthis	Kingfisher	Birds Dir Anx 1 W&CA Sch1 Part 1 LPS	278	3	2	0	N	01/02/2015	979	E	16/09/2021
Anser albifrons	White-fronted Goose	Local Spp of Cons Conc Bird-Red	3		20	523	W	02/02/1995	734	E	18/12/2011

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Anthus campestris	Tawny Pipit	Birds Dir Anx 1	1		1	801	N	19/08/2012	801	N	19/08/2012
Anthus trivialis	Tree Pipit	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	5		1	734	E	31/08/2008	801	N	25/08/2013
Apus apus	Swift	LPS	326	1	500	0	N	11/07/2014	865	E	05/09/2021
Ardea purpurea	Purple Heron	Birds Dir Anx 1 W&CA Sch1 Part 1	2		1	685	SE	29/05/2007	734	E	25/04/2009
Ardeola ralloides	Squacco Heron	Birds Dir Anx 1	2		1	685	SE	29/05/2007	819	SE	30/05/2007
Asio flammeus	Short-eared Owl	Birds Dir Anx 1	5		1	734	E	14/12/2011	734	E	14/12/2011
Aythya ferina	Pochard	LPS Local Spp of Cons Conc Bird-Red	172		100	0	N	04/08/2014	124	S	17/01/2021
Aythya marila	Scaup	W&CA Sch1 Part 1 NERC Act Section 41 Local Spp of Cons Conc Bird-Red	6		2	79	NE	04/11/2000	734	E	01/01/2011
Branta bernicla bernicla	Dark-bellied Brent Goose	NERC Act Section 41	1		2	973	NW	01/01/2012	973	NW	01/01/2012
Branta leucopsis	Barnacle Goose	Birds Dir Anx 1	7		1	523	W	Apr 1985	734	E	11/04/2017
Branta ruficollis	Red-breasted Goose	Birds Dir Anx 1	7		1	393	SW	07/07/2011	734	E	21/08/2011
Burhinus oedicnemus	Stone-curlew	Birds Dir Anx 1 W&CA Sch1 Part 1 NERC Act Section 41	1		1	801	N	27/03/2011	801	N	27/03/2011
Calcarius lapponicus	Lapland Bunting	W&CA Sch1 Part 1	2		2	734	E	12/10/2010	801	N	17/11/2011
Calidris pugnax	Ruff	Birds Dir Anx 1 W&CA Sch1 Part 1 Bird-Red	37		6	336	N	15/12/1987	734	E	06/10/2017
Charadrius dubius	Little Ringed Plover	W&CA Sch1 Part 1 LPS	25		3	295	S	28/03/2017	734	E	30/03/2017
Charadrius hiaticula	Ringed Plover	LPS Local Spp of Cons Conc Bird-Red	334	1	80	282	E	2012	979	E	17/12/2020
Chlidonias niger	Black Tern	Birds Dir Anx 1 W&CA Sch1 Part 1	152		100	79	NE	21/08/2008	734	E	25/08/2013
Ciconia ciconia	White Stork	Birds Dir Anx 1	3		1	774	SE	15/04/2021	774	SE	15/04/2021
Circus aeruginosus	Marsh Harrier	Birds Dir Anx 1 W&CA Sch1 Part 1	65		2	295	S	22/01/2017	774	SE	06/09/2020
Circus cyaneus	Hen Harrier	Birds Dir Anx 1 W&CA Sch1 Part 1 NERC Act Section 41 Local Spp of Cons Conc Bird-Red	1		1	979	E	31/10/2019	979	E	31/10/2019
Cuculus canorus	Cuckoo	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	108	1	3	124	S	30/05/2021	774	SE	05/09/2021
Curruca curruca	Lesser Whitethroat	LPS	188	2	47	0	N	18/04/2016	724	SE	14/06/2021
Cygnus columbianus	Tundra Swan	Birds Dir Anx 1 W&CA Sch1 Part 1	3		11	480	SE	06/11/1985	734	E	15/01/2012
Cygnus columbianus bewickii	Bewick's Swan	Birds Dir Anx 1 W&CA Sch1 Part 1 NERC Act Section 41	1		3	801	N	01/01/2011	801	N	01/01/2011

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Cygnus cygnus	Whooper Swan	Birds Dir Anx 1 W&CA Sch1 Part 1	1		5	79	NE	23/01/2010	79	NE	23/01/2010
Delichon urbicum	House Martin	LPS	146	2	250	0	N	09/07/2014	865	E	11/08/2020
Egretta garzetta	Little Egret	Birds Dir Anx 1	650		43	79	NE	17/01/2012	979	E	25/09/2021
Emberiza citrinella	Yellowhammer	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	6		3	336	N	27/11/1999	801	N	15/04/2013
Emberiza schoeniclus	Reed Bunting	NERC Act Section 41 Local Spp of Cons Conc	403	2	80	124	S	24/02/2019	579	SE	18/07/2021
Falco columbarius	Merlin	Birds Dir Anx 1 W&CA Sch1 Part 1 Bird-Red	5		46	523	W	08/09/1986	734	E	28/04/2007
Ficedula hypoleuca	Pied Flycatcher	Local Spp of Cons Conc Bird-Red	4		1	523	W	21/08/1995	801	N	27/08/2012
Fringilla montifringilla	Brambling	W&CA Sch1 Part 1	19		100	465	E	29/01/1980	801	N	24/10/2012
Gavia stellata	Red-throated Diver	Birds Dir Anx 1 W&CA Sch1 Part 1	1		1	523	W	08/02/1996	523	W	08/02/1996
Hydrocoloeus minutus	Little Gull	Birds Dir Anx 1 W&CA Sch1 Part 1	53		13	79	NE	15/07/2000	790	E	13/08/2018
Ichthyaetus melanocephalus	Mediterranean Gull	Birds Dir Anx 1 W&CA Sch1 Part 1	196		5	79	NE	14/12/2000	979	E	10/04/2021
Jynx torquilla	Wryneck	W&CA Sch1 Part 1	1		1	801	N	24/09/2011	801	N	24/09/2011
Larus argentatus	Herring Gull	Bird-Red	401		120	79	NE	07/11/2020	979	E	25/09/2021
Larus fuscus	Lesser Black-backed Gull	LPS	212		1000	79	NE	01/04/2014	790	E	28/09/2019
Larus fuscus fuscus	Baltic Gull	LPS	277		31	79	NE	08/08/2020	979	E	25/09/2021
Limosa lapponica	Bar-tailed Godwit	Birds Dir Anx 1	87		26	295	S	06/03/2017	979	E	09/09/2021
Limosa limosa	Black-tailed Godwit	W&CA Sch1 Part 1 LPS Local Spp of Cons Conc Bird-Red	1496	3	960	0	N	01/02/2015	979	E	29/09/2021
Linaria cannabina	Linnet	LPS Local Spp of Cons Conc Bird-Red	734	2	500	0	N	25/02/2020	865	E	24/09/2021
Locustella naevia	Grasshopper Warbler	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	10		1	523	W	13/04/1996	734	E	12/04/2017
Luscinia megarhynchos	Nightingale	Local Spp of Cons Conc Bird-Red	4		2	523	W	02/05/1999	734	E	09/04/2017
Mareca strepera	Gadwall	LPS	1457	1	500	0	NE	27/03/2015	790	E	24/09/2021
Melanitta nigra	Common Scoter	W&CA Sch1 Part 1 NERC Act Section 41 Local Spp of Cons Conc Bird-Red	19		28	79	NE	26/07/2010	801	N	20/03/2016
Mergellus albellus	Smew	Birds Dir Anx 1	3		1	523	W	29/12/1995	523	W	18/01/1997
Milvus milvus	Red Kite	Birds Dir Anx 1 W&CA Sch1 Part 1	1		1	734	E	26/03/2012	734	E	26/03/2012
Motacilla cinerea	Grey Wagtail	Local Spp of Cons Conc Bird-Red	427	5	10	0	N	09/07/2014	790	E	18/09/2021

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Motacilla flava	Yellow Wagtail	Local Spp of Cons Conc Bird-Red	138		12	336	N	07/05/2000	774	SE	30/04/2021
Motacilla flava flava	Blue-headed Wagtail	Local Spp of Cons Conc Bird-Red	1		1	734	E	13/05/2008	734	E	13/05/2008
Muscicapa striata	Spotted Flycatcher	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	41		3	336	N	17/05/1999	774	SE	24/08/2021
Numenius arquata	Curlew	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	652		54	79	NE	01/04/2014	979	E	22/07/2019
Numenius phaeopus	Whimbrel	W&CA Sch1 Part 1 Bird-Red	106	2	500	523	W	22/04/1996	979	E	11/05/2021
Pandion haliaetus	Osprey	Birds Dir Anx 1 W&CA Sch1 Part 1	4		1	523	W	13/05/1996	734	E	10/08/2011
Passer domesticus	House Sparrow	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	103	8	500	0	N	23/04/2014	979	E	29/06/2020
Passer montanus	Tree Sparrow	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	6		70	523	W	02/02/1982	523	W	06/09/1985
Perdix perdix	Grey Partridge	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	4	1	2	523	W	23/04/1987	935	N	05/03/2001
Pernis apivorus	Honey-buzzard	Birds Dir Anx 1 W&CA Sch1 Part 1	1		1	734	E	16/09/2011	734	E	16/09/2011
Phalacrocorax aristotelis	Shag	Bird-Red	2		1	734	E	26/01/2010	801	N	16/03/2011
Phoenicurus ochruros	Black Redstart	W&CA Sch1 Part 1 LPS Local Spp of Cons Conc Bird-Red	40		2	295	S	30/01/2017	979	E	25/09/2018
Platalea leucorodia	Spoonbill	Birds Dir Anx 1 W&CA Sch1 Part 1	3		1	734	E	01/11/2017	734	E	01/11/2017
Plectrophenax nivalis	Snow Bunting	W&CA Sch1 Part 1	1		1	734	E	06/11/2010	734	E	06/11/2010
Pluvialis apricaria	Golden Plover	Birds Dir Anx 1	10		20	734	E	12/11/2011	734	E	26/01/2017
Podiceps auritus	Slavonian Grebe	Birds Dir Anx 1 W&CA Sch1 Part 1 Bird-Red	2		1	523	W	08/02/1996	523	W	08/02/1996
Prunella modularis	Dunnock	LPS	676	2	125	0	N	08/08/2020	865	E	25/09/2021
Recurvirostra avosetta	Avocet	Birds Dir Anx 1 W&CA Sch1 Part 1	50		15	297	E	01/12/2010	979	E	09/03/2021
Riparia riparia	Sand Martin	LPS	192	1	300	0	N	16/06/2015	865	E	30/08/2021
Rissa tridactyla	Kittiwake	Bird-Red	27		33	523	W	02/08/1995	734	E	01/01/2014
Saxicola rubetra	Whinchat	Local Spp of Cons Conc Bird-Red	169		10	345	S	13/09/2020	865	E	06/05/2021
Scolopax rusticola	Woodcock	Local Spp of Cons Conc Bird-Red	32		3	0	N	15/01/2010	295	S	12/01/2017
Spatula querquedula	Garganey	W&CA Sch1 Part 1	19		2	734	E	13/08/2009	734	E	22/03/2014
Stercorarius parasiticus	Arctic Skua	Bird-Red	5		3	523	W	09/09/2004	801	N	25/08/2013

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Sterna dougallii	Roseate Tern	Birds Dir Anx 1 W&CA Sch1 Part 1 NERC Act Section 41 Bird-Red	1		2	734	E	25/09/2011	734	E	25/09/2011
Sterna hirundo	Common Tern	Birds Dir Anx 1	731	9	625	36	NE	14/03/2014	979	E	05/09/2021
Sterna paradisaea	Arctic Tern	Birds Dir Anx 1	87		5000	79	NE	21/08/2008	790	E	05/09/2021
Sternula albifrons	Little Tern	Birds Dir Anx 1 W&CA Sch1 Part 1	14		60	336	N	29/07/2000	979	E	11/04/2021
Streptopelia turtur	Turtle Dove	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	6		5	523	W	08/09/1986	734	E	20/10/2009
Strix aluco	Tawny Owl	LPS	3		4	116	N	21/01/2018	116	N	21/01/2018
Sturnus vulgaris	Starling	LPS Local Spp of Cons Conc Bird-Red	324	4	1500	0	N	04/08/2015	295	S	19/09/2021
Tadorna ferruginea	Ruddy Shelduck	Birds Dir Anx 1	10		1	734	E	20/06/2010	979	E	06/06/2018
Tadorna tadorna	Shelduck	LPS	818	2	750	0	N	24/03/2016	979	E	30/09/2019
Thalasseus sandvicensis	Sandwich Tern	Birds Dir Anx 1	59		27	336	N	17/09/2000	979	E	05/09/2021
Tringa glareola	Wood Sandpiper	Birds Dir Anx 1 W&CA Sch1 Part 1	8		2	734	E	06/05/2008	734	E	21/05/2012
Tringa nebularia	Greenshank	W&CA Sch1 Part 1	287		6	523	W	17/08/1994	734	E	19/08/2017
Tringa ochropus	Green Sandpiper	W&CA Sch1 Part 1	527		150	0	N	28/08/2014	124	S	30/08/2020
Turdus iliacus	Redwing	W&CA Sch1 Part 1 Bird-Red	87		600	0	N	16/03/2016	979	E	03/03/2021
Turdus philomelos	Song Thrush	LPS Local Spp of Cons Conc Bird-Red	239		18	0	N	07/04/2016	124	S	18/07/2021
Turdus pilaris	Fieldfare	W&CA Sch1 Part 1 Bird-Red	216		500	0	N	19/10/2015	926	SE	07/01/2021
Turdus torquatus	Ring Ouzel	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	38		4	685	SE	13/04/2013	774	SE	20/04/2021
Turdus viscivorus	Mistle Thrush	LPS Local Spp of Cons Conc Bird-Red	42		25	0	N	23/03/2016	865	E	05/10/2019
Upupa epops	Hoopoe	W&CA Sch1 Part 1	2		1	523	W	22/10/1996	523	W	23/10/1996
Vanellus vanellus	Lapwing	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	1443	7	630	0	N	11/07/2014	979	E	24/09/2021
Mammals - Marine											
Halichoerus grypus	Grey Seal	Hab&Spp Dir Anx 2 HSD5	19		3	178	N	22/07/2011	979	E	23/06/2020
Phoca vitulina	Harbour Seal	Hab&Spp Dir Anx 2 HSD5 NERC Act Section 41 Local Spp of Cons Conc	77		7	79	NE	11/02/2016	979	E	24/09/2021

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Phocoena phocoena	Common Porpoise	Hab&Spp Dir Anx 2 Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4a NERC Act Section 41 Local Spp of Cons Conc	2		2	426	NE	04/05/2013	426	NE	04/05/2013
Mammals - Terrestrial (excl. bats)											
Arvicola amphibius	European Water Vole	W&CA Sch5 Sec 9.4a W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN	27		1	0	NE	18/07/2016	345	S	09/05/2021
Erinaceus europaeus	West European Hedgehog	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-VU	1		P	317	NW	22/10/2020	317	NW	22/10/2020
Mammals - Terrestrial (bats)											
Nyctalus leisleri	Lesser Noctule	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	1		P	266	SW	02/10/2008	266	SW	02/10/2008
Nyctalus noctula	Noctule Bat	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 LPS Local Spp of Cons Conc	2		P	266	SW	02/10/2008	886	S	30/07/2016
Pipistrellus	Pipistrelle Bat species	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 Local Spp of Cons Conc RedList_GB-Lr(NT)	1		P	583	SW	13/03/1987	583	SW	13/03/1987
Pipistrellus pipistrellus	Common Pipistrelle	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c Local Spp of Cons Conc	2		P	266	SW	02/10/2008	886	S	30/07/2016

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Pipistrellus pygmaeus	Soprano Pipistrelle	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 LPS Local Spp of Cons Conc	3		P	266	SW	02/10/2008	886	S	30/07/2016
Vespertilionidae	Bats	Hab&Spp Dir Anx 2 Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 Local Spp of Cons Conc RedList_GB-CR RedList_GB-EN RedList_GB-VU RedList_GB-Lr(NT) RedList_GB-DD	1		P	268	W	2001-2002	268	W	2001-2002
Higher Plants - Conifers											
Juniperus communis subsp. communis	Common Juniper	NERC Act Section 41 LPS Local Spp of Cons Conc	1		1	1049	E	2002	1049	E	2002
Higher Plants - Flowering Plants											
Cyperus longus	Galingale	Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	2		P	614	W	14/07/2002	614	W	14/07/2002
Hippophae rhamnoides	Sea-buckthorn	Nationally Scarce	1		P	701	W	14/07/2002	701	W	14/07/2002
Hyacinthoides non-scripta	Bluebell	W&CA Sch8	1		P	497	SW	18/08/2003	497	SW	18/08/2003
Juncus compressus	Round-fruited Rush	Local Spp of Cons Conc RedList_GB-VU	1		P	180	NW	08/05/1984	180	NW	08/05/1984
Lepidium latifolium	Dittander	Local Spp of Cons Conc Nationally Scarce	2		3	94	NE	2001	94	NE	2001
Polypogon monspeliensis	Annual Beard-grass	Local Spp of Cons Conc Nationally Scarce	1		P	462	E	06/08/2003	462	E	06/08/2003
Puccinellia fasciculata	Borrer's Saltmarsh-grass	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	1		P	610	S	23/05/1971	610	S	23/05/1971
Trifolium fragiferum	Strawberry Clover	RedList_GB-VU	4		P	174	S	04/08/2003	513	SE	05/08/2003
Invertebrates - Molluscs											
Stagnicola palustris/fuscus/corvus	Marsh Pond Snail	RedList_GB-DD	1		P	525	NW	25/04/2013	525	NW	25/04/2013
Invertebrates - Dragonflies & Damselflies											
Sympetrum striolatum	Common Darter	RedList_GB-DD	17		10	0	N	09/07/2014	979	E	16/09/2021
Invertebrates - True Bugs											

Taxon Name	Common Name	Designation	Total number of occurrences	No. of breeding occurrences	Maximum occurrence	Distance (m) of nearest record	Bearing of nearest record	Date of nearest record	Distance (m) of most recent record	Bearing of most recent record	Date of most recent record
Raglius alboacuminatus	A True Bug	Local Spp of Cons Conc Nationally Notable B	1		P	931	N	17/06/10-03/09/10	931	N	17/06/10-03/09/10
Invertebrates - Beetles											
Demetrias imperialis	A Beetle	Nationally Notable B	1		P	887	N	17/06/10-03/09/10	887	N	17/06/10-03/09/10
Longitarsus ballotae	A Beetle	Nationally Notable B	1		P	931	N	17/06/10-03/09/10	931	N	17/06/10-03/09/10
Lucanus cervus	Stag Beetle	Hab&Spp Dir Anx 2 NERC Act Section 41 LPS Nationally Notable B	1		1	369	SW	09/06/2019	369	SW	09/06/2019
Invertebrates - Butterflies											
Aricia artaxerxes	Northern Brown Argus	NERC Act Section 41 RedList_GB-VU	1		2	1025	N	14/06/2011	1025	N	14/06/2011
Coenonympha pamphilus	Small Heath	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	6		3	732	W	25/07/2002	1025	N	14/09/2011
Coenonympha pamphilus pamphilus	Small Heath	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	1		1	774	SE	13/06/2017	774	SE	13/06/2017
Lasiommata megera	Wall	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	1		1	1025	N	24/05/2011	1025	N	24/05/2011
Lycaena phlaeas eleus	A Butterfly	LPS	1		1	0	N	08/08/2019	0	N	08/08/2019
Ochlodes sylvanus	Large Skipper	LPS	15		16	0	N	13/06/2015	724	SE	03/07/2019
Thymelicus lineola	Essex Skipper	LPS	6		2	399	NW	01/07/2017	774	SE	21/06/2018
Thymelicus sylvestris	Small Skipper	LPS	10		8	399	NW	01/07/2017	774	SE	21/06/2018
Invertebrates - Moths											
Chiasmia clathrata clathrata	Latticed Heath	NERC Act Section 41 LPS Local Spp of Cons Conc	1		1	0	N	11/06/2016	0	N	11/06/2016
Euplagia quadripunctaria	Jersey Tiger	Hab&Spp Dir Anx 2	7		2	0	N	15/07/2019	979	E	29/07/2019
Tyria jacobaeae	Cinnabar	NERC Act Section 41	8		5	295	S	14/06/2020	724	SE	09/06/2021

Protected species and Species of Conservation Concern – Coarse Resolution Records

The species records in this table represent records of 1km^2, 2km^2 or 10km^2 accuracy.

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Birds						
Actitis hypoleucos	Common Sandpiper	LPS	5	1km	21/11/2010	02/11/2016
Alauda arvensis	Skylark	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	4	1km, 10km	01/06/88-31/08/88	19/05/2016
Alcedo atthis	Kingfisher	Birds Dir Anx 1 W&CA Sch1 Part 1 LPS	1	10km	24/10/2010	24/10/2010
Anser albifrons	White-fronted Goose	Local Spp of Cons Conc Bird-Red	1	1km	21/12/2010	21/12/2010
Apus apus	Swift	LPS	3	1km, 10km	01/06/88-31/08/88	19/05/2016
Calcarius lapponicus	Lapland Bunting	W&CA Sch1 Part 1	1	10km	12/10/2010	12/10/2010
Calidris pugnax	Ruff	Birds Dir Anx 1 W&CA Sch1 Part 1 Bird-Red	1	1km	05/12/2010	05/12/2010
Charadrius hiaticula	Ringed Plover	LPS Local Spp of Cons Conc Bird-Red	2	1km	21/11/2010	28/11/2010
Cuculus canorus	Cuckoo	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	1	1km	01/06/88-31/08/88	01/06/1988
Curruca curruca	Lesser Whitethroat	LPS	2	10km	01/06/88-31/08/88	19/05/2016
Delichon urbicum	House Martin	LPS	2	10km	01/06/88-31/08/88	19/05/2016
Egretta garzetta	Little Egret	Birds Dir Anx 1	3	1km, 10km	17/10/2010	17/09/2016
Emberiza schoeniclus	Reed Bunting	NERC Act Section 41 Local Spp of Cons Conc	2	1km, 10km	01/06/88-31/08/88	19/05/2016
Fringilla montifringilla	Brambling	W&CA Sch1 Part 1	2	1km, 10km	12/10/2010	01/11/2010
Hydrocoloeus minutus	Little Gull	Birds Dir Anx 1 W&CA Sch1 Part 1	1	1km	02/12/2010	02/12/2010
Ichthyaetus melanocephalus	Mediterranean Gull	Birds Dir Anx 1 W&CA Sch1 Part 1	5	1km	12/10/2010	21/12/2010
Larus fuscus	Lesser Black-backed Gull	LPS	1	1km	02/11/2016	02/11/2016
Limosa lapponica	Bar-tailed Godwit	Birds Dir Anx 1	3	1km	14/10/2010	21/11/2010
Limosa limosa	Black-tailed Godwit	W&CA Sch1 Part 1 LPS Local Spp of Cons Conc Bird-Red	11	1km	14/10/2010	02/11/2016
Linaria cannabina	Linnet	LPS Local Spp of Cons Conc Bird-Red	4	1km	21/11/2010	19/05/2016
Mareca strepera	Gadwall	LPS	5	1km	24/10/2010	02/11/2016
Motacilla cinerea	Grey Wagtail	Local Spp of Cons Conc Bird-Red	1	1km	02/11/2016	02/11/2016
Numenius arquata	Curlew	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	12	1km	14/10/2010	21/12/2010

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Passer domesticus	House Sparrow	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	2	1km, 10km	01/06/88-31/08/88	31/07/2014
Phoenicurus ochruros	Black Redstart	W&CA Sch1 Part 1 LPS Local Spp of Cons Conc Bird-Red	1	10km	01/11/2010	01/11/2010
Platalea leucorodia	Spoonbill	Birds Dir Anx 1 W&CA Sch1 Part 1	2	1km	24/10/2010	24/10/2010
Plectrophenax nivalis	Snow Bunting	W&CA Sch1 Part 1	1	1km	06/11/2010	06/11/2010
Podiceps nigricollis	Black-necked Grebe	W&CA Sch1 Part 1	1	1km	25/12/2010	25/12/2010
Scolopax rusticola	Woodcock	Local Spp of Cons Conc Bird-Red	1	1km	17/11/2010	17/11/2010
Sterna hirundo	Common Tern	Birds Dir Anx 1	2	1km	17/10/2010	07/08/2016
Sturnus vulgaris	Starling	LPS Local Spp of Cons Conc Bird-Red	2	1km, 10km	01/06/88-31/08/88	31/07/2014
Tadorna tadorna	Shelduck	LPS	6	1km, 10km	01/06/88-31/08/88	19/05/2016
Thalasseus sandvicensis	Sandwich Tern	Birds Dir Anx 1	1	10km	19/09/2014	19/09/2014
Tringa ochropus	Green Sandpiper	W&CA Sch1 Part 1	2	1km	13/11/2010	27/12/2010
Turdus iliacus	Redwing	W&CA Sch1 Part 1 Bird-Red	2	1km	14/10/2010	20/12/2010
Turdus pilaris	Fieldfare	W&CA Sch1 Part 1 Bird-Red	1	1km	14/10/2010	14/10/2010
Vanellus vanellus	Lapwing	NERC Act Section 41 LPS Local Spp of Cons Conc Bird-Red	10	1km, 10km	01/06/88-31/08/88	02/11/2016
Mammals - Terrestrial (bats)						
Vespertilionidae	Bats	Hab&Spp Dir Anx 2 Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c NERC Act Section 41 Local Spp of Cons Conc RedList_GB-CR RedList_GB-EN RedList_GB-VU RedList_GB-Lr(NT) RedList_GB-DD	3	1km, 10km	1985	01/01/1985
Lower Plants - Mosses						
Leucobryum glaucum	Large White-moss	HSD5	1	1km	1948	01/01/1948
Higher Plants - Clubmosses						

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Lycopodiella inundata	Marsh Clubmoss	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	1	10km	1887	01/01/1887
Lycopodium clavatum	Stag's-horn Clubmoss	HSD5	1	10km	1965	01/01/1965
Higher Plants - Flowering Plants						
Adonis annua	Pheasant's-eye	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	1	10km	1912	01/01/1912
Angelica archangelica	Garden Angelica	RedList_GB-RE	1	10km	1976	01/01/1976
Anthemis arvensis	Corn Chamomile	Local Spp of Cons Conc RedList_GB-EN	4	1km, 10km	1920	01/01/1927
Anthemis cotula	Stinking Chamomile	Local Spp of Cons Conc RedList_GB-VU	1	10km	30/05/1936	30/05/1936
Apera spica-venti	Loose Silky-bent	Local Spp of Cons Conc RedList_GB-Lr(NT)	5	1km, 10km	1927	1977
Arabis glabra	Tower Mustard	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	2	10km	1845	1886
Blysmus compressus	Flat-sedge	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-VU	2	10km	1955	1964
Brassica oleracea	Wild Cabbage	Nationally Scarce	5	2km, 10km	1965-1976	1991
Bromus secalinus	Rye Brome	Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	2	10km	1937	1937
Bupleurum tenuissimum	Slender Hare's-ear	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	2	1km, 10km	1988	1988
Callitriche truncata	Short-leaved Water-starwort	Local Spp of Cons Conc Nationally Scarce	1	1km	03/09/1999	1999
Camelina sativa	Gold-of-pleasure	Local Spp of Cons Conc Nationally Scarce	7	1km, 2km, 10km	1953	1971
Campanula patula	Spreading Bellflower	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	1	10km	1965	1965

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Carex depauperata	Starved Wood-sedge	W&CA Sch8 NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Rare	3	10km	1780	1830
Carex divisa	Divided Sedge	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	11	1km, 2km, 10km	1835	1992
Centaurea cyanus	Cornflower	NERC Act Section 41 LPS Local Spp of Cons Conc	1	10km	1958	1958
Chamaemelum nobile	Chamomile	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-VU	2	10km	1830	1836
Chenopodium bonus-henricus	Good-King-Henry	Local Spp of Cons Conc RedList_GB-VU	7	1km, 10km	1835	12/09/1963
Chenopodium glaucum	Oak-leaved Goosefoot	Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	4	2km, 10km	20/09/1920	01/01/1956
Chenopodium murale	Nettle-leaved Goosefoot	Local Spp of Cons Conc RedList_GB-EN	2	10km	1953	01/01/1976
Chenopodium vulvaria	Stinking Goosefoot	W&CA Sch8 NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	2	10km	1954	1994
Clinopodium calamintha	Lesser Calamint	Local Spp of Cons Conc Nationally Scarce	1	10km	1920	1920
Cynodon dactylon	Bermuda-grass	Local Spp of Cons Conc Nationally Rare	8	1km, 2km, 10km	1934	2002
Damasonium alisma	Starfruit	W&CA Sch8 NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-CR Nationally Rare	3	10km	1760	1853
Fallopia dumetorum	Copse-bindweed	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	1	10km	1922	1922
Galium parisiense	Wall Bedstraw	Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	1	10km	1954	1954

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Galium tricornutum	Corn Cleavers	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-CR Nationally Rare	1	10km	1820	1820
Genista anglica	Petty Whin	Local Spp of Cons Conc RedList_GB-Lr(NT)	3	10km	1920	1994
Glebionis segetum	Corn Marigold	Local Spp of Cons Conc RedList_GB-VU	3	10km	1953	29/05/1976
Gnaphalium sylvaticum	Heath Cudweed	Local Spp of Cons Conc RedList_GB-EN	2	10km	1920	24/09/1927
Hippophae rhamnoides	Sea-buckthorn	Nationally Scarce	1	10km	1997	01/01/1997
Hottonia palustris	Water-violet	RedList_GB-VU	1	1km	1920	01/01/1920
Hyacinthoides non-scripta	Bluebell	W&CA Sch8	6	10km	1965-1976	20/03/2004
Hydrocharis morsus-ranae	Frogbit	Local Spp of Cons Conc RedList_GB-VU	4	1km, 10km	1835	01/01/1835
Hyoscyamus niger	Henbane	Local Spp of Cons Conc RedList_GB-VU	2	10km	1953	01/01/1993
Hypericum montanum	Pale St John's-wort	Local Spp of Cons Conc RedList_GB-Lr(NT)	1	10km	1951	01/01/1951
Hypochaeris glabra	Smooth Cat's-ear	Local Spp of Cons Conc RedList_GB-VU	2	1km, 10km	1992	01/01/1992
Juncus compressus	Round-fruited Rush	Local Spp of Cons Conc RedList_GB-VU	2	1km, 2km	1975	08/05/1984
Lactuca saligna	Least Lettuce	W&CA Sch8 NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Rare	9	1km, 2km, 10km	1763	1988
Lathyrus aphaca	Yellow Vetchling	Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	6	1km, 10km	1927	1994
Lepidium latifolium	Dittander	Local Spp of Cons Conc Nationally Scarce	5	1km, 10km	1989	2002
Lithospermum arvense	Field Gromwell	Local Spp of Cons Conc RedList_GB-EN	4	1km, 10km	1927	1971
Lolium temulentum	Darnel	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-CR Nationally Rare	4	1km, 10km	1927	1934
Lotus angustissimus	Slender Bird's-foot-trefoil	Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	1	1km	1988	1988
Malva setigera	Rough Marsh-mallow	W&CA Sch8	3	1km, 10km	1939	1939
Medicago minima	Bur Medick	Local Spp of Cons Conc RedList_GB-VU Nationally Scarce	1	10km	1958	1958
Medicago polymorpha	Toothed Medick	Local Spp of Cons Conc Nationally Scarce	1	10km	1958	1958

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Medicago sativa subsp. falcata	Sickle Medick	Local Spp of Cons Conc Nationally Scarce	5	1km, 10km	1927	1991
Mentha pulegium	Pennyroyal	W&CA Sch8 NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	2	10km	1815	1885
Mentha suaveolens	Round-leaved Mint	RedList_GB-DD Nationally Scarce	3	1km, 2km, 10km	1877	1991
Mespilus germanica	Medlar	Local Spp of Cons Conc Nationally Scarce	2	2km, 10km	27/09/1937	1937
Misopates orontium	Weasel's-snout	Local Spp of Cons Conc RedList_GB-VU	1	10km	1994	1994
Nymphoides peltata	Fringed Water-lily	Local Spp of Cons Conc Nationally Scarce	1	10km	1994	1994
Onobrychis viciifolia	Sainfoin	Local Spp of Cons Conc RedList_GB-VU	1	10km	1990	1990
Papaver argemone	Prickly Poppy	Local Spp of Cons Conc RedList_GB-VU	1	10km	1920	1920
Polypogon monspeliensis	Annual Beard-grass	Local Spp of Cons Conc Nationally Scarce	1	10km	1850	1850
Potamogeton friesii	Flat-stalked Pondweed	Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	1	10km	1994	1994
Potentilla argentea	Hoary Cinquefoil	Local Spp of Cons Conc RedList_GB-Lr(NT)	1	10km	1870	1870
Puccinellia fasciculata	Borrer's Saltmarsh-grass	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	5	1km, 10km	1965	1979
Ranunculus arvensis	Corn Buttercup	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-CR	1	1km	1920	1920
Rubus spadix	A Flowering Plant	Local Spp of Cons Conc Nationally Rare	2	10km	1940	1950
Ruscus aculeatus	Butcher's-broom	HSD5	5	10km	1955	09/04/2006
Scandix pecten-veneris	Shepherd's-needle	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-CR	1	10km	1939	01/01/1939
Silene noctiflora	Night-flowering Catchfly	Local Spp of Cons Conc RedList_GB-VU	3	2km, 10km	1951	16/09/1956
Silene nutans	Nottingham Catchfly	Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	1	10km	1948	01/01/1948

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Sium latifolium	Greater Water-parsnip	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-EN Nationally Scarce	5	1km, 10km	1836	01/01/1877
Sonchus palustris	Marsh Sow-thistle	Local Spp of Cons Conc Nationally Scarce	4	10km	1877	1885
Spergula arvensis	Corn Spurrey	Local Spp of Cons Conc RedList_GB-VU	9	10km	1835	1981
Torilis arvensis	Spreading Hedge-parsley	NERC Act Section 41 LPS Local Spp of Cons Conc Nationally Scarce	1	10km	1836	1836
Trifolium fragiferum	Strawberry Clover	RedList_GB-VU	2	1km, 10km	22/07/1990	1990
Trifolium squamosum	Sea Clover	Local Spp of Cons Conc Nationally Scarce	3	1km	1830	1835
Verbascum lychnitis	White Mullein	Local Spp of Cons Conc Nationally Scarce	2	1km, 10km	1920	1990
Vicia lutea	Yellow-vetch	Local Spp of Cons Conc RedList_GB-Lr(NT) Nationally Scarce	2	10km	1953	1984
Invertebrates - Dragonflies & Damselflies						
Lestes dryas	Scarce Emerald Damselfly	LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	1	10km	28/07/88-10/08/88	1988
Sympetrum striolatum	Common Darter	RedList_GB-DD	2	10km	28/07/88-10/08/88	2014
Invertebrates - Beetles						
Gymnetron villosulum	A Beetle	Nationally Notable B	1	10km	04/07/2015	2015
Larinus carlinae	A Beetle	Nationally Notable B	1	1km	04/07/2015	2015
Polydrusus formosus	A Beetle	Nationally Notable A	1	1km	04/07/2015	2015
Tournotaris bimaculata	A Beetle	Nationally Notable B	1	1km	20/07/2013	2013
Invertebrates - Butterflies						
Coenonympha pamphilus	Small Heath	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	2	1km, 2km	17/08/1997	1997
Coenonympha pamphilus pamphilus	Small Heath	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	3	1km, 2km	1980-1986	1980
Lasiommata megera	Wall	NERC Act Section 41 LPS Local Spp of Cons Conc RedList_GB-Lr(NT)	3	1km	1980-1986	1980
Thymelicus lineola	Essex Skipper	LPS	7	1km, 2km	1980-1986	2015-2019
Thymelicus sylvestris	Small Skipper	LPS	3	1km, 2km	1980-1986	1996-1996

4.2 Confidential Records

Records included in this section do not include any geographic content as it has been requested (by the data owners/originators) that the location remains confidential. The following information is provided to create a 'species alert' record highlighting the presence of a species in the search area.

In order to establish the presence of confidential records on the site in question, a second data search request must be submitted with a detailed site boundary. For further explanations of GiGL's Access to Data Policy and the confidential records please see the "Supporting Information" annex. For further details of the information provided in the report please contact GiGL directly - enquiries@gigl.org.uk.

Taxon Name	Common Name	Designation	Total number of occurrences	Date of oldest record	Date of most recent record
Birds					
Anthus trivialis	Tree Pipit	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	10	22/04/1996	09/05/2014
Asio flammeus	Short-eared Owl	Birds Dir Anx 1	4	16/04/2010	24/04/2012
Aythya ferina	Pochard	LPS Local Spp of Cons Conc Bird-Red	141	01/04/1996	06/06/2021
Calidris pugnax	Ruff	Birds Dir Anx 1 W&CA Sch1 Part 1 Bird-Red	9	09/04/84-17/04/84	30/04/2011
Caprimulgus europaeus	Nightjar	Birds Dir Anx 1 NERC Act Section 41	1	26/05/1999	26/05/1999
Cettia cetti	Cetti's Warbler	W&CA Sch1 Part 1	1776	30/09/2007	25/09/2021
Charadrius dubius	Little Ringed Plover	W&CA Sch1 Part 1 LPS	261	22/05/1980	17/06/2006
Circus aeruginosus	Marsh Harrier	Birds Dir Anx 1 W&CA Sch1 Part 1	28	15/07/2007	05/05/2015

Taxon Name	Common Name	Designation	Total number of occurrences	Date of oldest record	Date of most recent record
Coccothraustes coccothraustes	Hawfinch	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	2	22/11/1995	30/11/2008
Coturnix coturnix	Quail	W&CA Sch1 Part 1	1	01/06/2007	01/06/2007
Curruca undata	Dartford Warbler	Birds Dir Anx 1 W&CA Sch1 Part 1	4	13/02/2008	13/02/2008
Egretta garzetta	Little Egret	Birds Dir Anx 1	392	08/07/2004	24/06/2017
Emberiza calandra	Corn Bunting	LPS Local Spp of Cons Conc Bird-Red	9	10/01/1986	19/05/2013
Falco peregrinus	Peregrine	Birds Dir Anx 1 W&CA Sch1 Part 1 LPS	652	24/08/1994	24/03/2017
Falco subbuteo	Hobby	W&CA Sch1 Part 1	109	20/06/1994	28/08/2010
Lullula arborea	Woodlark	Birds Dir Anx 1 W&CA Sch1 Part 1 NERC Act Section 41 Local Spp of Cons Conc	1	13/10/2012	13/10/2012
Milvus milvus	Red Kite	Birds Dir Anx 1 W&CA Sch1 Part 1	25	04/04/2009	29/07/2010
Panurus biarmicus	Bearded Tit	W&CA Sch1 Part 1 LPS	54	22/11/1983	02/01/2017
Phoenicurus ochruros	Black Redstart	W&CA Sch1 Part 1 LPS Local Spp of Cons Conc Bird-Red	26	01/05/1995	10/04/1996
Podiceps nigricollis	Black-necked Grebe	W&CA Sch1 Part 1	1	21/07/2001	21/07/2001
Recurvirostra avosetta	Avocet	Birds Dir Anx 1 W&CA Sch1 Part 1	15	23/04/2006	28/07/2010
Spatula querquedula	Garganey	W&CA Sch1 Part 1	13	02/05/1999	01/04/2013

Taxon Name	Common Name	Designation	Total number of occurrences	Date of oldest record	Date of most recent record
Streptopelia turtur	Turtle Dove	NERC Act Section 41 Local Spp of Cons Conc Bird-Red	34	18/05/1982	07/07/2007
Tyto alba	Barn Owl	W&CA Sch1 Part 1	81	Aug 1986-Sep 1986	19/03/2014
Mammals - Terrestrial (bats)					
Pipistrellus pipistrellus	Common Pipistrelle	Hab&Spp Dir Anx 4 Cons Regs 2010 Sch2 W&CA Sch5 Sec 9.4b W&CA Sch5 Sec 9.4c Local Spp of Cons Conc	1	19/10/2009	19/10/2009

4.3 LISI Species

The London Invasive Species Initiative (LISI) encourages better co-ordination and partnership working to prevent, reduce and eliminate the impacts caused by invasive non-native species across the city.

The list presents a number of species present in London and causing impacts for which action, monitoring or research is needed. It also lists species not currently in London but of concern due to high risk of negative impact should they arrive, including those for which national alerts are in place through the GB Non-Native Species Secretariat. LISI species are categorised following their likely risk to the environment. For further explanations please see the Supporting Information annex.

LISI Category	Explanation
LISI 1	Species not currently present in London but 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, this should be reported to GIGL or LISI to ensure that action is taken rapidly.
LISI 2	Species of high impact or concern present at specific sites that require attention (control, management, eradication etc). Such species are priority species for action in London and LISI encourages this wherever possible.
LISI 3	Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control/eradicate. These species are species currently causing large scale impacts across London and LISI supports area or catchment wide partnership working to ensure this.
LISI 4	Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required. Appropriate biosecurity is required for sites where these species are found.
LISI 5	Species for which insufficient data or evidence was available from those present to be able to prioritise.
LISI 6	Species that were not currently considered to pose a threat or have the potential to cause problems in London.

For further advice on dealing with invasive species in London, or to report management work undertaken at a site please contact the LISI Manager at enquiries@londonisi.org.uk or visit http://londonisi.org.uk/

Taxon Name	Common Name	Designation	Total number of occurrences	Maximum occurrence	Location of nearest record	Date of nearest record	Location of most recent record	Date of most recent record	Date range
Birds									
Psittacula krameri	Ring-necked Parakeet	LISI category 4	82	12	TQ4806480985	09/07/2014	TQ4927880760	02/02/2021	25/10/08-02/02/21
Higher Plants - Flowering Plants									
Ailanthus altissima	Tree-of-heaven	LISI category 3	2	P	TQ4762381227	26/08/2003	TQ4762381227	26/08/2003	06/08/03-26/08/03
Buddleja davidii	Butterfly-bush	LISI category 3	39	1	TQ4812481215	25/08/2003	TQ4747280865	08/09/2013	14/07/02-08/09/13
Cotoneaster	A Flowering Plant	LISI category 2	20	1	TQ4812480937	08/09/2013	TQ4812480937	08/09/2013	14/07/02-08/09/13
Elodea canadensis	Canadian Waterweed	LISI category 4	2	1	TQ4762381227	26/08/2003	TQ4730080718	08/09/2013	26/08/03-08/09/13
Elodea nuttallii	Nuttall's Waterweed	LISI category 4	1	P	TQ4762381227	26/08/2003	TQ4762381227	26/08/2003	26/08/2003
Fallopia japonica	Japanese Knotweed	LISI category 3	17	1	TQ4766980305	08/02/2013	TQ4731379760	01/01/2020	04/08/03-01/01/20
Galega officinalis	Goat's-rue	LISI category 4	39	1	TQ4808780913	25/08/2003	TQ4812480937	08/09/2013	17/07/03-08/09/13
Heracleum mantegazzianum	Giant Hogweed	LISI category 3	8	1	TQ485803	15/08/2006	TQ485821	26/09/2017	22/10/02-26/09/17
Hyacinthoides hispanica	Spanish Bluebell	LISI category 4	1	P	TQ4734880327	18/08/2003	TQ4734880327	18/08/2003	18/08/2003
Hydrocotyle ranunculoides	Floating Pennywort	LISI category 3	4	1	TQ4764581135	13/05/2015	TQ4764581135	13/05/2015	24/04/11-13/05/15
Lemna minuta	Least Duckweed	LISI category 4	1	1	TQ4730080718	08/09/2013	TQ4730080718	08/09/2013	08/09/2013
Pentaglottis sempervirens	Green Alkanet	LISI category 6	1	1	TQ4766980305	08/02/2013	TQ4766980305	08/02/2013	08/02/2013
Prunus laurocerasus	Cherry Laurel	LISI category 3	8	1	TQ4812480937	08/09/2013	TQ4730379975	01/01/2020	14/07/02-01/01/20
Quercus cerris	Turkey Oak	LISI category 5	1	P	TQ4711879904	01/01/2020	TQ4711879904	01/01/2020	01/01/2020
Robinia pseudoacacia	False-acacia	LISI category 4	6	1	TQ4812480937	08/09/2013	TQ4812480937	08/09/2013	16/07/02-08/09/13
Symphoricarpos albus	Snowberry	LISI category 2	4	1	TQ4735580326	08/09/2013	TQ4735580326	08/09/2013	14/07/02-08/09/13

LISI species – Coarse Resolution Records

The species records in this table represent records of 1km^2, 2km^2 or 10km^2 accuracy.

Taxon Name	Common Name	Designation	Total number of occurrences	Record accuracy	Date of oldest record	Date of most recent record
Higher Plants - Ferns						
Azolla filiculoides	Water Fern	LISI category 2	5	1km, 10km	1988	1992
Higher Plants - Flowering Plants						
Buddleja davidii	Butterfly-bush	LISI category 3	6	1km, 10km	1965-1976	11/03/2006
Cotoneaster divaricatus	Spreading Cotoneaster	LISI category 2	1	10km	1995	1995
Cotoneaster zabelii	Cherryred Cotoneaster	LISI category 2	1	10km	2001	2001
Crassula helmsii	New Zealand Pigmyweed	LISI category 3	2	10km	1960	16/08/1997
Elodea canadensis	Canadian Waterweed	LISI category 4	1	10km	1965-1976	1965-1976
Elodea nuttallii	Nuttall's Waterweed	LISI category 4	1	1km	1965-1976	1965-1976
Fallopia japonica	Japanese Knotweed	LISI category 3	13	1km, 10km	1965-1976	21/08/2004
Galega officinalis	Goat's-rue	LISI category 4	9	1km, 10km	1937	21/08/2004
Galinsoga parviflora	Gallant Soldier	LISI category 3	2	1km, 10km	1927	1965-1976
Galinsoga quadriradiata	Shaggy Soldier	LISI category 3	1	1km	1927	1927
Heracleum mantegazzianum	Giant Hogweed	LISI category 3	10	1km	1927	1992
Hyacinthoides hispanica	Spanish Bluebell	LISI category 4	1	1km	1996	1996
Hyacinthoides non-scripta x hispanica = H. x massartiana	Bluebell	LISI category 4	2	10km	1996	11/03/2006
Ilex aquifolium x perado = I. x altaclerensis	Highclere Holly	LISI category 5	1	10km	19/01/2002	19/01/2002
Impatiens glandulifera	Himalayan Balsam	LISI category 3	2	10km	1965-1976	1991
Impatiens parviflora	Small Balsam	LISI category 2	1	10km	24/07/1982	24/07/1982
Lamiastrum galeobdolon subsp. argentatum	A Flowering Plant	LISI category 4	1	10km	19/01/2002	19/01/2002
Lemna minuta	Least Duckweed	LISI category 4	1	10km	19/01/2002	19/01/2002
Myriophyllum aquaticum	Parrot's-feather	LISI category 3	1	10km	03/09/1999	03/09/1999
Paulownia tomentosa	Foxglove-tree	LISI category 5	1	1km	20/03/2004	20/03/2004
Pentaglottis sempervirens	Green Alkanet	LISI category 6	4	10km	1992	11/03/2006
Prunus laurocerasus	Cherry Laurel	LISI category 3	5	10km	1996	19/01/2002
Quercus cerris	Turkey Oak	LISI category 5	2	10km	1955	19/01/2002
Quercus ilex	Evergreen Oak	LISI category 5	1	10km	11/03/2006	11/03/2006
Rhododendron ponticum	A Flowering Plant	LISI category 2	4	10km	1995	19/01/2002
Robinia pseudoacacia	False-acacia	LISI category 4	2	10km	1997	08/06/2006
Sorghum halepense	Johnson-grass	LISI category 2	1	10km	1980	1980
Symphoricarpos albus	Snowberry	LISI category 2	1	1km	1965-1976	1965-1976

5.0 Notable Thames Structures

Please note there are 2 notable Inner Thames structures, e.g. derelict dolphin jetties, T-jetties or abandoned barges or wall structures, which should be taken into account during local bird assessment.

Structures with significant bird use along the eastern tidal Thames are identified by the Inner Thames High Tide Group and were digitised by GiGL on behalf of the Group and collaborating partners London Wildlife Trust and the Environment Agency, in 2012. Associated bird records are maintained within the GiGL species database and are summarised above in records or confidential records tables.

6.0 Habitats

Habitats present within the search area from these sources can be seen on the following pages:

- Survey data
- BAP Condition Assessment and Habitat Suitability

The tables can be cross-referenced with the Survey Parcels Map.

Note that GiGL does not currently hold habitat data for all areas. Even where data is held, a lack of records in a defined geographical area does not necessarily mean that the habitat does not occur there – the area may simply not have been surveyed.

This section identifies and maps components of the local ecological networks and potential areas identified for habitat restoration or creation.

6.1 Survey Data

This table holds the most recent habitat survey information for a given site. It includes data collected via different survey methodologies. The GLA conducted a series of rolling habitat surveys between the mid-1980s and 2009. It used the habitat typologies developed specifically for Greater London – for further details of categories please refer to the Supporting Information section of the Annex. Other habitat classification methodologies recorded in the database are National Vegetation Classification, Phase 1 Habitat Assessment, and Biodiversity Action Plan Broad Habitat classification.

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Ridgeway east	GiGL_HAB_1955	(546728,179795)	4.93	18/07/2002	Neutral grassland (semi-improved)	64	3.14	Lon(P1)
					Scrub	25	1.23	
					Scattered trees	1	0.05	
Abbey Wood Park, central	GiGL_HAB_1971	(546946,179707)	5.49	28/06/2002	Amenity grassland	80	4.38	Lon(P1)
					Scattered trees	10	0.55	
					Ruderal or ephemeral	10	0.55	
Abbey Wood Park, south	GiGL_HAB_1972	(546890,179499)	12.14	28/06/2002	Amenity grassland	80	9.68	Lon(P1)
					Scattered trees	10	1.21	
					Ruderal or ephemeral	10	1.21	
Abbey Wood Park, north	GiGL_HAB_1973	(546982,179857)	9.12	28/06/2002	Amenity grassland	80	7.27	Lon(P1)
					Scattered trees	10	0.91	
					Ruderal or ephemeral	10	0.91	
Abbey Wood Park, roundabout	GiGL_HAB_1977	(547306,179629)	0.35	28/06/2002	Ruderal or ephemeral	50	0	Lon(P1)
					Amenity grassland	50	0	
Boiler House green	GiGL_HAB_2091	(547169,180516)	0.71	14/07/2002	Scattered trees	60	0.43	Lon(P1)
					Amenity grassland	39	0.28	
					Planted shrubbery	1	0.01	
Crossway Drain	GiGL_HAB_2092	(547192,180609)	0.81	14/07/2002	Scattered trees	58	0.47	Lon(P1)
					Amenity grassland	24	0.19	
					Standing water (includes canals)	15	0.12	
					Scrub	2	0.02	
					Wet marginal vegetation	1	0.01	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Manor Way Green	GiGL_HAB_2093	(547197,180944)	1.81	14/07/2002	Amenity grassland	50	0.9	Lon(P1)
					Scattered trees	37	0.67	
					Bare artificial habitat	10	0.18	
					Planted shrubbery	3	0.05	
Hoveton Rd copse	GiGL_HAB_2094	(547022,181027)	0.19	14/07/2002	Native broadleaved woodland	100	0.19	Lon(P1)
Manorway green west	GiGL_HAB_2095	(546997,180869)	0.61	14/07/2002	Scattered trees	52	0.32	Lon(P1)
					Amenity grassland	40	0.24	
					Bare artificial habitat	5	0.03	
					Scrub	3	0.02	
Carlyle Rd/Central Way roundabout	GiGL_HAB_2096	(546881,180890)	0.28	14/07/2002	Amenity grassland	80	0.22	Lon(P1)
					Scattered trees	20	0.06	
Police Station Green	GiGL_HAB_2097	(546997,180593)	0.84	14/07/2002	Bare artificial habitat	45	0.38	Lon(P1)
					Scattered trees	30	0.25	
					Amenity grassland	20	0.17	
					Neutral grassland (semi-improved)	5	0.04	
Tawney/Atlee Rd verge	GiGL_HAB_2098	(546894,180822)	0.30	14/07/2002	Scattered trees	50	0.15	Lon(P1)
					Amenity grassland	50	0.15	
Bentham Road drain	GiGL_HAB_2099	(547063,180451)	0.38	14/07/2002	Standing water (includes canals)	48	0.18	Lon(P1)
					Amenity grassland	24	0.09	
					Bare artificial habitat	15	0.06	
					Scattered trees	10	0.04	
					Wet marginal vegetation	2	0.01	
					Planted shrubbery	1	0	
Hawksmoor Park, Tump 53 - wet bits	GiGL_HAB_2101	(546671,180378)	0.80	14/07/2002	Reedswamp	52	0.42	Lon(P1)
					Standing water (includes canals)	35	0.28	
					Scrub	5	0.04	
					Typha etc. swamp	3	0.02	
					Native broadleaved woodland	3	0.02	
					Neutral grassland (semi-improved)	2	0.02	
Hawksmoor Park, scrub	GiGL_HAB_2102	(546817,180404)	0.18	14/07/2002	Scrub	90	0.16	Lon(P1)
					tall herbs	10	0.02	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Hawksmoor Park, park	GiGL_HAB_2103	(546656,180558)	1.51	15/07/2002	Amenity grassland	69	1.03	Lon(P1)
					Scattered trees	15	0.23	
					Bare artificial habitat	15	0.23	
					Planted shrubbery	1	0.02	
Nickleby Close green	GiGL_HAB_2104	(547243,181179)	0.57	14/07/2002	Amenity grassland	50	0.28	Lon(P1)
					Scattered trees	28	0.16	
					Non- native broadleaved woodland	10	0.06	
					Bare artificial habitat	10	0.06	
					Planted shrubbery	1	0.01	
					Native hedge	1	0.01	
Greenhaven Drive bank	GiGL_HAB_2118	(546810,180953)	0.36	18/07/2002	Amenity grassland	60	0.22	Lon(P1)
					Bare soil and rock	35	0.13	
					Bare artificial habitat	3	0.01	
					Scattered trees	2	0.01	
Birchmere Park, Eastern Way bund north	GiGL_HAB_2123	(546888,179984)	3.74	16/07/2002	Amenity grassland	40	1.49	Lon(P1)
					Scrub	35	1.31	
					Scattered trees	20	0.75	
					Roughland (intimate mix of 9, 14 and 6)	10	0.37	
						4	0.15	
					Bare artificial habitat	1	0.04	
					Planted shrubbery			
Birchmere Park, park grassland	GiGL_HAB_2124	(546867,180076)	7.70	17/07/2002	Amenity grassland	93	7.14	Lon(P1)
					Scattered trees	5	0.38	
					Bare artificial habitat	2	0.15	
Poplar Place rough	GiGL_HAB_2127	(547268,180302)	0.54	14/07/2002	Neutral grassland (semi-improved)	30	0.16	Lon(P1)
					Amenity grassland	30	0.16	
					Ruderal or ephemeral	15	0.08	
					Bare artificial habitat	15	0.08	
					Scattered trees	5	0.03	
					Scrub	3	0.02	
					Planted shrubbery	2	0.01	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Austin Close green	GiGL_HAB_2128	(546899,180320)	0.32	16/07/2002	Amenity grassland	70	0.22	Lon(P1)
					Bare artificial habitat	15	0.05	
					Planted shrubbery	8	0.03	
					Scattered trees	7	0.02	
Passfield Path green	GiGL_HAB_2129	(546865,180614)	0.24	16/07/2002	Scattered trees	60	0.14	Lon(P1)
					Amenity grassland	25	0.06	
					Bare artificial habitat	15	0.04	
Marshall Path green	GiGL_HAB_2130	(546856,180751)	0.46	15/07/2002	Scattered trees	50	0.23	Lon(P1)
					Amenity grassland	35	0.16	
					Bare artificial habitat	15	0.07	
Waterways Community Nursery	GiGL_HAB_2131	(546811,180199)	0.31	16/07/2002	Neutral grassland (semi-improved)	57	0.18	Lon(P1)
					Bare artificial habitat	4	0.01	
					Scrub	3	0.01	
Bentham Rd verge	GiGL_HAB_2132	(546817,180259)	0.19	16/07/2002	Scattered trees	50	0.1	Lon(P1)
					Amenity grassland	50	0.1	
Thames Path and river to HWM, east	GiGL_HAB_2136	(546869,181161)	2.50	18/07/2002	Bare artificial habitat	43	1.07	Lon(P1)
					Planted shrubbery	35	0.87	
					Bare soil and rock	10	0.25	
					Amenity grassland	10	0.25	
					Scattered trees	2	0.05	
Eastern Way treeline	GiGL_HAB_2153	(546933,179942)	0.79	19/07/2002	Scattered trees	45	0.36	Lon(P1)
					Scrub	40	0.32	
					Neutral grassland (semi-improved)	15	0.12	
Byron Close verge	GiGL_HAB_2199	(547217,180319)	0.58	14/07/2002	Amenity grassland	49	0.28	Lon(P1)
					Scattered trees	30	0.17	
					Bare artificial habitat	20	0.12	
					Planted shrubbery	1	0.01	
Bishop John Robinson School, School Grounds	GiGL_HAB_2389	(547133,180952)	0.63	25/07/2002	Bare artificial habitat	50	0.31	Lon(P1)
					Amenity grassland	20	0.12	
					Scattered trees	15	0.09	
					Native hedge	10	0.06	
					Planted shrubbery	5	0.03	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Bishop John Robinson School, Wildlife Area	GiGL_HAB_2390	(547098,180910)	0.05	25/07/2002	Amenity grassland	75	0.04	Lon(P1)
					Scrub	10	0.01	
					Scattered trees	5	0	
					Bare soil and rock	5	0	
					Bare artificial habitat	5	0	
Drain N of Bentham Rd	GiGL_HAB_2458	(546669,180351)	0.57	02/09/2002	Ditches (water filled)	70	0.4	Lon(P1)
					Amenity grassland	25	0.14	
					Bare artificial habitat	5	0.03	
River Thames, Open Water	GiGL_HAB_6303	(547200,181645)	79.41	15/07/2002	Running water (rivers and streams)	100	79.15	Lon(P1)
River Thames, Salt Marsh	GiGL_HAB_6304	(547207,182072)	0.91	15/07/2002	Saltmarsh	95	0.86	Lon(P1)
					Bare soil and rock	5	0.05	
River Thames, Mudflats	GiGL_HAB_6305	(547225,181948)	30.60	15/07/2002	Intertidal mud, sand, shingle etc	100	30.50	Lon(P1)
River Thames, Open Water South of Fords	GiGL_HAB_6306	(549267,181415)	35.55	01/10/2002	Running water (rivers and streams)	100	35.43	Lon(P1)
River Thames, South of Fords Mudflats	GiGL_HAB_6307	(549222,181552)	5.81	01/10/2002	Intertidal mud, sand, shingle etc	100	5.79	Lon(P1)
Barking Reach (East), Sea Wall	GiGL_HAB_6333	(547203,182083)	2.61	15/07/2002	Neutral grassland (semi-improved)	64	1.66	Lon(P1)
					Saltmarsh	25	0.65	
					tall herbs	10	0.26	
					Scrub	1	0.03	
Barking Reach (East), Main Area	GiGL_HAB_6334	(547466,182518)	74.16	05/09/2002	Neutral grassland (semi-improved)	80	59.14	Lon(P1)
					tall herbs	18	13.31	
					Scrub	1	0.74	
					Bare soil and rock	1	0.74	
Goresbrook, Goresbrook (1)	GiGL_HAB_6337	(548036,182422)	3.58	15/07/2002	Reedswamp	80	2.86	Lon(P1)
					tall herbs	10	0.36	
					Neutral grassland (semi-improved)	5	0.18	
					Running water (rivers and streams)	5	0.18	
West Hindermans Rough	GiGL_HAB_6344	(548445,182261)	2.08	22/10/2002	Neutral grassland (semi-improved)	88	1.83	Lon(P1)
					tall herbs	10	0.21	
					Scrub	2	0.04	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
East Hindermans Rough	GiGL_HAB_6345	(548551,182135)	0.96	22/10/2002	tall herbs	60	0.58	Lon(P1)
					Neutral grassland (semi-improved)	29	0.28	
					Bare soil and rock	10	0.1	
					Scrub	1	0.01	
Erith Marshes South, South-west Pasture	GiGL_HAB_6897	(548303,179994)	8.17	04/08/2003	Neutral grassland (semi-improved)	60	4.88	Lon(P1)
					Neutral grassland (herb-rich)	20	1.63	
					Wet marginal vegetation	10	0.81	
					tall herbs	5	0.41	
					Scrub	5	0.41	
					Ruderal or ephemeral	5	0.41	
Erith Marshes South, South-east Pasture	GiGL_HAB_6898	(548638,179759)	8.94	04/08/2003	Neutral grassland (semi-improved)	70	6.24	Lon(P1)
					Neutral grassland (herb-rich)	20	1.78	
					tall herbs	5	0.45	
					Ruderal or ephemeral	5	0.45	
Erith Marshes South, Poplar Wood	GiGL_HAB_6899	(548473,179672)	6.54	04/08/2003	Non- native broadleaved woodland	70	4.56	Lon(P1)
					tall herbs	10	0.65	
					Scrub	10	0.65	
					Roughland (intimate mix of 9, 14 and 6)	10	0.65	
Erith Marshes South, Wasteland	GiGL_HAB_6900	(548447,179724)	1.14	04/08/2003	Scrub	30	0.34	Lon(P1)
					tall herbs	20	0.23	
					Ruderal or ephemeral	20	0.23	
					Roughland (intimate mix of 9, 14 and 6)	10	0.11	
						10	0.11	
					Bare soil and rock	10	0.11	
					Bare artificial habitat			
Erith Marshes South, Tree Scrub	GiGL_HAB_6901	(548085,180092)	0.85	04/08/2003	Neutral grassland (semi-improved)	70	0.6	Lon(P1)
					Scrub	20	0.17	
					tall herbs	5	0.04	
					Ruderal or ephemeral	5	0.04	
Erith Marshes South, Amenity Grass	GiGL_HAB_6902	(547958,180105)	5.57	04/08/2003	Amenity grassland	60	3.33	Lon(P1)
					Neutral grassland (semi-improved)	40	2.22	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Erith Marshes South, Reedbed	GiGL_HAB_6903	(548002,180361)	5.98	04/08/2003	Reedswamp	40	2.39	Lon(P1)
					Wet marginal vegetation	20	1.19	
					Roughland (intimate mix of 9, 14 and 6)	20	1.19	
					tall herbs	10	0.6	
					Typha etc. swamp	5	0.3	
					Ditches (water filled)	5	0.3	
Erith Marshes South, Roughland	GiGL_HAB_6904	(548849,180075)	3.57	04/08/2003	Neutral grassland (semi-improved)	30	1.07	Lon(P1)
					tall herbs	20	0.71	
					Roughland (intimate mix of 9, 14 and 6)	20	0.71	
					Wet marginal vegetation	10	0.36	
					Scrub	10	0.36	
					Ditches (water filled)	10	0.36	
Erith Marshes South, College Grounds	GiGL_HAB_6909	(548531,179546)	3.80	05/08/2003	Amenity grassland	90	3.4	Lon(P1)
					Planted shrubbery	10	0.38	
Erith Marshes South, West Horse Pasture	GiGL_HAB_6912	(548071,179760)	2.71	05/08/2003	Neutral grassland (semi-improved)	60	1.62	Lon(P1)
					Neutral grassland (herb-rich)	30	0.81	
					tall herbs	10	0.27	
Erith Marshes South, West Ditch and Reeds	GiGL_HAB_6913	(548108,180040)	1.88	05/08/2003	Reedswamp	60	1.13	Lon(P1)
					Wet marginal vegetation	10	0.19	
					Scrub	10	0.19	
					Roughland (intimate mix of 9, 14 and 6)	10	0.19	
					Ditches (water filled)	10	0.19	
Erith Marshes South, Central Ditch	GiGL_HAB_6914	(548554,180067)	3.97	05/08/2003	Reedswamp	40	0	Lon(P1)
					Wet marginal vegetation	20	0	
					tall herbs	10	0	
					Typha etc. swamp	10	0	
					Roughland (intimate mix of 9, 14 and 6)	10	0	
					Ditches (water filled)	10	0	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Erith Marshes South, East Pasture	GiGL_HAB_6915	(548367,180199)	18.96	05/08/2003	Neutral grassland (semi-improved)	50	9.45	Lon(P1)
					Neutral grassland (herb-rich)	30	5.67	
					Wet marginal vegetation	5	0.95	
					tall herbs	5	0.95	
					Scrub	5	0.95	
					Ruderal or ephemeral	5	0.95	
Erith Marshes South, Western Scrub	GiGL_HAB_6916	(547889,180192)	0.42	05/08/2003	Scrub	70	0.29	Lon(P1)
					Roughland (intimate mix of 9, 14 and 6)	20	0.08	
					tall herbs	10	0.04	
Thamesmead Golf Course, Main	GiGL_HAB_6917	(548087,180913)	9.92	25/08/2003	Improved or re-seeded agricultural grassland	30	2.97	Lon(P1)
					Amenity grassland	30	2.97	
					Neutral grassland (semi-improved)	20	1.98	
					Bare soil and rock	10	0.99	
					Acid grassland	10	0.99	
Thamesmead Golf Course, South-East Pond	GiGL_HAB_6918	(548051,180701)	0.08	28/08/2003	Reedswamp	60	0.05	Lon(P1)
					Wet marginal vegetation	10	0.01	
					tall herbs	10	0.01	
					Typha etc. swamp	10	0.01	
					Standing water (includes canals)	10	0.01	
Thamesmead Golf Course, South Pond	GiGL_HAB_6919	(548011,180767)	0.11	25/08/2003	Reedswamp	60	0.07	Lon(P1)
					Wet marginal vegetation	10	0.01	
					tall herbs	10	0.01	
					Typha etc. swamp	10	0.01	
					Standing water (includes canals)	10	0.01	
Thamesmead Golf Course, South-West Scrub	GiGL_HAB_6920	(547913,180776)	0.14	25/08/2003	Scrub	70	0.1	Lon(P1)
					tall herbs	10	0.01	
					Planted shrubbery	10	0.01	
					Roughland (intimate mix of 9, 14 and 6)	10	0.01	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Thamesmead Golf Course, Poplar Wood	GiGL_HAB_6921	(548044,180900)	0.44	25/08/2003	Non- native broadleaved woodland	84	0.37	Lon(P1)
					tall herbs	8	0.04	
					Scrub	8	0.04	
Thamesmead Golf Course, East Pond	GiGL_HAB_6922	(548193,180978)	0.13	25/08/2003	Reedswamp	40	0.05	Lon(P1)
					Wet marginal vegetation	10	0.01	
					tall herbs	10	0.01	
					Typha etc. swamp	10	0.01	
					Standing water (includes canals)	10	0.01	
Thamesmead Golf Course, North Pond and Ditch	GiGL_HAB_6923	(548290,181111)	0.50	25/08/2003	Reedswamp	60	0.3	Lon(P1)
					Wet marginal vegetation	10	0.05	
					tall herbs	10	0.05	
					Typha etc. swamp	10	0.05	
					Standing water (includes canals)	5	0.03	
					Ditches (water filled)	5	0.03	
Thamesmead Golf Course, North Poplar Wood	GiGL_HAB_6924	(548243,181118)	0.34	28/08/2003	Non- native broadleaved woodland	90	0.3	Lon(P1)
					tall herbs	5	0.02	
					Scrub	5	0.02	
Thamesmead Golf Course, Driving Range	GiGL_HAB_6925	(548270,181185)	2.10	25/08/2003	Amenity grassland	80	1.67	Lon(P1)
					Bare soil and rock	10	0.21	
					Bare artificial habitat	10	0.21	
Thamesmead Golf Course, Car Park and Ruderal Community	GiGL_HAB_6926	(548124,181215)	1.42	25/08/2003	Bare soil and rock	30	0.42	Lon(P1)
					Bare artificial habitat	30	0.42	
					Ruderal or ephemeral	20	0.28	
					tall herbs	10	0.14	
					Neutral grassland (semi-improved)	10	0.14	
Thamesmead Golf Course, West Pathway	GiGL_HAB_6927	(547822,180926)	1.70	25/08/2003	Amenity grassland	50	0.85	Lon(P1)
					Planted shrubbery	30	0.51	
					Scattered trees	10	0.17	
					Bare artificial habitat	10	0.17	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Crossness - Tump 39, Tump 39	GiGL_HAB_6947	(547623,181227)	2.71	26/08/2003	Standing water (includes canals)	40	1.08	Lon(P1)
					tall herbs	10	0.27	
					Planted shrubbery	10	0.27	
					Roughland (intimate mix of 9, 14 and 6)	10	0.27	
						10	0.27	
					Reedswamp	10	0.27	
					Non- native broadleaved woodland	5	0.14	
					Wet marginal vegetation	5	0.14	
					Typha etc. swamp			
Crossness - Tump 39, Parkland	GiGL_HAB_6948	(547787,181261)	2.24	26/08/2003	Planted shrubbery	30	0.67	Lon(P1)
					Amenity grassland	30	0.67	
					Scattered trees	20	0.45	
					Bare artificial habitat	20	0.45	
Crossness, Central Area	GiGL_HAB_6949	(549019,180455)	15.49	06/08/2003	tall herbs	20	3.09	Lon(P1)
					Scrub	20	3.09	
					Ruderal or ephemeral	20	3.09	
					Roughland (intimate mix of 9, 14 and 6)	20	3.09	
						20	3.09	
					Bare soil and rock			
Crossness, Small Lake	GiGL_HAB_6950	(549211,180596)	0.76	06/08/2003	Standing water (includes canals)	60	0.46	Lon(P1)
					Reedswamp	30	0.23	
					Wet marginal vegetation	10	0.08	
Crossness, Pond	GiGL_HAB_6951	(549146,180748)	0.12	06/08/2003	Standing water (includes canals)	70	0.08	Lon(P1)
					Wet marginal vegetation	10	0.01	
					tall herbs	10	0.01	
					Scrub	10	0.01	
Crossness, Works	GiGL_HAB_6952	(548655,180761)	30.52	06/08/2003	Bare artificial habitat	70	21.29	Lon(P1)
					Neutral grassland (semi-improved)	10	3.04	
					Roughland (intimate mix of 9, 14 and 6)	10	3.04	
						5	1.52	
					Ruderal or ephemeral	5	1.52	
					Neutral grassland (herb-rich)			

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Crossness, Rough Grassland	GiGL_HAB_6953	(548469,180938)	3.90	06/08/2003	Neutral grassland (semi-improved)	90	3.5	Lon(P1)
					Roughland (intimate mix of 9, 14 and 6)	10	0.39	
Crossness, Large Lake Area	GiGL_HAB_6954	(548395,180794)	3.07	06/08/2003	Standing water (includes canals)	56	1.71	Lon(P1)
					Neutral grassland (semi-improved)	17	0.52	
					Scattered trees	8	0.24	
					Reedswamp	8	0.24	
					Wet marginal vegetation	4	0.12	
					Typha etc. swamp	4	0.12	
					Scrub	3	0.09	
Crossness, Small Pond	GiGL_HAB_6955	(548463,181143)	0.09	06/08/2003	Standing water (includes canals)	90	0.08	Lon(P1)
					Wet marginal vegetation	5	0	
					Bare artificial habitat	5	0	
Crossness, Fig Wood	GiGL_HAB_6956	(548254,180901)	2.52	06/08/2003	Scrub	20	0.5	Lon(P1)
					Roughland (intimate mix of 9, 14 and 6)	20	0.5	
						20	0.5	
					Non- native broadleaved woodland	10	0.25	
					tall herbs	10	0.25	
					Bare soil and rock	10	0.25	
					Bare artificial habitat	5	0.13	
					Neutral grassland (semi-improved)	5	0.13	
					Ruderal or ephemeral			
Crossness, Amenity Grass	GiGL_HAB_6957	(548296,180654)	2.86	06/08/2003	Amenity grassland	70	2	Lon(P1)
					tall herbs	10	0.28	
					Neutral grassland (semi-improved)	10	0.28	
					Bare artificial habitat	10	0.28	
Crossness, South-west Woodland	GiGL_HAB_6958	(548435,180437)	4.04	06/08/2003	Scrub	30	1.21	Lon(P1)
					Roughland (intimate mix of 9, 14 and 6)	30	1.21	
						20	0.81	
					tall herbs	20	0.81	
					Bare artificial habitat			

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Crossness, Holding Tanks	GiGL_HAB_6959	(548597,180388)	2.68	06/08/2003	Standing water (includes canals)	40	1.07	Lon(P1)
					Wet marginal vegetation	20	0.53	
					Roughland (intimate mix of 9, 14 and	20	0.53	
					6)	10	0.27	
					Scrub	5	0.13	
					Typha etc. swamp	5	0.13	
					Reedswamp			
Crossness, Main Wasteland	GiGL_HAB_6960	(548658,180258)	9.56	06/08/2003	Scrub	40	3.81	Lon(P1)
					Roughland (intimate mix of 9, 14 and	30	2.86	
					6)	20	1.9	
					tall herbs	10	0.95	
					Ruderal or ephemeral			
Crossness, Conservation Area	GiGL_HAB_6961	(549206,180378)	4.76	06/08/2003	Standing water (includes canals)	23	1.09	Lon(P1)
					Reedswamp	18	0.85	
					Wet marginal vegetation	9	0.43	
					Typha etc. swamp	9	0.43	
					Scrub	9	0.43	
					Ruderal or ephemeral	9	0.43	
					Roughland (intimate mix of 9, 14 and	9	0.43	
					6)	9	0.43	
					Ditches (water filled)	5	0.24	
					Bare soil and rock			
Crossnes Salt Marsh, Main	GiGL_HAB_7184	(550173,180674)	4.95	07/08/2003	Saltmarsh	60	2.96	Lon(P1)
					Reedswamp	20	0.99	
					Intertidal mud, sand, shingle etc	20	0.99	
Thamesmead Green Chain Walk, North	GiGL_HAB_7293	(547853,180091)	8.59	17/07/2003	Amenity grassland	80	6.85	Lon(P1)
					Scattered trees	10	0.86	
					Bare artificial habitat	10	0.86	
Thamesmead Green Chain Walk, Central	GiGL_HAB_7294	(547855,180169)	1.12	17/07/2003	Amenity grassland	80	0.9	Lon(P1)
					Scattered trees	10	0.11	
					Bare artificial habitat	10	0.11	

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Thamesmead Green Chain Walk, South	GiGL_HAB_7295	(547812,179818)	1.90	17/07/2003	Amenity grassland	80	1.51	Lon(P1)
					Scattered trees	10	0.19	
					Bare artificial habitat	10	0.19	
St John Fisher School	GiGL_HAB_7298	(548058,179481)	1.08	18/08/2003	Amenity grassland	80	0.86	Lon(P1)
					Bare artificial habitat	10	0.11	
					Scrub	5	0.05	
					Scattered trees	5	0.05	
Southlake Primary School	GiGL_HAB_7300	(547664,179725)	3.49	18/08/2003	Amenity grassland	70	2.44	Lon(P1)
					Neutral grassland (semi-improved)	10	0.35	
					Scrub	5	0.17	
					Scattered trees	5	0.17	
					Roughland (intimate mix of 9, 14 and 6)	5	0.17	
					Bare artificial habitat	5	0.17	
Southern Outfall Sewer	GiGL_HAB_7301	(547722,180403)	5.47	14/08/2003	Scrub	30	1.64	Lon(P1)
					Roughland (intimate mix of 9, 14 and 6)	30	1.64	
					Bare artificial habitat	30	1.64	
					tall herbs	10	0.55	
Jubilee Primary School	GiGL_HAB_7302	(547310,180502)	1.78	18/08/2003	Amenity grassland	90	1.59	Lon(P1)
					Scattered trees	5	0.09	
					Bare artificial habitat	5	0.09	
Crossway Park, Main	GiGL_HAB_7303	(547620,180528)	9.32	18/08/2003	Amenity grassland	75	6.97	Lon(P1)
					Scattered trees	10	0.93	
					Planted shrubbery	5	0.46	
					Native hedge	5	0.46	
					Bare artificial habitat	5	0.46	
Crossway Park, Waterway and Tump	GiGL_HAB_7304	(547301,180743)	2.23	18/08/2003	Standing water (includes canals)	60	1.34	Lon(P1)
					Wet marginal vegetation	10	0.22	
					tall herbs	10	0.22	
					Scrub	10	0.22	
					Reedswamp	10	0.22	
Crossway Park, Reedbed	GiGL_HAB_7305	(547606,180411)	0.07	18/08/2003	Reedswamp	100	0.07	Lon(P1)

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Crossway Park, Sycamore Wood	GiGL_HAB_7306	(547348,180327)	0.42	18/08/2003	Non- native broadleaved woodland	100	0.42	Lon(P1)
Crossway Park, Roughland	GiGL_HAB_7307	(547354,180290)	0.59	18/08/2003	Roughland (intimate mix of 9, 14 and	60	0.35	Lon(P1)
					6)	20	0.12	
					Neutral grassland (semi-improved)	10	0.06	
					tall herbs	10	0.06	
					Scattered trees			
Crossway Park, Shrubbery	GiGL_HAB_7308	(547890,180517)	3.05	18/08/2003	Planted shrubbery	100	3.04	Lon(P1)
Crossway Park, Sports Pitch	GiGL_HAB_7309	(547948,180628)	2.03	18/08/2003	Amenity grassland	100	2.02	Lon(P1)
Castillion Primary School, Sports Field	GiGL_HAB_7427	(547328,181133)	0.75	11/08/2003	Amenity grassland	100	0.75	Lon(P1)
Castillion Primary School, Parkland	GiGL_HAB_7428	(547262,181136)	0.18	11/08/2003	Amenity grassland	60	0.11	Lon(P1)
					Scattered trees	20	0.04	
					Planted shrubbery	10	0.02	
					Bare artificial habitat	10	0.02	
Grange Crescent	GiGL_HAB_7429	(547279,180886)	0.77	11/08/2003	Amenity grassland	65	0.5	Lon(P1)
					Scattered trees	18	0.14	
					Planted shrubbery	9	0.07	
					Bare artificial habitat	8	0.06	
Crossness Path	GiGL_HAB_7430	(547365,181339)	3.81	11/08/2003	Roughland (intimate mix of 9, 14 and	30	1.14	Lon(P1)
					6)	20	0.76	
					Wet marginal vegetation	10	0.38	
					tall herbs	10	0.38	
					Scrub	10	0.38	
					Ruderal or ephemeral	10	0.38	
					Neutral grassland (herb-rich)	5	0.19	
					Reedswamp	5	0.19	
					Intertidal mud, sand, shingle etc			

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Survey Date	Habitat Type	Area (%)	Area (ha)	Survey Type
Crossness Sea Wall, Inner	GiGL_HAB_7431	(549318,180711)	1.73	07/08/2003	Neutral grassland (semi-improved)	30	0.52	Lon(P1)
					Improved or re-seeded agricultural grassland	28	0.48	
					tall herbs	10	0.17	
					Ruderal or ephemeral	10	0.17	
					Roughland (intimate mix of 9, 14 and 6)	10	0.17	
					Bare artificial habitat	2	0.03	
					Scrub			
Binsey Walk	GiGL_HAB_7443	(547371,179843)	1.15	29/08/2003	Amenity grassland	90	1.03	Lon(P1)
					Scattered trees	10	0.11	
River Thames, Open Water	GiGL_HAB_7485	(551018,179894)	285.85	06/08/2003	Running water (rivers and streams)	100	284.90	Lon(P1)
River Thames, Intertidal Area	GiGL_HAB_7486	(550876,179703)	76.67	06/08/2003	Intertidal mud, sand, shingle etc	100	76.42	Lon(P1)
Southmere Lake, Lake	GiGL_HAB_7518	(547640,180028)	9.50	17/07/2003	Standing water (includes canals)	100	9.47	Lon(P1)
Southmere Lake, Island and surrounds	GiGL_HAB_7519	(547844,180020)	0.39	17/07/2003	Standing water (includes canals)	50	0.2	Lon(P1)
					tall herbs	25	0.1	
					Scattered trees	25	0.1	
Southmere Lake, South-west Housing Green	GiGL_HAB_7520	(547436,179809)	0.58	17/07/2003	Amenity grassland	75	0.44	Lon(P1)
					Bare artificial habitat	15	0.09	
					Scattered trees	10	0.06	
Southmere Lake, Southern Open Space	GiGL_HAB_7521	(547515,179728)	0.69	17/07/2003	Bare artificial habitat	85	0.59	Lon(P1)
					Standing water (includes canals)	5	0.03	
					Scattered trees	5	0.03	
					Amenity grassland	5	0.03	

6.2 BAP Condition Assessment & Habitat Suitability

The London Biodiversity Partnership (LBP) habitat suitability dataset was created to promote the preservation, restoration and re-creation of priority habitats. This is a modelled dataset which, if used to create one or more of the nine selected BAP priority habitats, should give the best benefit to biodiversity in London.

Launched in 2010, this dataset is based on methods developed with the London Biodiversity Partnership's Habitat Action Plan (HAP) groups. GiGL mapped Biodiversity Action Plan (BAP) habitat distribution using information from GLA habitat surveys, and assessed their condition using species records and other datasets. Further to this work, GiGL created a predictive model of areas suitable for either maintaining existing BAP habitat, expanding areas of BAP habitat or creating new BAP habitats. Again, the methodology was designed in partnership with the HAP groups, and includes factors such as soil type.

This dataset was a one-off project and is not updated.

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Created Date	Habitat Condition	Area (ha)	Habitat Suitability	Area (ha)
Ridgeway east	GiGL_HAB_1955	(546728,179795)	4.93	2002			Create new/restore relict wood	4.91
Abbey Wood Park, central	GiGL_HAB_1971	(546946,179707)	5.49	2002			Create new/restore relict wood	5.47
Abbey Wood Park, south	GiGL_HAB_1972	(546890,179499)	12.14	2002			Create new/restore relict wood	12.10
Abbey Wood Park, north	GiGL_HAB_1973	(546982,179857)	9.12	2002			Create new/restore relict wood	9.09
Abbey Wood Park, roundabout	GiGL_HAB_1977	(547306,179629)	0.35	2002			Create new/restore relict wood	0.35
Boiler House green	GiGL_HAB_2091	(547169,180516)	0.71	2002			Create new/restore relict wood	0.71
Crossway Drain	GiGL_HAB_2092	(547192,180609)	0.81	2002	Pond condition Poor	0.12	Create new/restore relict pond	0.81
Manor Way Green	GiGL_HAB_2093	(547197,180944)	1.81	2002			Create new/restore relict wood	1.80
Hoveton Rd copse	GiGL_HAB_2094	(547022,181027)	0.19	2002	Wood Unknown condition (management not known)	0.19	Create new/restore relict wood	0.19
Manorway green west	GiGL_HAB_2095	(546997,180869)	0.61	2002			Create new/restore relict wood	0.61
Carlyle Rd/Central Way roundabout	GiGL_HAB_2096	(546881,180890)	0.28	2002			Create new/restore relict wood	0.28
Police Station Green	GiGL_HAB_2097	(546997,180593)	0.84	2002			Create new/restore relict wood	0.84
Tawney/Atlee Rd verge	GiGL_HAB_2098	(546894,180822)	0.30	2002			Create new/restore relict wood	0.30
Bentham Road drain	GiGL_HAB_2099	(547063,180451)	0.38	2002	Pond condition Poor	0.18	Create new/restore relict pond	0.37
Hawksmoor Park, Tump 53 - wet bits	GiGL_HAB_2101	(546671,180378)	0.80	2002	Reed condition Poor Pond condition Poor Wood Unknown condition (management not known)	0.42 0.28 0.02	Create new/restore relict reed Create new/restore relict pond	0.7 0.38
Hawksmoor Park, scrub	GiGL_HAB_2102	(546817,180404)	0.18	2002			Create new/restore relict pond	0.18
Hawksmoor Park, park	GiGL_HAB_2103	(546656,180558)	1.51	2002			Create new/restore relict pond	1.50
Nickleby Close green	GiGL_HAB_2104	(547243,181179)	0.57	2002	Wood Unknown condition (management not known)	0.06	Create new/restore relict wood	0.56
Greenhaven Drive bank	GiGL_HAB_2118	(546810,180953)	0.36	2002			Create new/restore relict wood	0.36
Birchmere Park, Eastern Way bund north	GiGL_HAB_2123	(546888,179984)	3.74	2002			Create new/restore relict wood	3.73
Birchmere Park, park grassland	GiGL_HAB_2124	(546867,180076)	7.70	2002			Create new/restore relict pond	7.68
Poplar Place rough	GiGL_HAB_2127	(547268,180302)	0.54	2002			Create new/restore relict wood	0.54
Austin Close green	GiGL_HAB_2128	(546899,180320)	0.32	2002			Create new/restore relict wood	0.32
Passfield Path green	GiGL_HAB_2129	(546865,180614)	0.24	2002			Create new/restore relict wood	0.24
Marshall Path green	GiGL_HAB_2130	(546856,180751)	0.46	2002			Create new/restore relict wood	0.46
Waterways Community Nursery	GiGL_HAB_2131	(546811,180199)	0.31	2002			Create new/restore relict wood	0.31
Bentham Rd verge	GiGL_HAB_2132	(546817,180259)	0.19	2002			Create new/restore relict wood	0.19
Thames Path and river to HWM, east	GiGL_HAB_2136	(546869,181161)	2.50	2002			Create new/restore relict wood	2.49
Eastern Way treeline	GiGL_HAB_2153	(546933,179942)	0.79	2002			Create new/restore relict wood	0.79
Byron Close verge	GiGL_HAB_2199	(547217,180319)	0.58	2002			Create new/restore relict wood	0.58
Bishop John Robinson School, School Grounds	GiGL_HAB_2389	(547133,180952)	0.63	2002			Create new/restore relict wood	0.62
Bishop John Robinson School, Wildlife Area	GiGL_HAB_2390	(547098,180910)	0.05	2002			Create new/restore relict wood	0.05

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Created Date	Habitat Condition	Area (ha)	Habitat Suitability	Area (ha)
Drain N of Bentham Rd	GiGL_HAB_2458	(546669,180351)	0.57	2002	Floodplain G M condition Average	0.14	Create new/restore relict pond Maintain existing floodplain GM	0.43 0.14
River Thames, Open Water	GiGL_HAB_6303	(547200,181645)	79.41	2002			Create new/restore relict reed	79.15
River Thames, Salt Marsh	GiGL_HAB_6304	(547207,182072)	0.91	2002				
River Thames, Mudflats	GiGL_HAB_6305	(547225,181948)	30.60	2002				
River Thames, Open Water South of Fords	GiGL_HAB_6306	(549267,181415)	35.55	2002			Create new/restore relict reed	35.43
River Thames, South of Fords Mudflats	GiGL_HAB_6307	(549222,181552)	5.81	2002				
Barking Reach (East), Sea Wall	GiGL_HAB_6333	(547203,182083)	2.61	2002			Create new/restore relict wood	2.60
Barking Reach (East), Main Area	GiGL_HAB_6334	(547466,182518)	74.16	2002			Create new/restore relict pond	73.92
Goresbrook, Goresbrook (1)	GiGL_HAB_6337	(548036,182422)	3.58	2002	Reed condition Poor	2.86	Create new/restore relict reed	3.04
West Hindermans Rough	GiGL_HAB_6344	(548445,182261)	2.08	2002			Create new/restore relict wood	2.08
East Hindermans Rough	GiGL_HAB_6345	(548551,182135)	0.96	2002			Create new/restore relict wood	0.96
Erith Marshes South, South-west Pasture	GiGL_HAB_6897	(548303,179994)	8.17	2003	Meadow condition Poor	1.63	Create new/restore relict meadow	8.14
Erith Marshes South, South-east Pasture	GiGL_HAB_6898	(548638,179759)	8.94	2003	Meadow condition Poor	1.78	Create new/restore relict meadow Create new/restore relict pond	8.91 7.13
Erith Marshes South, Poplar Wood	GiGL_HAB_6899	(548473,179672)	6.54	2003	Wood Unknown condition (management not known)	4.56	Create new/restore relict wood	6.52
Erith Marshes South, Wasteland	GiGL_HAB_6900	(548447,179724)	1.14	2003			Create new/restore relict wood	1.13
Erith Marshes South, Tree Scrub	GiGL_HAB_6901	(548085,180092)	0.85	2003			Create new/restore relict wood	0.85
Erith Marshes South, Amenity Grass	GiGL_HAB_6902	(547958,180105)	5.57	2003			Create new/restore relict wood	5.55
Erith Marshes South, Reedbed	GiGL_HAB_6903	(548002,180361)	5.98	2003	Reed condition Average	2.39	Maintain existing reed	2.39
Erith Marshes South, Roughland	GiGL_HAB_6904	(548849,180075)	3.57	2003	Floodplain G M condition Average	1.07	Maintain existing floodplain GM	1.07
Erith Marshes South, College Grounds	GiGL_HAB_6909	(548531,179546)	3.80	2003			Create new/restore relict wood	3.78
Erith Marshes South, West Horse Pasture	GiGL_HAB_6912	(548071,179760)	2.71	2003	Meadow condition Poor	0.81	Create new/restore relict meadow	2.70
Erith Marshes South, West Ditch and Reeds	GiGL_HAB_6913	(548108,180040)	1.88	2003	Reed condition Poor	1.13	Create new/restore relict reed	1.13
Erith Marshes South, Central Ditch	GiGL_HAB_6914	(548554,180067)	3.97	2003	Reed condition Poor	1.58	Create new/restore relict reed	1.58
Erith Marshes South, East Pasture	GiGL_HAB_6915	(548367,180199)	18.96	2003	Meadow condition Poor	5.67	Create new/restore relict meadow	18.90
Erith Marshes South, Western Scrub	GiGL_HAB_6916	(547889,180192)	0.42	2003			Create new/restore relict wood	0.42
Thamesmead Golf Course, Main	GiGL_HAB_6917	(548087,180913)	9.92	2003	Species Rich Acid grass CAT B	0.99	Create new/restore relict pond Expand existing acid grass	8.9 0.99
Thamesmead Golf Course, South-East Pond	GiGL_HAB_6918	(548051,180701)	0.08	2003	Reed condition Poor Pond condition Poor	0.05 0.01	Create new/restore relict reed Create new/restore relict pond	0.06 0.03
Thamesmead Golf Course, South Pond	GiGL_HAB_6919	(548011,180767)	0.11	2003	Reed condition Poor Pond condition Poor	0.07 0.01	Create new/restore relict reed Create new/restore relict pond	0.08 0.04
Thamesmead Golf Course, South-West Scrub	GiGL_HAB_6920	(547913,180776)	0.14	2003			Create new/restore relict wood	0.14
Thamesmead Golf Course, Poplar Wood	GiGL_HAB_6921	(548044,180900)	0.44	2003	Wood Unknown condition (management not known)	0.37	Create new/restore relict wood	0.44
Thamesmead Golf Course, East Pond	GiGL_HAB_6922	(548193,180978)	0.13	2003	Reed condition Poor Pond condition Poor	0.05 0.01	Create new/restore relict pond Create new/restore relict reed	0.08 0.06
Thamesmead Golf Course, North Pond and Ditch	GiGL_HAB_6923	(548290,181111)	0.50	2003	Reed condition Poor Pond condition Poor	0.3 0.03	Create new/restore relict reed Create new/restore relict pond	0.33 0.2
Thamesmead Golf Course, North Poplar Wood	GiGL_HAB_6924	(548243,181118)	0.34	2003	Wood Unknown condition (management not known)	0.30	Create new/restore relict pond	0.33
Thamesmead Golf Course, Driving Range	GiGL_HAB_6925	(548270,181185)	2.10	2003			Create new/restore relict pond	2.09
Thamesmead Golf Course, Car Park and Ruderal Community	GiGL_HAB_6926	(548124,181215)	1.42	2003				
Thamesmead Golf Course, West Pathway	GiGL_HAB_6927	(547822,180926)	1.70	2003			Create new/restore relict wood	1.69
Crossness - Tump 39, Tump 39	GiGL_HAB_6947	(547623,181227)	2.71	2003	Pond condition Poor Wood Unknown condition (management not known) Reed condition Poor	1.08 0.27 0.27	Create new/restore relict pond Create new/restore relict reed	2.43 1.35
Crossness - Tump 39, Parkland	GiGL_HAB_6948	(547787,181261)	2.24	2003			Create new/restore relict pond	2.23
Crossness, Central Area	GiGL_HAB_6949	(549019,180455)	15.49	2003			Create new/restore relict pond	15.44

Site Name	Polygon ID	Grid Ref	Site Area (ha)	Created Date	Habitat Condition	Area (ha)	Habitat Suitability	Area (ha)
Crossness, Small Lake	GiGL_HAB_6950	(549211,180596)	0.76	2003	Pond condition Poor Reed condition Poor	0.46 0.23	Create new/restore relict reed Create new/restore relict pond	0.69 0.53
Crossness, Pond	GiGL_HAB_6951	(549146,180748)	0.12	2003	Pond condition Poor	0.08	Create new/restore relict pond	0.12
Crossness, Works	GiGL_HAB_6952	(548655,180761)	30.52	2003	Meadow condition Poor	1.52	Create new/restore relict meadow Create new/restore relict pond	30.41 28.89
Crossness, Rough Grassland	GiGL_HAB_6953	(548469,180938)	3.90	2003				
Crossness, Large Lake Area	GiGL_HAB_6954	(548395,180794)	3.07	2003	Pond condition Poor Reed condition Poor	1.71 0.24	Create new/restore relict pond Create new/restore relict reed	2.82 1.95
Crossness, Small Pond	GiGL_HAB_6955	(548463,181143)	0.09	2003	Pond condition Poor	0.08	Create new/restore relict pond	0.09
Crossness, Fig Wood	GiGL_HAB_6956	(548254,180901)	2.52	2003	Wood Unknown condition (management not known)	0.50	Create new/restore relict pond	2.51
Crossness, Amenity Grass	GiGL_HAB_6957	(548296,180654)	2.86	2003			Create new/restore relict wood	2.85
Crossness, South-west Woodland	GiGL_HAB_6958	(548435,180437)	4.04	2003			Create new/restore relict pond	4.03
Crossness, Holding Tanks	GiGL_HAB_6959	(548597,180388)	2.68	2003	Pond condition Poor Reed condition Poor	1.07 0.13	Create new/restore relict pond Create new/restore relict reed	2.54 1.2
Crossness, Main Wasteland	GiGL_HAB_6960	(548658,180258)	9.56	2003			Create new/restore relict pond	9.52
Crossness, Conservation Area	GiGL_HAB_6961	(549206,180378)	4.76	2003	Pond condition Poor Reed condition Poor	1.09 0.85	Create new/restore relict pond Create new/restore relict reed	3.89 1.94
Crossnes Salt Marsh, Main	GiGL_HAB_7184	(550173,180674)	4.95	2003	Reed condition Poor	0.99	Create new/restore relict reed	0.99
Thamesmead Green Chain Walk, North	GiGL_HAB_7293	(547853,180091)	8.59	2003			Create new/restore relict pond	8.56
Thamesmead Green Chain Walk, Central	GiGL_HAB_7294	(547855,180169)	1.12	2003			Create new/restore relict wood	1.12
Thamesmead Green Chain Walk, South	GiGL_HAB_7295	(547812,179818)	1.90	2003			Create new/restore relict pond	1.89
St John Fisher School	GiGL_HAB_7298	(548058,179481)	1.08	2003			Create new/restore relict wood	1.08
Southlake Primary School	GiGL_HAB_7300	(547664,179725)	3.49	2003			Create new/restore relict pond	3.48
Southern Outfall Sewer	GiGL_HAB_7301	(547722,180403)	5.47	2003			Create new/restore relict wood	5.45
Jubilee Primary School	GiGL_HAB_7302	(547310,180502)	1.78	2003			Create new/restore relict wood	1.77
Crossway Park, Main	GiGL_HAB_7303	(547620,180528)	9.32	2003			Create new/restore relict pond	9.29
Crossway Park, Waterway and Tump	GiGL_HAB_7304	(547301,180743)	2.23	2003	Pond condition Poor Reed condition Poor	1.34 0.22	Create new/restore relict pond Create new/restore relict reed	2.01 1.56
Crossway Park, Reedbed	GiGL_HAB_7305	(547606,180411)	0.07	2003	Reed condition Poor	0.07	Create new/restore relict reed Create new/restore relict pond	0.07 0
Crossway Park, Sycamore Wood	GiGL_HAB_7306	(547348,180327)	0.42	2003	Wood Unknown condition (management not known)	0.42	Create new/restore relict wood	0.42
Crossway Park, Roughland	GiGL_HAB_7307	(547354,180290)	0.59	2003			Create new/restore relict wood	0.59
Crossway Park, Shrubbery	GiGL_HAB_7308	(547890,180517)	3.05	2003				
Crossway Park, Sports Pitch	GiGL_HAB_7309	(547948,180628)	2.03	2003			Create new/restore relict wood	2.02
Castillion Primary School, Sports Field	GiGL_HAB_7427	(547328,181133)	0.75	2003			Create new/restore relict wood	0.75
Castillion Primary School, Parkland	GiGL_HAB_7428	(547262,181136)	0.18	2003			Create new/restore relict wood	0.18
Grange Crescent	GiGL_HAB_7429	(547279,180886)	0.77	2003			Create new/restore relict pond	0.77
Crossness Path	GiGL_HAB_7430	(547365,181339)	3.81	2003	Meadow condition Poor Reed condition Poor	0.38 0.19	Create new/restore relict meadow Create new/restore relict pond Create new/restore relict reed	3.61 3.23 0.19
Crossness Sea Wall, Inner	GiGL_HAB_7431	(549318,180711)	1.73	2003			Create new/restore relict pond	1.72
Binsey Walk	GiGL_HAB_7443	(547371,179843)	1.15	2003			Create new/restore relict wood	1.14
River Thames, Open Water	GiGL_HAB_7485	(551018,179894)	285.85	2003			Create new/restore relict reed	284.90
River Thames, Intertidal Area	GiGL_HAB_7486	(550876,179703)	76.67	2003				
Southmere Lake, Lake	GiGL_HAB_7518	(547640,180028)	9.50	2003			Create new/restore relict pond Create new/restore relict reed	9.47 9.47
Southmere Lake, Island and surrounds	GiGL_HAB_7519	(547844,180020)	0.39	2003	Pond condition Poor	0.20	Create new/restore relict pond	0.39
Southmere Lake, South-west Housing Green	GiGL_HAB_7520	(547436,179809)	0.58	2003			Create new/restore relict wood	0.58
Southmere Lake, Southern Open Space	GiGL_HAB_7521	(547515,179728)	0.69	2003	Pond condition Poor	0.03	Create new/restore relict pond	0.69

7.0 Open Spaces

Open space information within the search area can be seen on the following pages.

The table can be cross-referenced with the Open Space Map.

This open space dataset is a combination of information collected during GLA surveys, information provided to GiGL by the London boroughs and data sourced through other means, e.g. volunteer surveys.

Note that GiGL does not currently hold open space data for all areas. Even where data is held, a lack of records in a defined geographical area does not necessarily mean that the open space features do not occur there – the area may simply not have been surveyed.

GiGL manage a dataset of spaces designated as public open space categorised according to a site hierarchy documented in The London Plan (Table 8.1). Information on public open spaces sites are displayed within the open space table.

GiGL uses to following open space definition: undeveloped land which has an amenity value, or has potential for an amenity value. The value could be visual, derive from a site's historical or cultural interest or from the enjoyment of facilities which it provides. It includes both public and private spaces, but excludes private gardens.

7.1 Open Space Data

The dataset documents the primary and secondary uses of open space (divided according to broad land use categories) along with other information such as public accessibility, facilities, and special designations which apply to the site. For further details of open space typology and designation categories please also refer to the Supporting Information section of the Annex.

Site Name	Site ID	Grid Ref	Site Area (ha)	Open Space Typology			Public Open Space Awards and Designations	Public Access	Facilities
				Land use category	Primary use	Secondary uses			
Abbey Wood Park	OS_Gr_0460	TQ4703679740	4.76	Parks and Gardens	Park			Free	Litter bins Seats
Abbey Wood Park Estate	OS_Gr_0007	TQ4680979600	4.00	Amenity	Landscaping around premises			Free	Litter bins Seats
Austin Close green	OS_Gr_0019	TQ4689380317	0.26	Amenity	Landscaping around premises			Free	
Barking Reach (East)	OS_BD_0018	TQ4748582573	92.26	Other	Vacant land	River		De facto	
Bentham Rd verge	OS_Gr_0038	TQ4682580255	0.19	Green Corridors	Road island/verge	Landscaping around premises		Free	
Bentham Road drain	OS_Gr_0039	TQ4706280448	0.38	Green Corridors	Canal			Free	
Binsey Walk	OS_Bx_0033	TQ4737479849	0.95	Green Corridors	Road island/verge			Free	
Birchmere Park	OS_Gr_0047	TQ4661679990	17.62	Parks and Gardens	Park		SINC (GrBI15 33%) Local Park and Open Space (Birchmere Park)	Free	All weather playing pitch Dog litter bins/area Litter bins Play for 7-13 Play for under 7s Seats
Bishop John Robinson School	OS_Gr_0050	TQ4713080942	0.56	Amenity	Educational				Litter bins Play for under 7s Seats
Boiler House green	OS_Gr_0466	TQ4721380501	0.73	Amenity	Amenity green space	Road island/verge		Free	
Byron Close verge	OS_Gr_0070	TQ4716580352	0.58	Green Corridors	Road island/verge	Amenity green space		Free	
Carlyle Rd/Central Way roundabout	OS_Gr_0075	TQ4688180890	0.28	Green Corridors	Road island/verge			Free	
Castillion Primary School	OS_Bx_0046	TQ4731381127	0.93	Amenity	Educational	Park		Free	Litter bins Seats
Crossnes Salt Marsh	OS_Bx_0065	TQ4950480780	4.95	Green Corridors	River		SINC (M031 96%)	De facto	
Crossness Nature Reserve - Conservation Area	OS_Bx_0270	TQ4918680366	4.13	Natural and Semi-natural Urban Greenspace	Nature reserve		LNR (98%) SINC (M041 100%) Metropolitan Open Land (100%)	Restricted	
Crossness Path	OS_Bx_0068	TQ4788281401	3.81	Green Corridors	River		SINC (BxBI01 8%) SINC (M031 89%) Linear Open Space (Crossness Path) Metropolitan Open Land (21%)	Free	
Crossness Sea Wall	OS_Bx_0069	TQ4969880674	3.86	Natural and Semi-natural Urban Greenspace	Nature reserve		LNR (29%) SINC (M041 46%) Local Park and Open Space (Crossness Sea Wall) Metropolitan Open Land (32%)	Free	
Crossness Sewage Treatment Works	OS_Bx_0066	TQ4871980582	76.23	Other	Sewage/water works	Private woodland; Vacant land	SINC (BxBII25 4%) SINC (M041 21%) Metropolitan Open Land (65%)	None	Car parking
Crossness - Tump	OS_Bx_0067	TQ4766681247	4.95			Landscaping around premises; Park	SINC (BxBI01 93%)	Free	Litter bins Seats
Crossway Drain	OS_Gr_0099	TQ4719580598	0.68	Amenity	Amenity green space	Canal		Free	

Site Name	Site ID	Grid Ref	Site Area (ha)	Open Space Typology			Public Open Space Awards and Designations	Public Access	Facilities
				Land use category	Primary use	Secondary uses			
Crossway Park	OS_Bx_0070	TQ4765180559	17.72	Parks and Gardens	Park	Recreation ground	SINC (BxL07 86%) Local Park and Open Space (Crossway Park) Metropolitan Open Land (89%)	Free	BMX track Litter bins Seats
Drain N of Bentham Rd	OS_Gr_0103	TQ4679580354	0.57	Green Corridors	Canal		SINC (GrBI02 68%)	Free	
Eastern Way treeline	OS_Gr_0110	TQ4642279802	0.30	Green Corridors	Road island/verge			Free	
East Hindermans Rough	OS_BD_0055	TQ4866282143	0.96					None	
Erith Marshes South	OS_Bx_0084	TQ4849280050	48.61	Other Urban Fringe	Agriculture		SINC (M041 68%) Metropolitan Open Land (67%)	None	
Erith Marshes Wasteland	OS_Bx_0274	TQ4844979723	1.14	Other	Vacant land		SINC (BxBII02 90%) SINC (M041 10%) Metropolitan Open Land (92%)	Free	
Erith Marshes West Horse Pasture	OS_Bx_0275	TQ4805079764	2.71	Other Urban Fringe	Agriculture		SINC (BxBII02 92%) Metropolitan Open Land (96%)	None	
Goresbrook	OS_BD_0077	TQ4822082820	7.67	Green Corridors	River		SINC (B&DBI07 94%) Green chain	De facto	
Grange Crescent	OS_Bx_0104	TQ4729580919	0.77	Parks and Gardens	Park		SINC (BxL07 35%) Small Open Space (Grange Crescent)	Free	Litter bins Seats
Greenhaven Drive bank	OS_Gr_0162	TQ4681880952	0.36	Amenity	Amenity green space	Landscaping around premises		Free	
Hawksmoor Park	OS_Gr_0176	TQ4674480467	2.98	Parks and Gardens	Park	Nature reserve	SINC (GrBI02 48%) Local Park and Open Space (Hawksmoor Park)	Free	All weather playing pitch Historic features Litter bins Play for under 7s Seats
Hoveton Rd copse	OS_Gr_0195	TQ4702381030	0.14	Other	Vacant land			None	
Jubilee Primary School	OS_Bx_0132	TQ4734280469	1.78	Amenity	Educational		Green chain Metropolitan Open Land (96%)		
Manor Way Green (Greenwich)	OS_Gr_0223	TQ4721280907	1.81	Parks and Gardens	Park			Free	Dog litter bins/area Litter bins Play for under 7s Seats
Manorway green west	OS_Gr_0224	TQ4702680909	0.61	Amenity	Amenity green space	Landscaping around premises		Free	Dog litter bins/area Litter bins
Marshall Path green	OS_Gr_0227	TQ4684180753	0.44	Amenity	Landscaping around premises			Free	Dog litter bins/area Litter bins Play for under 7s Seats
Nickleby Close green	OS_Gr_0268	TQ4722581209	0.63	Parks and Gardens	Park			Free	Dog litter bins/area Litter bins Seats
Passfield Path green	OS_Gr_0279	TQ4687080614	0.24	Amenity	Landscaping around premises			Free	Dog litter bins/area Play for under 7s
Police Station Green	OS_Gr_0302	TQ4698680583	0.79	Amenity	Amenity green space	Road island/verge		Free	All weather playing pitch Litter bins Play for under 7s Seats
Poplar Place rough	OS_Gr_0305	TQ4729380291	0.10	Green Corridors	Road island/verge				
Poplar Wood	OS_Bx_0278	TQ4846379680	6.54	Natural and Semi-natural Urban Greenspace	Public woodland		SINC (BxBII02 96%) Local Park and Open Space (Poplar Wood) Metropolitan Open Land (100%)	Free	

Site Name	Site ID	Grid Ref	Site Area (ha)	Open Space Typology			Public Open Space Awards and Designations	Public Access	Facilities
				Land use category	Primary use	Secondary uses			
Ridgeway	OS_Gr_0318	TQ4620979528	10.90	Green Corridors	Walking/cycling route		SINC (GrBII06 87%)	Free	
River Thames	OS_MB_0020	TQ3920978923	2129.56	Green Corridors	River		SINC (M031 99%) Linear Open Space (River Thames) Metropolitan Open Land (9%)	Free	Cycle paths Information Litter bins Public art Seats Waymarked walking route
Southern Outfall Sewer	OS_Bx_0215	TQ4772480367	5.47	Other	Sewage/water works		SINC (BxL16 96%) Green chain Metropolitan Open Land (94%)	De facto	
Southlake Primary School	OS_Bx_0216	TQ4766279709	3.49	Amenity	Educational		Metropolitan Open Land (88%)		
Southmere Park and Lake	OS_Bx_0217	TQ4779880055	27.27	Parks and Gardens	Park	Landscaping around premises; Other recreational	SINC (BxBII02 87%) SINC (M041 5%) District Park (Southmere Park And Lake) Green chain Metropolitan Open Land (96%)	Free	Litter bins Seats
St John Fisher School	OS_Bx_0219	TQ4811279458	1.08	Amenity	Educational				
Tawney/Atlee Rd verge	OS_Gr_0362	TQ4685880836	0.30	Green Corridors	Road island/verge			Free	
Thamesmead Golf Course	OS_Bx_0232	TQ4809780983	16.88	Outdoor Sports Facilities	Golf course	Landscaping around premises; Vacant land	SINC (BxBI14 74%) Metropolitan Open Land (95%)	Free	Golf course Litter bins Seats
Thamesmead Green Chain Walk	OS_Bx_0233	TQ4784279279	3.75	Parks and Gardens	Park		SINC (BxBII02 96%) Local Park and Open Space (Thamesmead Green Chain Walk) Green chain Metropolitan Open Land (100%)	Free	Litter bins Seats
Thames Path in Greenwich	OS_Gr_0562	TQ4329980066	13.38	Green Corridors	Walking/cycling route		SINC (M031 31%)	Free	Historic features Information Litter bins Sculptures/monuments Seats
The Business Academy Bexley (Primary Section)	OS_Bx_0279	TQ4856579486	5.76	Amenity	Educational		SINC (BxBII02 26%) Metropolitan Open Land (95%)	De facto	
Waterways Community Nursery	OS_Gr_0403	TQ4680780200	0.23	Amenity	Landscaping around premises			None	All weather playing pitch Seats
West Hindermans Rough	OS_BD_0226	TQ4842882262	2.08	Other	Vacant land			De facto	

8.0 Contacts

8.1 Borough Contacts

Further details of sites and species within the search area may be gathered from the following borough contacts:

London Borough of Barking and Dagenham

Linda Beard
Environmental Sustainability Officer
Regeneration and Economic Development
3rd Floor, Maritime House
1 Linton Road
Barking
IG11 8HG

Tel: [redacted]
Email: [redacted]

London Borough of Bexley

Mark Taylor
Parks Nature Conservation and Community Officer
Crayford Town Hall
Crayford Road
Kent
DA1 4ER

Tel: [redacted]
Email: [redacted]

London Borough of Greenwich

Holly Weir
Assistant Spatial Strategy Manager
The Woolwich Centre
35 Wellington Street
SE18 6HQ

Tel: [redacted]
Email: [redacted]

8.2 Further Contacts

The following contacts work closely with GiGL and are the best source for further advice or interpretation of the data provided by us. They are widely recognised in Greater London as the experts in their fields, and have provided the following information as the preferred method of contact.

Areas of expertise	**SINCs, open space and habitat survey data advice**
Organisation	**GiGL – Greenspace Information for Greater London**
Email	enquiries@gigl.org.uk
Website	[redacted]

Areas of expertise	**Black redstarts, birds, brown and green roofs**
Name	**Dusty Gedge**
Organisation	**Livingroofs.org**
Email	[redacted]
Website	[redacted]

Areas of expertise	**Bats**
Organisation	**London Bat Group**
Email	enquiries@londonbats.org.uk
Website	[redacted]

Areas of expertise	**Regional biodiversity action plans**
Organisation	**London Biodiversity Partnership**
Website	[redacted]

Areas of expertise	**Area recorders for birds (Inner London, Kent, Surrey, Buckinghamshire, Middlesex, and Essex)**
Organisation	**London Natural History Society**
Website	[redacted]

Areas of expertise	**Plant galls**
Name	**Ken Hill**
Organisation	**London Natural History Society**
Email	[redacted]
Website	[redacted]

Areas of expertise	**Odonata - Dragonflies and damselflies**
Name	**Neil Anderson**
Organisation	**London Natural History Society**
Email	[redacted]
Website	[redacted]

Areas of expertise	**Invertebrates**
Name	**Colin W Plant**
Organisation	**London Natural History Society**
Email	[redacted]
Website	[redacted]

Areas of expertise	**Lichens and Fungi**
Name	**Ted Tuddenham**
Organisation	**London Natural History Society**
Email	[redacted]
Website	[redacted]

Areas of expertise	**Butterflies**
Name	**Leslie Williams**
Organisation	**London Natural History Society**
Email	[redacted]
Website	[redacted]

Areas of expertise	**Vascular plants**
Name	**Mark Spencer**
Organisation	**London Natural History Society**
Email	[redacted]
Website	[redacted]

Areas of expertise	**General conservation advice**
Name	**Conservation Programmes Manager**
Organisation	**London Wildlife Trust**
Email	enquiries@wildlondon.org.uk
Website	[redacted]

Areas of expertise	**Statutory site advice**
Name	**Conservation Officer**
Organisation	**Natural England**
Email	london@naturalengland.org.uk
Website	www.naturalengland.org.uk

Areas of expertise	**London Invasive Species Initiative**
Name	**Joanna Heisse**
Organisation	**Environment Agency**
Email	Joanna.heisse@environment-agency.gov.uk
Website	[redacted]

Areas of expertise	**Geological Designations**
Organisation	**London Geodiversity Partnership**
Email	info@londongeopartnership.org.uk
Website	[redacted]

Annex A - MAPS

Statutory Sites Map

SINCs Map

Proposed SINCs Map

RIGS or LIGS Map

Survey Parcels Map

Open Space Map

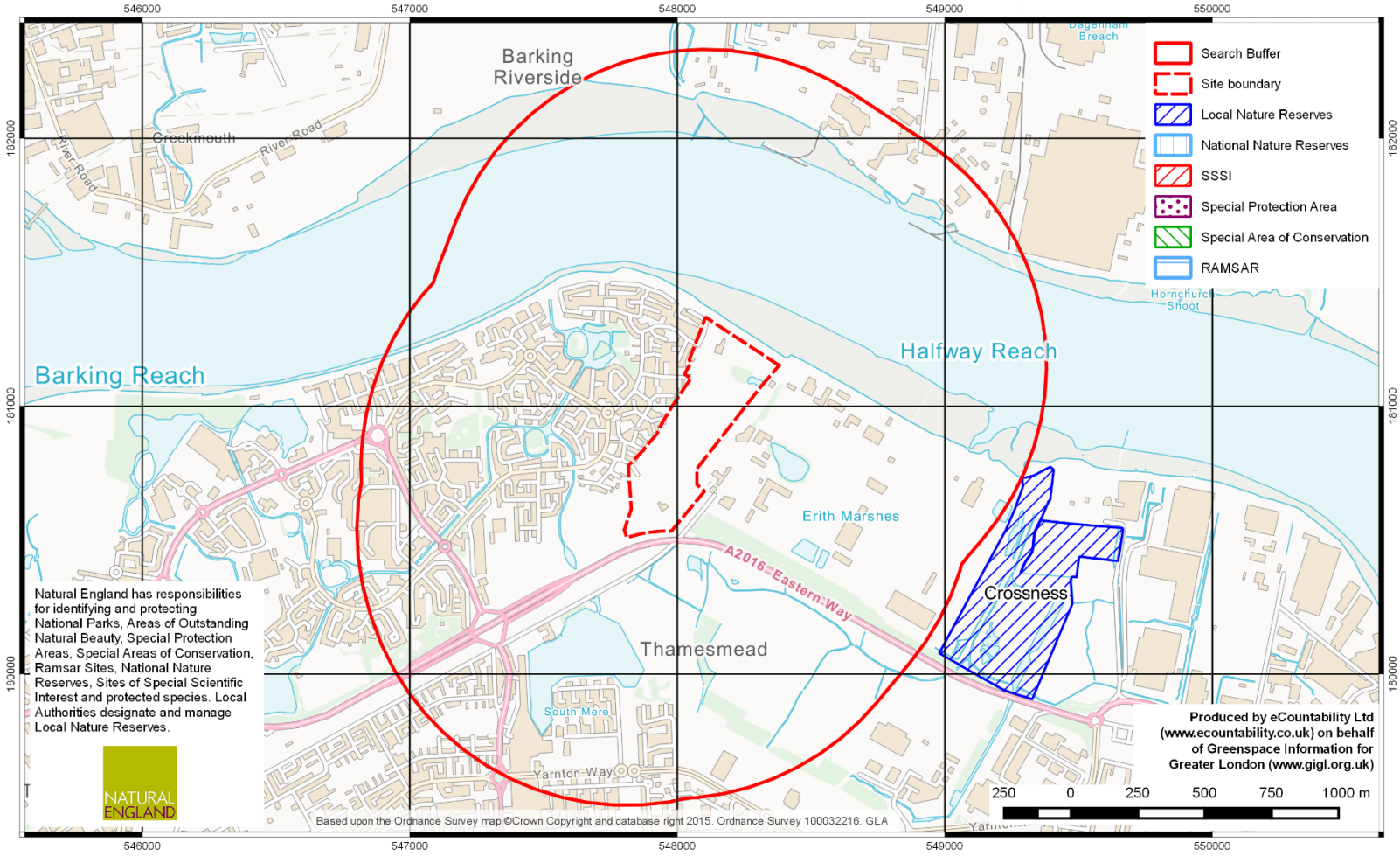
Green Belt and Metropolitan Open Land Map

Statutory Site Designations

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC the capital's environmental records centre

eCountability

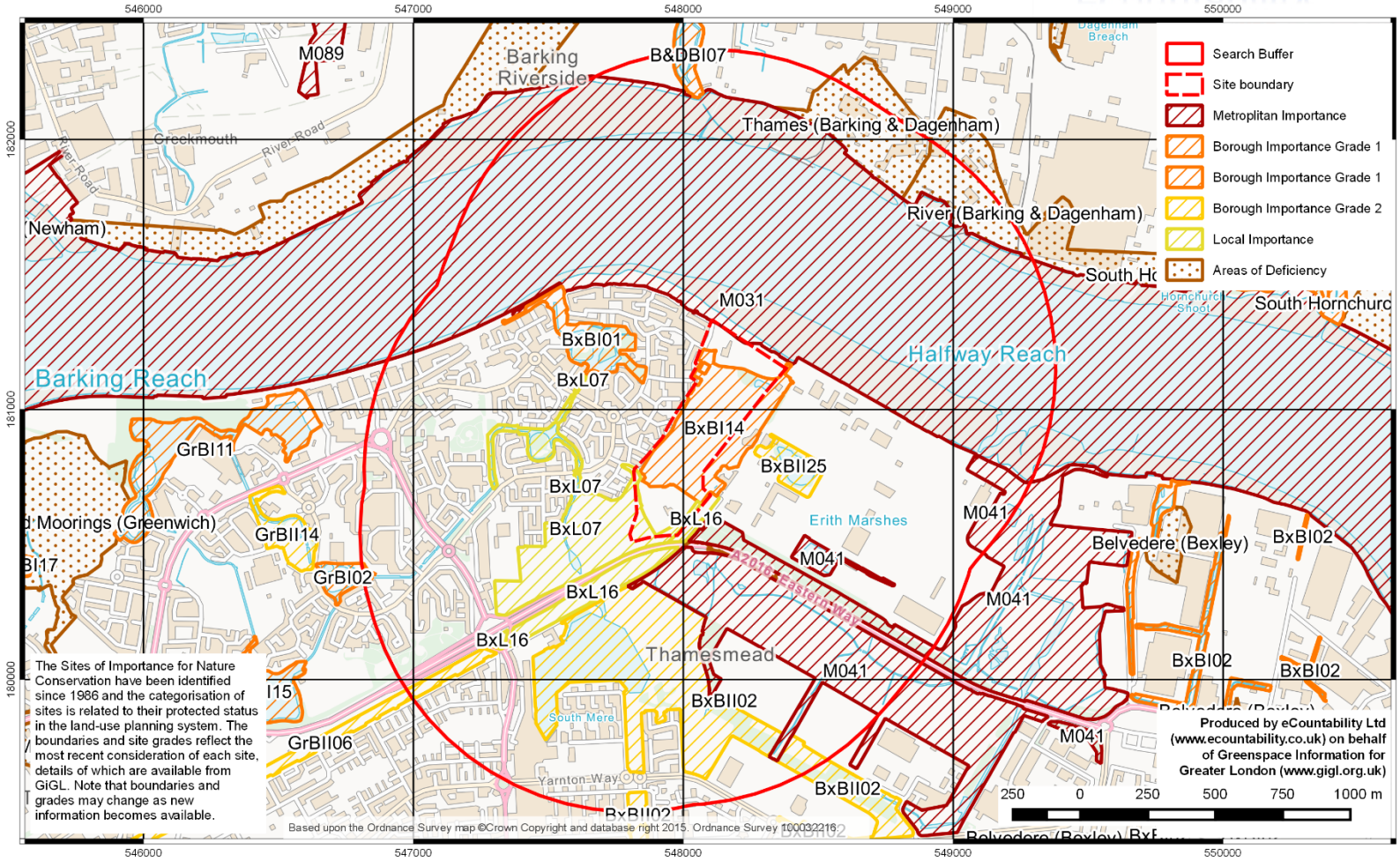


Sites of Importance for Nature Conservation

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC
the capital's environmental records centre

eCountability

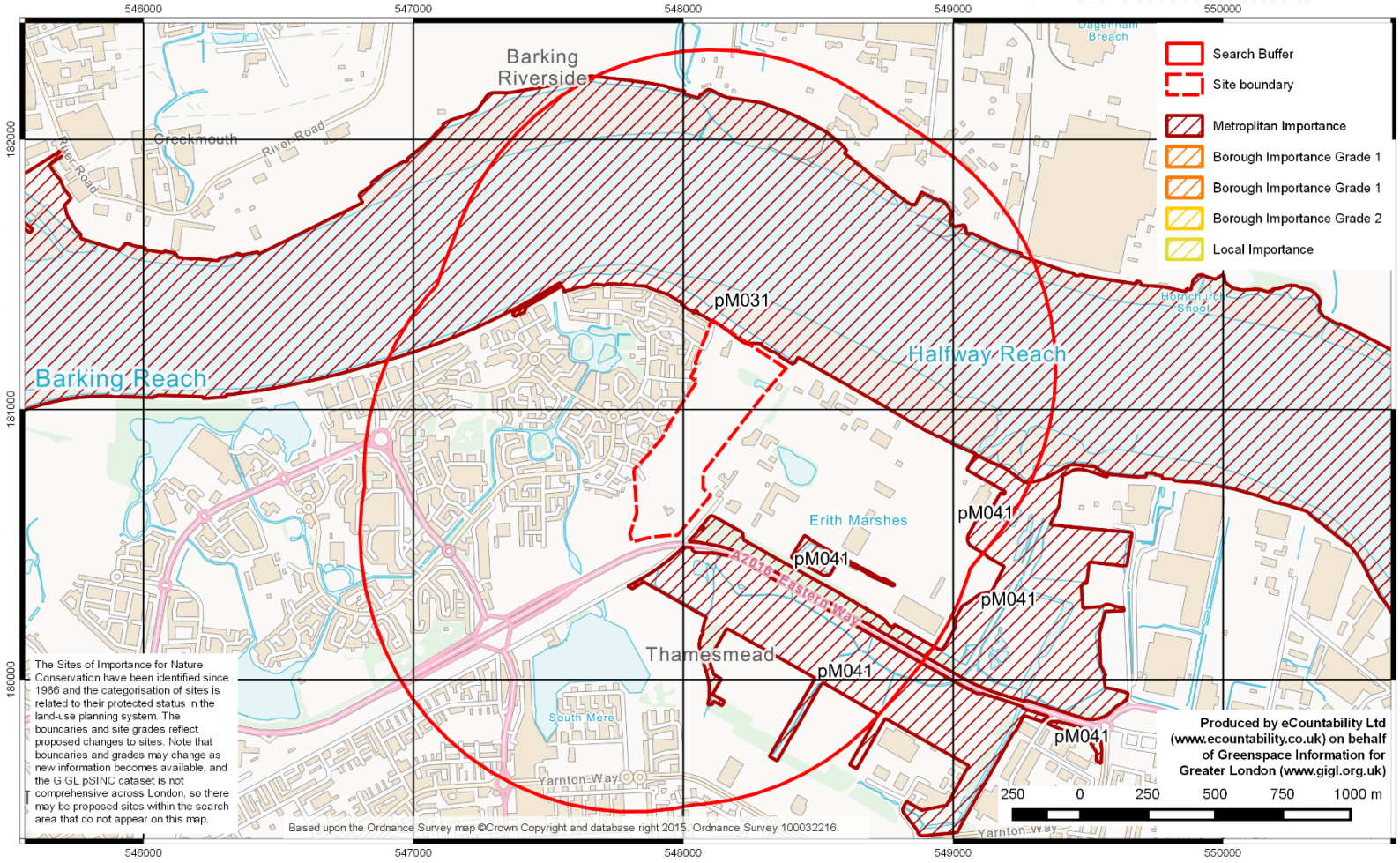


Proposed Sites of Importance for Nature Conservation

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC
the capital's environmental records centre

eCountability



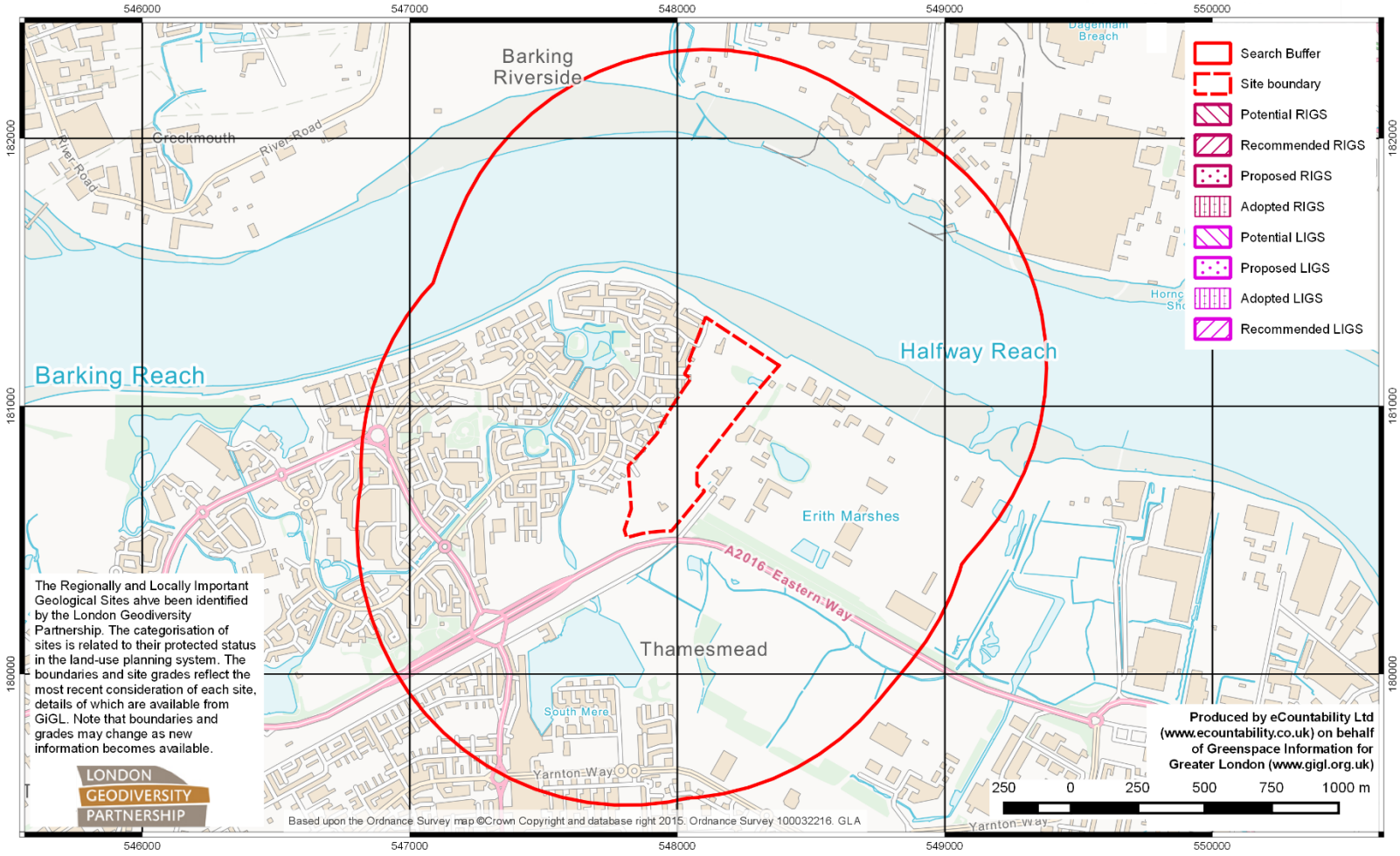
The Sites of Importance for Nature Conservation have been identified since 1986 and the categorisation of sites is related to their protected status in the land-use planning system. The boundaries and site grades reflect proposed changes to sites. Note that boundaries and grades may change as new information becomes available, and the GiGL pSINC dataset is not comprehensive across London, so there may be proposed sites within the search area that do not appear on this map.

Important Geological/Geomorphological Sites

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC
the capital's environmental records centre

eCountability

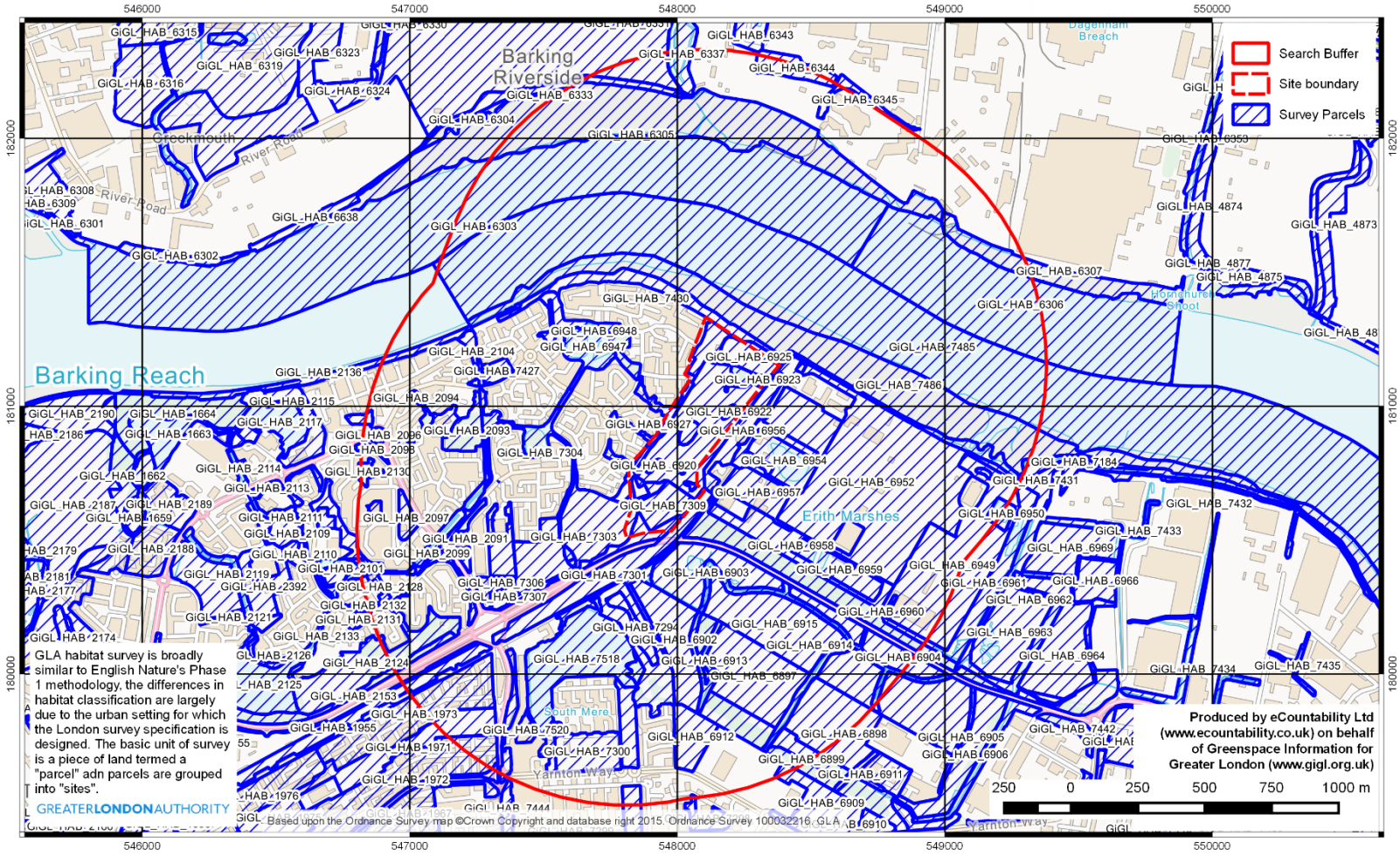


Habitat Survey Parcels

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC
the capital's environmental records centre

eCountability

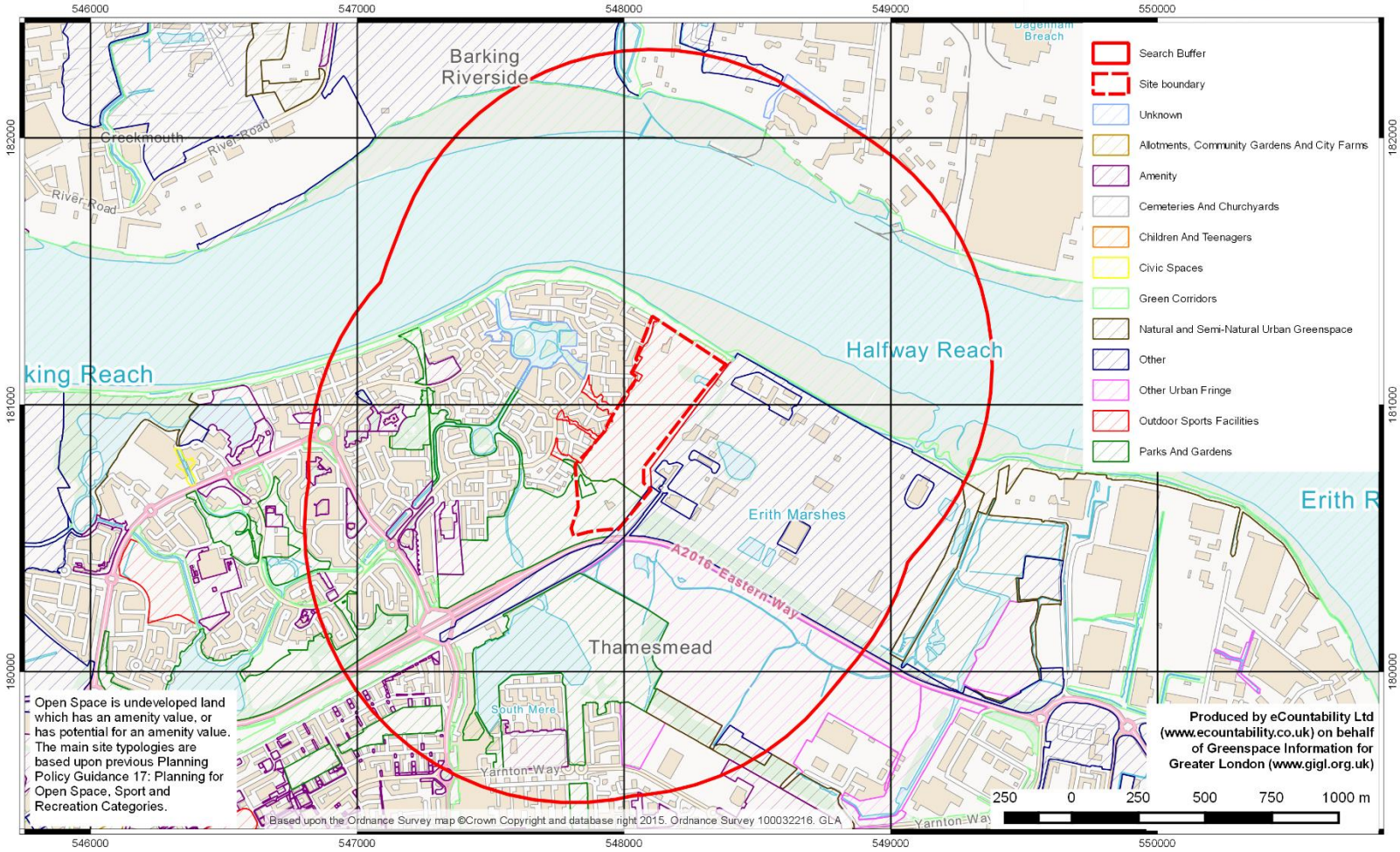


Open Spaces

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC the capital's environmental records centre

eCountability

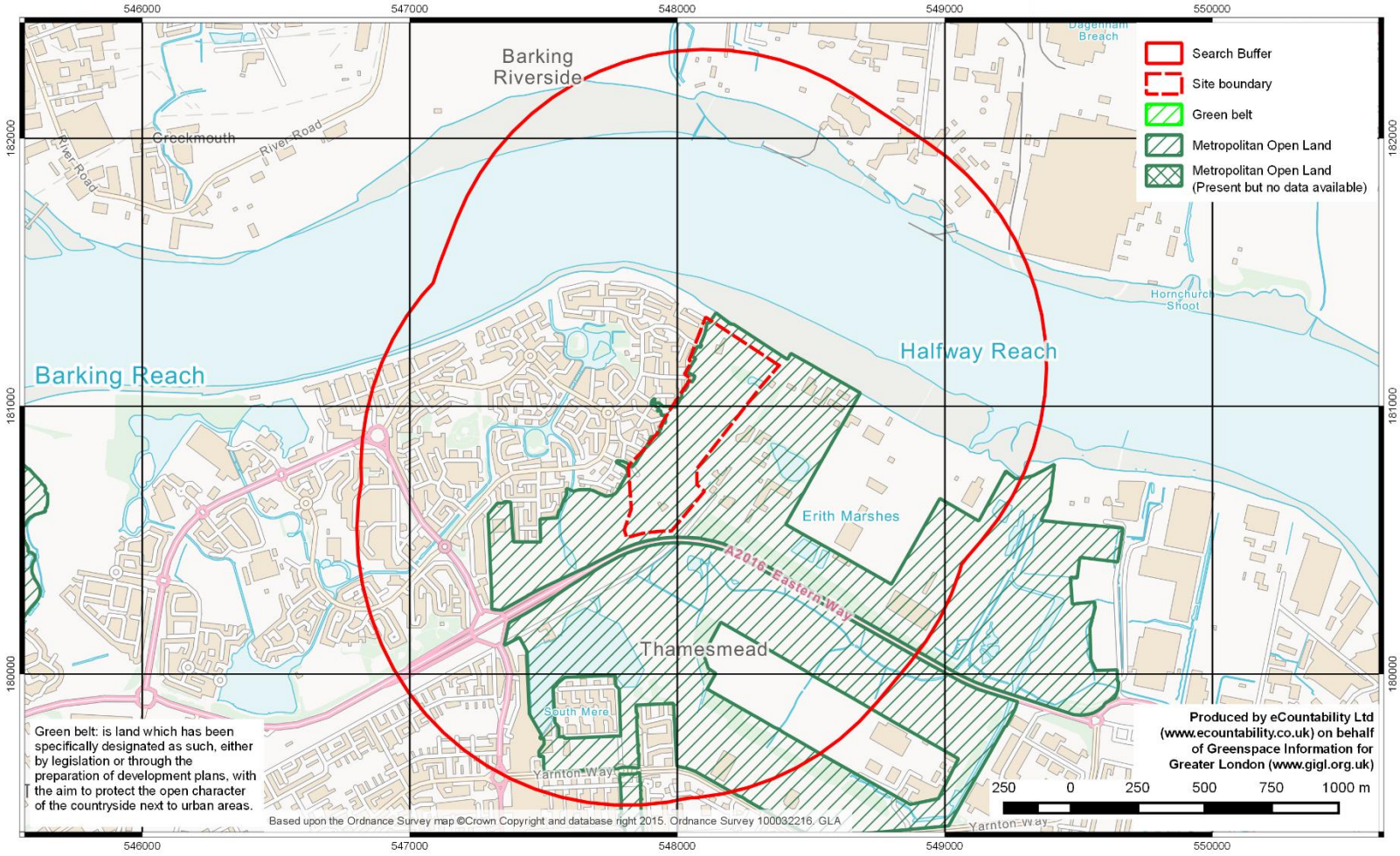


Green Belt

Ecological Data Search for EPR
Crossness Park, 04 June 2022

GiGL Greenspace Information for Greater London CIC
the capital's environmental records centre

eCountability



Annex B - Supporting Information

Statutory Site Designations

Local Nature Reserve (LNR)
Land owned, leased or managed by Local Authorities and designated under the National Parks and Access to the Countryside Act. A site of some nature conservation value managed for educational objectives — no need for SSSI status. In some cases it is managed by a non-statutory body (e.g. London Wildlife Trust). Local Authorities have the power to pass bylaws controlling (e.g.) access, special protection measures.

Site of Special Scientific Interest (SSSI)
Area notified under the Wildlife and Countryside Act, 1981, by English Nature, the Countryside Council for Wales or Scottish Heritage as being of special interest for nature conservation. Consultation and some form of agreement with the national statutory conservation agency is mandatory before any listed, potentially damaging development, change in land use, etc. can be carried out. SSSI notification forms the statutory bedrock for site protection, although experience has shown that even SSSIs are not sacrosanct.

Biological SSSIs form a national network of wildlife sites in which each site is a distinct discrete link. Sites are selected in such a way that the protection of each site, and hence the network, aims to conserve the minimum area of wildlife habitat necessary to maintain the natural diversity and distribution of Britain's native flora and fauna and the communities they comprise. Each site, therefore, is of national significance for its nature conservation value. The vast majority of SSSIs, and indeed most areas of semi-natural habitat, cannot be created within human time scales and are therefore considered irreplaceable.

Geological SSSIs—more correctly termed Earth Science SSSIs—are the best sites chosen for their research value, the criterion being that they are of national or international importance. Earth Science conservation is concerned with the maintenance of our geological and geomorphological heritage.

National Nature Reserve (NNR)
Statutory reserve established for the nation under the Wildlife and Countryside Act, 1981. NNRs may be owned by a relevant national body (e.g. English Nature in England) or by established agreement; a few are owned and managed by non-statutory bodies. NNRs cover a selection of the most important sites for nature conservation in the UK.

Special Area of Conservation (SAC) and Special Protection Area (SPA)
SACs and SPAs are areas designated under European law and are the most important sites for wildlife in the UK. SACs are designated under the European Habitats Directive (Council Directive 92/43/EEC) and SPAs under the European Birds Directive (Council Directive 79/409/EEC). Both the Habitats and Birds Directive provide for the creation of a network of protected wildlife areas across the EU, to be known as "Natura 2000". The designations aim to conserve important or threatened species and habitats and provide them with increased protection and management.

Ramsar sites
Ramsar sites are wetlands of international importance designated under the Ramsar Convention. The initial emphasis was on selecting sites of importance to waterbirds within the UK, and consequently many Ramsar sites are also Special Protection Areas (SPAs) classified under the Birds Directive. Non-bird features are now increasingly taken into account, both in the selection of new sites and when reviewing existing sites.

SINC Designations

Sites of Importance for Nature Conservation

1 The different kinds of sites and areas

1.1 There are three kinds of site, which are chosen on the basis of their importance to a particular defined geographic area. This use of search areas is an attempt, not only to protect the best sites in London, but also to provide each part of London with a nearby site, so that people are able to have access to enjoy nature.

Sites of Metropolitan Importance

1.2 Sites of Metropolitan Importance for Nature Conservation are those sites which contain the best examples of London's habitats, sites which contain particularly rare species, rare assemblages of species or important populations of species, or sites which are of particular significance within otherwise heavily built-up areas of London.

1.3 They are of the highest priority for protection. The identification and protection of Metropolitan Sites is necessary, not only to support a significant proportion of London's wildlife, but also to provide opportunities for people to have contact with the natural environment.

1.3.1 The best examples of London's habitats include the main variants of each major habitat type, for example hornbeam woodland, wet heathland, or chalk downland. Habitats typical of urban areas are also included, e.g. various types of abandoned land colonised by nature (‘wasteland’ or ‘unofficial countryside’). Those habitats which are particularly rare in London may have all or most of their examples selected as Metropolitan Sites.

1.3.2 Sites of Metropolitan Importance include not only the best examples of each habitat type, but also areas which are outstanding because of their assemblage of habitats, for example the Crane corridor, which contains the River Crane, reservoirs, pasture, woodland and heathland.

1.3.3 Rare species include those that are nationally scarce or rare (including Red Data Book species) and species which are rare in London.

1.3.4 A small number of sites are selected which are of particular significance within heavily built up areas of London. Although these are of lesser intrinsic quality than those sites selected as the best examples of habitats on a London-wide basis they are outstanding oases and provide the opportunity for enjoyment of nature in extensive built environments. Examples include St James's Park, Nunhead Cemetery, Camley Street Natural Park and Sydenham Hill Woods. In some cases (e.g. inner London parks) this is the primary reason for their selection. For sites of higher intrinsic interest it may only be a contributory factor. Only those sites that provide a significant contribution to the ecology of an area are identified.

1.3.5 A small number of sites are selected which are of particular significance within heavily built up areas of London. Although these are of lesser intrinsic quality than those sites selected as the best examples of habitats on a Londonwide basis they are outstanding oases and provide the opportunity for enjoyment of nature in extensive built environments. Examples include St James’s Park, Nunhead Cemetery, Camley Street Natural Park and Sydenham Hill Woods. In some cases (e.g. inner London parks) this is the

primary reason for their selection. For sites of higher intrinsic interest it may only be a contributory factor. Only those sites that provide a significant contribution to the ecology of an area are identified.

1.4 Should one of these sites be lost or damaged, something would be lost which exists in a very few other places in London. Management of these sites should as a first priority seek to maintain and enhance their interest, but use by the public for education and passive recreation should be encouraged unless these are inconsistent with nature conservation.

Sites of Borough Importance

1.5 These are sites which are important on a borough perspective in the same way as the Metropolitan sites are important to the whole of London. Although sites of similar quality may be found elsewhere in London, damage to these sites would mean a significant loss to the borough. As with Metropolitan sites, while protection is important, management of Borough sites should usually allow and encourage their enjoyment by people and their use for education.

1.6 In defining Sites of Borough Importance, the search is not confined rigidly to borough boundaries; these are used for convenience of defining areas substantially smaller than the whole of Greater London, and the needs of neighbouring boroughs should be taken into account. In the same way as for Sites of Metropolitan Importance, parts of some boroughs are more heavily built-up and some borough sites are chosen there as oases providing the opportunity for enjoyment of nature in extensive built environments.

1.7 Planning Policy Statement on Biodiversity and Geological Conservation (2005), in paragraph 5 (i), states that local development frameworks should indicate the location of designate sites for biodiversity and geodiversity, including locally designated sites..

1.8 Since essentially a comparison within a given borough is made when choosing Sites of Borough Importance, there is considerable variation in quality between those for different boroughs; for example, those designated in Barnet will frequently be of higher intrinsic quality than those in Hammersmith and Fulham, a borough comparatively deficient in wildlife habitat. Only those sites that provide a significant contribution to the ecology of an area are identified.

Sites of Local Importance

1.9 A Site of Local Importance is one which is, or may be, of particular value to people nearby (such as residents or schools). These sites may already be used for nature study or be run by management committees mainly composed of local people. Where a Site of Metropolitan or Borough Importance may be so enjoyed it acts as a Local site, but further sites are given this designation in recognition of their role. This local importance means that these sites are also deserving protection in planning.

1.12 Local sites are particularly important in areas otherwise deficient in nearby wildlife sites. To aid the choice of these further local sites, Areas of Deficiency (see below) are identified. Further Local sites are chosen as the best available to alleviate this deficiency; such sites need not lie in the Area of Deficiency, but should be as near to it as possible. Where no such sites are available, opportunities should be taken to provide them by habitat enhancement or creation, by negotiating access and management agreements, or by direct acquisition. Only those sites that provide a significant contribution to the ecology of an area are identified.

Areas of Deficiency

Areas of Deficiency are defined as built-up areas more than one kilometre actual walking distance from an accessible Metropolitan or Borough site. These aid the choice of Sites of Local Importance (see above).

Geological Designations

Regionally Important Geological/geomorphological Sites (RIGS) and Locally Important Geological Sites (LIGS)

Government guidance uses the term *Local Sites* for non-statutory geological sites, as distinct from the Sites of Special Scientific Interest [SSSIs] which are protected by government statute.

- In England they are often called *Local Geological Sites*.
- In Scotland they are often called *Local Geodiversity Sites*.
- In Wales they are called *Regionally Important Geodiversity Sites*.

NOTE: The term *Regionally Important Geological/geomorphological Sites (RIGS)*, which has been in usage now for many years and is still used to describe Local Geological/geodiversity Sites, should be regarded as synonymous to Local Geological Sites. In London, the term RIGS has been retained to cover those sites that are worthy of protection for their geodiversity importance at the London-wide level.

RIGS were established in 1990 by the Nature Conservancy Council (NCC) (predecessor of English Nature and Natural England). They have support from Natural England and other national agencies, and are increasingly recognised by local planning authorities. To date RIG Sites have been selected by voluntary groups, Local geoconservation groups (lately known as RIGS groups), which are generally formed by county or by unitary authority area in England. There are more than 50 local groups in the UK, though not all are active. There are 3 active groups in London, South London RIGS, North West London RIGS and GeoEssex, but to date no RIGS have been formally designated in Greater London.

RIGS are currently the most important designated places for geology and geomorphology outside statutorily protected land such as SSSIs. The designation of RIGS is one way of recognising and protecting important geodiversity and landscape features for future generations to enjoy. RIGS are equivalent to local Wildlife Sites and other non-statutory wildlife designations. They can be listed in local authorities' development plans and shown on "alert maps". RIGS can be protected through the planning system if a RIGS group recommends sites to the local planning authority.

Guidance on RIGS is available on the GeoconservationUK website (www.geoconservationuk.org.uk). They are important as an educational, historical and recreational resource. Sites are selected according to:

- the value for educational purposes in life-long learning
- the value for study both by professional and amateur earth scientists
- the historical value in terms of important advances in Earth science knowledge, events or human exploitation
- the aesthetic value in the landscape, particularly in relation to promoting public awareness and appreciation of geodiversity.

RIGS can be viewed as equivalent to Sites of Metropolitan Importance for Nature Conservation (SMIs), which include land of strategic importance for nature conservation and biodiversity across London. They are proposed by the Boroughs in Development plan documents and are confirmed if there is no objection from the Mayor to the proposal. These sites should be protected as set out in Policy 3D.16 of the London Plan.

The London boroughs may also designate certain areas as being of local conservation (including geological) interest (LIGS). The criteria for inclusion, and the level of protection provided, should reflect the local level of importance in the hierarchy of sites.

LIGS are equivalent to Sites of Borough or Local Importance for nature conservation, which are accorded a level of protection commensurate with their borough or local significance. Local site networks provide a comprehensive rather than a representative suite of sites. Defra have published detailed guidance on identification, selection and management of local sites (DEFRA, 2006).

LIGS are designated in the Development Plan Documents prepared under the Town and Country Planning system by the London boroughs and are a material consideration when planning applications are being determined.

The London Plan Implementation Report *London's foundations* (March 2009) describes the geodiversity audit of 36 sites (including the 7 London SSSIs designated for their geodiversity importance). 14 sites were recommended for designation as RIGS and 15 as LIGS. Since publication of *London's foundations*, the London Geodiversity Partnership has published the London Geodiversity Action Plan, which includes a programme of inspection and audit of these sites and other potential sites (98 listed in *London's foundations*) to manage and conserve London's geodiversity.

Species Protections

GiGL has used the conservations designations list created and maintained by the Joint Nature Conservation Committee (JNCC) and used the following designations in the data search report.

International and national legislation

International Legislation	
Birds Directive Annex 1	Birds which are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution. As appropriate, Special Protection Areas to be established to assist conservation measures. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.
Habitats Directive Annex 2 - priority species	Species which are endangered, the conservation of which the Community has a particular responsibility in view of the proportion of their natural range which falls within the territory of the Community. They require the designation of special areas of conservation.
Habitats Directive Annex 2 - non-priority species	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) whose conservation requires the designation of special areas of conservation. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.
Habitats Directive Annex 4	Animal and plant species of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) in need of strict protection. They are protected from killing, disturbance or the destruction of them or their habitat. Note that the contents of this annex have been updated in April 2003 following the Treaty of Accession.
National Legislation	
The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 2)	Schedule 2- European protected species of animals.
The Conservation (Natural Habitats, &c.) Regulations 2010 (Schedule 5)	Schedule 5- European protected species of plants.
Natural Environment and Rural Communities Act 2006 - Species of Principal Importance in England	Species “of principal importance for the purpose of conserving biodiversity” covered under section 41 (England) of the NERC Act (2006) and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.
Wildlife and Countryside Act 1981 (Schedule 1 Part 1)	Birds which are protected by special penalties at all times.
Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (killing/injuring))	Animals which are protected from intentional killing or injuring.
Wildlife and Countryside Act 1981 (Schedule 5 Section 9.1 (taking))	Section 9.1 Animals which are protected from taking.

Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4a)	Section 9.4 Animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection.
Wildlife and Countryside Act 1981 (Schedule 5 Section 9.4b)	Section 9.4 Animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection.
Wildlife and Countryside Act 1981 (Schedule 5)	Cetacean/basking shark that are not allowed to be intentionally or recklessly disturbed.
Wildlife and Countryside Act 1981 (Schedule 8)	Plants which are protected from intentional picking, uprooting or destruction (Section 13 1a); selling, offering for sale, possessing or transporting for the purpose of sale (live or dead, part or derivative) (Section 13 2a); advertising (any of these) for buying or selling (Section 13 2b).
Protection of Badgers Act (1992)	The Protection of Badgers Act 1992 protects badgers from taking, injuring, killing, cruel treatment, selling, possessing, marking and having their setts interfered with, subject to exceptions.

Notable and other species designations

Red Data List	
Bird Population Status - red	Red list species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
IUCN (2001) - Critically endangered	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the criteria A to E for Critically Endangered (see Section V), and it is therefore considered to be facing an extremely high risk of extinction in the wild.
IUCN (2001) - Data Deficient	A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status. A taxon in this category may be well studied, and its biology well known, but appropriate data on abundance and/or distribution are lacking. Data Deficient is therefore not a category of threat. Listing of taxa in this category indicates that more information is required and acknowledges the possibility that future research will show that threatened classification is appropriate. It is important to make positive use of whatever data are available. In many cases great care should be exercised in choosing between DD and a threatened status. If the range of a taxon is suspected to be relatively circumscribed, and a considerable period of time has elapsed since the last record of the taxon, threatened status may well be justified.
IUCN (2001) - Endangered	A taxon is Endangered when the best available evidence indicates that it meets any of the criteria A to E for Endangered (see Section V), and it is therefore considered to be facing a very high risk of extinction in the wild.
IUCN (2001) - Extinct	A taxon is Extinct when there is no reasonable doubt that the last individual has died. A taxon is presumed Extinct when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual), throughout its historic range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.

IUCN (2001) - Extinct in the wild	A taxon is Extinct in the wild in Great Britain when it is known to survive only in cultivation, in captivity or as a naturalised population (or populations) well outside the past range. A taxon is presumed extinct in the wild when exhaustive surveys in known and/or expected habitat, at appropriate times (diurnal, seasonal, annual) throughout its range have failed to record an individual. Surveys should be over a time frame appropriate to the taxon's life cycle and life form.
IUCN (2001) - Regionally Extinct	Category for a taxon when there is no reasonable doubt that the last individual potentially capable of reproduction within the region has died or has disappeared from the wild in the region, or when, if it is a former visiting taxon, the last individual has died or disappeared in the wild from the region. The setting of any time limit for listing under RE is left to the discretion of the regional Red List authority, but should not normally pre-date 1500 AD.
IUCN (2001) - Lower risk - near threatened	A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
IUCN (2001) - Vulnerable	A taxon is Vulnerable when the best available evidence indicates that it meets any of the criteria A to E for Vulnerable (see Section V), and it is therefore considered to be facing a high risk of extinction in the wild.
Other rare/scarce	
Nationally rare marine species	Species which occur in eight or fewer 10km X 10km grid squares containing sea (or water of marine saline influence) within the three mile territorial limit.
Nationally rare	Occurring in 15 or fewer hectads in Great Britain. Excludes rare species qualifying under the main IUCN criteria.
Nationally scarce marine species	Species which occur in nine to 55 10km X 10km grid squares containing sea (or water of marine saline influence) within the three mile territorial limit.
Nationally Notable A	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in 30 or fewer 10km squares of the National Grid or, for less well-recorded groups, within seven or fewer vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Nationally Notable B	Taxa which do not fall within RDB categories but which are none-the-less uncommon in Great Britain and thought to occur in between 31 and 100 10km squares of the National Grid or, for less-well recorded groups between eight and twenty vice-counties. Superseded by Nationally Scarce, and therefore no longer in use.
Nationally scarce	Occurring in 16-100 hectads in Great Britain.
Nationally Notable	Species which are estimated to occur within the range of 16 to 100 10km squares. (subdivision into Notable A and Notable B is not always possible because there may be insufficient information available). Superseded by Nationally Scarce, and therefore no longer in use.
UK BAP	
UK Biodiversity Action Plan priority species	The UK List of Priority Species and Habitats contains 1150 species and 65 habitats that have been listed as priorities for conservation action under the UK Biodiversity Action Plan (UK BAP).
Local List	

London Species of Conservation Concern	London Biodiversity Partnership listed some 300 species of conservation interest occurring in London.
London BAP Priority species	See below.

London Biodiversity Action Plan Species

Rationale for selecting priority species for action

1. Background

The *Greater London Authority Act 1999* requires the elected Mayor to produce a Spatial Development Strategy for London, called the London Plan. The London Plan is the overall strategic plan for London, and it sets out a fully integrated economic, environmental, transport and social framework for the development of the capital to 2031. It forms part of the development plan for Greater London. London boroughs' local plans need to be in general conformity with the London Plan, and its policies guide decisions on planning applications by councils and the Mayor. From 22 July 2011 this replaces the London Plan (consolidated with alterations since 2004 which was published in February 2008.

The London Plan includes an important policy (7.19) Biodiversity and Access to Nature, which links to policies and proposals on approaches to strategic planning in the Mayor's Biodiversity Strategy[1]. Policy 7.19 contains the following statement;

> *The Mayor's Biodiversity Strategy[2] sets out criteria and procedures for identifying land of importance for London's biodiversity for protection in LDFs and identifying areas of deficiency in access to nature. Protecting the sites at all levels, serves to protect the significant areas of Biodiversity Action Plan (BAP) priority habitat in London and most priority species. However, protection of biodiversity outside designated sites will also be needed. The Mayor and the London Biodiversity Partnership have identified targets in Table 7.3 for the re-creation and restoration of priority habitats, as recommended in PPS 9: Biodiversity and Geological Conservation[3].*

This policy is employed by the Mayor of London when considering those larger planning applications referred to him for direction under the *Town and Country Planning (Mayor of London) Order 2000*. Also the London Unitary Development Plans and, increasingly with time, the new Local Development Frameworks of the London Boroughs have to be in general conformity with the London Plan. It is through these local policies that most protection of priority species will occur. The planning protection for priority species should be equivalent to that applying to statutory protected species, although of course development planning can only provide protection from planning-related activities.

The London Biodiversity Partnership (LBP) published its original Audit of habitats and species in 2000. This lists all habitats of interest in London, as these relate to the UK BAP. The Audit also lists some 300 species of conservation interest occurring in London. All of these could not practically be considered as priorities for conservation action in the London BAP. Importantly, the LBP has adopted a practical approach to species conservation, whereby action for species should be considered and incorporated within the action proposed for their relevant habitats whenever possible. Species Action Plans have been produced only for prioritised species that are not so conveniently habitat-specific.

[1] *Connecting with London's nature, The Mayor's Biodiversity Strategy*, GLA July 2002
[2] *Mayor of London. The Mayor's Biodiversity Strategy- connecting with Nature. GLA 2005*
[3] *ODPM PPS9. Biodiversity and geological conservation. 2005*

2. The evaluation process

2.2 Priority Species in London

From the list of Species of Conservation Concern in Greater London, our Priority BAP Species have been identified.

Criteria for selection of UK BAP Priority Species are as follows:

- Species that are globally threatened;
- Species that are rapidly declining in the UK, ie. by more than 50% in the last 25 years.

In accordance with national guidance, London BAP Priority Species must include;

- All UK BAP Priority Species with native or long-established naturalised populations in Greater London.

Further species have been selected using the following criteria;

- Species for which Species Action Plans are currently being implemented in the London BAP;
- Nationally threatened (Red Data listed) species with native or long-established naturalised populations in Greater London;
- UK SCC and declining Nationally Scarce species with significant[4] native or long-established naturalised populations within Greater London, (ie. for which a regional responsibility for conservation may be clearly demonstrated).
- Species with native or long-established naturalised populations that are known to have undergone a recent significant decline in Greater London, or for which Greater London holds the majority of the known UK population.

[4] for example: the only population within its 10km grid square; a population at the edge of a declining species' UK range; a constituent of an isolated UK population; an exceptionally strong core area population

Confidential Records

GiGL holds some species records that are confidential. The fundamental principle is of making available all records, no matter how sensitive, with the appropriate interpretation. However, access to records will be restricted where general availability could pose a real threat to species or habitats, or would compromise the supply of data.

Data supplied in the search reports will be included at the resolution defined either by GiGL Records Advisory Group and / or by the data owner/originator.

The following is the list of species and groups that are treated as confidential.

Common Name	Scientific Name	Additional comments
Badger	*Meles meles*	All records
Adder	*Vipera berus*	All records
Garganey	*Anas querquedula*	Records from April -July only
Pochard	*Aythya ferina*	Records from April -July only
Quail	*Coturnix coturnix*	All records
Red-necked Grebe	*Podiceps grisegena*	Records from April -July only
Black-necked Grebe	*Podiceps nigricollis*	Records from April -July only
Little Egret	*Egretta garzetta*	Records from April -July only
Honey Buzzard	*Pernis apivorus*	Records from April -July only
Red Kite	*Milvus milvus*	Records from April -July only
Marsh Harrier	*Circus aeruginosus*	Records from April -July only
Goshawk	*Accipiter gentilis*	All records
Common Buzzard	*Buteo buteo*	Records from April -July only
Hobby	*Falco subbuteo*	All records
Peregrine Falcon	*Falco peregrinus*	All records
Avocet	*Recurvirostra avosetta*	Records from April -July only
Little Ringed Plover	*Charadrius dubius*	Records from April -July only
Ruff	*Philomachus pugnax*	Records from April -July only
Common Snipe	*Gallinago gallinago*	Records from April -July only
Turtle Dove	*Streptopelia turtur*	Records from April -July only
Barn Owl	*Tyto alba*	All records
Long-eared Owl	*Asio otus*	All records
Short-eared Owl	*Asio flammeus*	Records from April -July only
Nightjar	*Caprimulgus europaeus*	All records
Woodlark	*Lullula arborea*	All records
Tree Pipit	*Anthus trivalis*	Records from April-July only
Black Redstart	*Phoenicurus ochruros*	Records from April -July only
Cetti's Warbler	*Cettia cetti*	All records
Marsh Warbler	*Acrocephalus palustris*	All records
Dartford Warbler	*Sylvia undata*	All records
Firecrest	*Regulus ignicapilla*	Records from April -July only
Bearded Tit	*Panurus biarmicus*	All records
Willow Tit	*Poecile montanus*	All records
Marsh Tit	*Poecile palustris*	Records from April -July only
Golden Oriole	*Oriolus oriolus*	All records
Hawfinch	*Coccothraustes coccothraustes*	All records
Corn Bunting	*Miliaria calandra*	All records
Lesser-spotted Woodpecker	*Dendrocopus minor*	Records from April -July only
Lizard orchid	*Himantoglossum hircinum*	All records
Cannabis	*Cannabis sativa*	All records

London Invasive Species Initiative overview

The London Invasive Species Initiative (LISI)
The London Invasive Species Initiative encourages better co-ordination and partnership working to prevent, reduce and eliminate the impacts caused by invasive non-native species across the city. It is a sub-group of the London Biodiversity Partnership and has a wide membership, spanning several sectors and organisations.

LISI sub-group
Invasive non-native species are widely recognised as a major threat to biodiversity, second only to habitat loss. They can also have serious economic impacts and impacts on social, health and amenity resources.

Following on from the creation of the GB Non-Native Species Co-ordinating Mechanism, DEFRA published the 'Invasive Non-native species framework strategy for GB' in 2008. Parallel to this, a number of regional initiatives have been set up across the country which helps implement the various policy documents at a regional and sub-regional level. As such, a London Invasive Species Initiative has been formed to work within this context.

There are many species present in London, most of the non-native species do not pose a threat to biodiversity and add to the individuality and richness of London's wildlife and heritage. However, there are some invasive non-native species which are a cause for concern, some of which are already threatening the value of London's natural environment. Uniquely, the highly urbanised nature of London and the anticipated impacts of climate change are likely to exacerbate the effects of invasive non-native species. Finally, London is an international city and has a higher risk of new non-native species appearing and becoming invasive than some other areas.

The presence of a LISI species on or near a site has the following implications:

- The presence of an invasive species may threaten the ecological value of a site and cause additional socio-economic impacts.
- There is a statutory requirement under the Wildlife and Countryside Act 1981 to ensure that non-native species are not introduced or spread in the wild. Species listed in Schedule 9 of the act are known to be established in the wild and care should be taken to ensure that where present, these are not spread through site activities.
- In addition to establishing appropriate biosecurity measures, management may be required to eradicate, control or mitigate the species.

The LISI group was set up as a sub-group of the London Biodiversity Partnership in late 2009 and has since worked on prioritising species for London, providing advice, raising awareness and co-ordinating action on the ground.

Group membership is open to all interested organisations with an interest in invasive non-native species, particularly those seeking to work in partnership to tackle the problems caused by them. The Environment Agency currently chairs the group.

Joining the LISI group will enable:

- A more efficient and co-ordinated approach to tackling invasive non-native species, including practical action on the ground.
- A more co-ordinated approach will enable organisations to have up to date data on distribution and spread of invasive non-native species as well as work more closely with local groups and organisations to tackle these issues. This will lead to a reduction in resources spent in some locations in the long term.
- Habitat and environmental enhancements.

- Partnership work.

The group's objectives
The LISI objectives mirror the Convention for Biological Diversity's "guiding principles of prevention, detection/surveillance and control/eradication of invasive species" and cover the following points:

- Collating and monitoring data on the distribution and spread of invasive species in London.
- Developing action plans to address the species of most urgent concern.
- Facilitating control and eradication projects for high priority species.
- Providing a link between research and practitioners (to help to support the evidence base for invasive species impacts and/or control measures).
- Act as an early warning system for new and emerging invasive species.
- Promoting awareness of the risks and impacts associated with invasive species.

LISI species of concern
A list of invasive non-native species of concern for London has been drawn up using several sources of information: Schedule 9 of the Wildlife and Countryside Act 1981, The UK Water Framework Directive Technical Advisory Group's invasive species list and local knowledge. The resulting list presents a number of species either present in London and causing impacts for which action, monitoring or research is needed. The highest priority for London is also the prevention of new species arriving, particularly those for which national alerts are in place through the GB Non-Native Species Secretariat.

Each species has been assigned a category for action as follows:

1. Species not currently present in London but 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, this should be reported to GIGL or LISI to ensure that action is taken rapidly.
2. Species of high impact or concern present at specific sites that require attention (control, management, eradication etc). Such species are priority species for action in London and LISI encourages this wherever possible.
3. Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control/eradicate. These species are species currently causing large scale impacts across London and LISI supports area or catchment wide partnership working to ensure this.
4. Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required. Appropriate biosecurity is required for sites where these species are found.
5. Species for which insufficient data or evidence was available from those present to be able to prioritise.
6. Species that were not currently considered to pose a threat or have the potential to cause problems in London.

Further information:
For further information relating to LISI please contact – enquiries@londonisi.org.uk

For further guidance on invasive non-native species, including management guidance and advice, please see the GB Non-Native Species Secretariat:
https://secure.fera.defra.gov.uk/nonnativespecies/home/index.cfm

Habitat Classifications

The habitat data includes the most recent habitat survey information for a given area. The data includes information collected using different habitat surveying methodologies.

GLA habitat surveys

The GLA conducted a series of rolling habitat surveys between the mid-1980s and 2009. It used the habitat typologies developed specifically for Greater London.

1 Survey information

1.1 In order to choose sites for protection it is necessary to have good survey information on the habitats and species of all candidate areas.

The London Wildlife Habitat Survey

1.2 Information on wildlife habitats can be collected in a standardised, comprehensive survey. We are fortunate in London in having such a survey, first carried out by the London Wildlife Trust for the Greater London Council in 1984/85, and updated and extended in various surveys since, including re-examination of sites to be described in the handbook series or in relation to proposed developments or management. In a number of London boroughs a systematic survey has been carried out using the London Ecology Unit's specification since 1985. The specification was updated in 2000, when the GLA was established, to collect additional data required for open space planning. The format of the survey is similar to those usually described as ‘Phase I’ or ‘Field by Field’, but is enhanced by the extensive use of standardised written notes. The Authority holds this survey information.

1.3 The initial survey documented areas with semi-natural habitats (more natural than well-gardened allotments or heavily mown urban playing fields) and was also confined to large areas (above 0.5 ha for inner boroughs and 1 ha for outer boroughs). Much subsequent survey work has documented open spaces regardless of their natural quality and has used a much lower area threshold, to provide a more comprehensive coverage.

1.4 The wildlife habitat survey helps to ensure that candidate sites are not overlooked and that the same essential minimum of information is available for each. There is usually little other information available on the quality of the wildlife habitats, but any information provided is taken into account.

Information on species

1.5 Information on species, which has been obtained in a consistent and standardised manner as part of the systematic survey of habitats may be used by the Authority in reaching decisions on site quality. Other information on species, relating to individual sites, is frequently available but has rarely been collected in a systematic way so as to allow straightforward comparisons with other sites.

1.6 Information on species is often available from local naturalists, who are able to observe sites throughout seasons and years to provide an accurate and quite comprehensive listing of these and who may publish accounts of particular species or sites. Valuable though this information is, it often proves difficult to use it to compare candidate sites, as the recording effort put into each site may differ greatly and so may the completeness of the list. The length of the species list and the detection of rare species therefore depends upon the searching effort. For these reasons, such information on

species is used only together with knowledge of how the information was obtained and of the way in which the ecology of individual species affects their apparent status.

1.7 The policy of the Authority is to take considerable care in interpreting site-based species data to ensure that fully professional standards are maintained.

Habitat Types

A list of habitats for open space survey in London

Code	Name	Definition
01/02/03	Woodland	Stands of trees forming at least 75% cover, including coppice and trees of shrub size, but excluding fen carr (19). Includes stands of willow except *Salix cinerea, caprea* and *viminalis*, but excludes hawthorn, hazel (except hazel coppice with standards), elder, juniper and the three willow species listed above, which are always scrub (06) regardless of height. Where the species composition does not fulfil any of 01, 02 or 03 below, code as a mixture. Always record % shrub layer under the qualifiers.
01	Native broadleaved woodland	Woodland (see above) with native broadleaved species (i.e. excluding sycamore and sweet chestnut) comprising at least 75% of the canopy.
02	Non-native broadleaved woodland	Woodland (see above) with non-native broadleaved species (including sycamore and sweet chestnut) comprising 75% of the canopy.
03	Coniferous woodland	Woodland (see above) with coniferous species (including yew) comprising 75% of the canopy.
37	Scattered trees	Trees forming less than 75% canopy cover over another habitat (excluding coppice with standards, which is coded as woodland). Record percentage tree cover here, and the rest of the area under the appropriate habitat.
05	Recently felled woodland	Does not include coppice, which is coded as woodland.
06	Scrub	Dominated (at least 75% cover) by shrubs (usually less than 5 metres tall), excluding fen carr (19), heathland (15), young woodland, coppice, hedges (25, 34) and planted shrubberies (38). Includes stands of hawthorn, hazel (except coppice with standards), elder and *Salix cinerea, caprea* and *viminalis* regardless of height.
38	Planted shrubbery	Dominated (at least 75% cover) by shrubs, usually non-native species, the majority of which have clearly been planted. Excludes hedges (25, 34).
25	Native hedge	Line of shrubs, with or without treeline, one or two mature shrubs wide (wider belts should be coded as scrub or woodland), with native species comprising at least 75% of the shrubs.
34	Non-native hedge	As above but with non-native species comprising at least 75% of the shrubs. If neither 25 nor 34 apply, code as a mixture.
31	Orchard	Planted fruit or nut trees forming at least 50% canopy cover.

Code	Name	Definition
36	Vegetated walls, tombstones. etc	Includes ruins, fences and other artificial structures with an appreciable amount of vegetation (including mosses and lichens) but excluding artificial water margins, which should be coded as wet marginal vegetation (18) if vegetated.
26	Bare soil and rock	Includes active quarries, fresh road workings, spoil or tipping and earth banks of water habitats, where these are minimally vegetated. Excludes arable land (28).
27	Bare artificial habitat	Includes tarmac, concrete, railway ballast, gravel paths, buildings and artificial margins to aquatic habitats, where these are minimally vegetated.
08	Acid grassland	Un- or semi-improved grassland on acidic soils, with less than 25% cover of heather or dwarf gorse. Excludes reedswamp (17). Usually with one or more of *Deschampsia flexuosa, Molinia caerulea, Nardus stricta, Juncus squarrosus, Galium saxatile, Potentilla erecta* or *Rumex acetosella* in abundance.
09	Neutral grassland (semi-improved)	Mesotrophic grassland usually with one or more of *Arrhenatherum elatius, Deschampsia cespitosa, Alopecurus pratensis, Cynosurus cristatus, Dactylis glomerata, Festuca arundinacea* or *F.pratensis*. Contains more than just *Lolium perenne, Trifolium repens, Rumex acetosa, Taraxacum, Bellis perennis* and *Ranunculus* species (see 07 and 11), but lacks the characteristic forbs of 35. Excludes reedswamp (17).
35	Neutral grassland (herb-rich)	Mesotrophic grassland with more forbs typical of old grassland than 09. Likely to contain one or more of *Primula veris, Lychnis flos-cuculi, Achillea ptarmica, Silaum silaus, Succisa pratensis, Stachys officinalis, Serratula tinctoria, Ophioglussum, Gensita tinctoria, Sanguisorba officinalis* or *Caltha palustris,* or an abundance of *Carex ovalis, Pimpinella saxifraga, Conopodium majus, Cardamine pratensis, Knautia* or *Filipendula ulmaria*.
10	Basic grassland	Un- or semi-improved grassland containing calcicoles. Usually with some of *Brachypodium pinnatum, Bromopsis erecta, Heliotrichon pratense, Thymus polytrichus, Sanguisorba minor, Centaurea scabiosa* or *Origanum vulgare* in some abundance.
11	Improved or re-seeded agricultural grassland	Species-poor mesotrophic grassland containing little but *Lolium perenne, Trifolium repens, Agrostis* species*, Bellis perennis, Taraxacum* and *Ranunculus* species. Distinguished from 07 by its agricultural use and hence usually less frequent mowing.
07	Amenity grassland	Usually frequently mown, species-poor mesotrophic grassland characteristic of parks and sports pitches, containing similar species to 11. Scattered trees and shrubberies in parks should be coded separately.
12	Ruderal or ephemeral	Communities composed of pioneer species such as occur in early succession of heavily modified substrates. Typical species include *Senecio squalidus, S.vulgaris, Sinapis arvensis, Poa annua, Hirschfeldia incana* and species of *Polygonum, Persicaria, Melilotus, Atriplex, Chenopodium, Medicago, Vulpia, Picris, Lactuca, Diplotaxis, Conyza* and *Reseda*.

Code	Name	Definition
13	Bracken	Stands where bracken is dominant. Also used with other habitat codes to indicate scattered bracken.
14	Tall herbs	Stands of tall non-grass herbaceous species, often rhizomatous perennials, such as *Fallopia japonica, Conium maculatum, Chamerion angustifolium, Anthriscus sylvestris, Urtica dioica, Epilobium hirsutum, Solidago canadensis* and species of *Aster* and *Heracleum*. Excludes herbaceous fen vegetation 32).
33	Roughland	An intimate mix of semi-improved neutral grassland (09), tall herbs (14) and scrub (06). If these occur in large enough patches they should be coded separately. Usually the next successional stage after 12.
15	Heathland	Dwarf-shrub cover greater than 25% of species such as heathers and *Ulex minor*, with less than 50% cover of *Sphagnum*. May include a large amount of acid grassland (06) in a close mosaic, but code as a mixture if grassland areas are large.
39	Allotments (active)	Communal allotment gardens which are under cultivation. Code disused plots under other habitats as appropriate.
28	Arable	Cropland, horticultural land (excluding allotments), freshly ploughed land and livestock paddocks stocked so heavily as to have little vegetation.
16	Bog	Dominated by *Sphagnum* mosses (greater than 50% cover) with water table at or just below the surface.
17	Reedswamp	Stands of *Phragmites australis* with at least 75% cover of reeds. Includes dry and tidal stands.
40	Typha, etc swamp	Stands of *Glyceria maxima, Typha* species or *Phalaris arundinacea* where these species form at least 75% cover.
18	Wet marginal vegetation	Emergent vegetation with a permanently high water table in strips less than five metres wide on the margins of water bodies. Contains species such as *Iris pseudacorus, Apium nodiflorum, Acorus calamus* and species of *Rorippa, Alisma* and *Juncus*. May include *Phragmites, Typha* and *Glyceria maxima*, but where these form single-species stands code as 17 or 40 respectively. Usually too small to map but must always be coded if present.
19	Fen carr	Woodland or scrub over herbaceous vegetation with the water table above ground for most of the year.
20	Standing water (includes canals)	Lakes, reservoirs, pools, wet gravel pits, ponds, canals, docks and brackish lagoons beyond the limit of swamp or wet marginal vegetation. Always code vegetated margins separately and note trophic status and whether saline or tidal.
21	Ditches (water filled)	Distinguished from 20 and 22 by their (often agricultural) drainage role. Always code vegetated margins separately and note trophic status and whether saline or tidal.
22	Running water	Rivers and streams. Always code vegetated margins separately and note trophic status and whether saline or tidal.

Code	Name	Definition
23	Intertidal mud, sand, shingle, etc	Intertidal areas without significant vegetation of higher plants. Try to record the extent at low tide.
24	Saltmarsh	Intertidal areas appreciably vegetated with higher plants, excluding reedswamp (17).
30	Habitat information not available	Areas which cannot be observed due to restricted access, etc.
29	Other	To be avoided if possible. Must be specified if used.
32	Species-rich herbaceous fen	Stands of herbaceous vegetation where the water table is above ground for most of the year, with less than 75% dominance of *Phragmites, Typha, Glyceria* and *Phalaris arundinacea*. Distinguished by width from 18. So rare in London that it is not on the survey form; write in under "Other" if required.

Other habitat classifications

For further information on the recognised habitat classification systems and survey methods that may be represented within the GiGL data, please visit the following links:

National Vegetation Classification (NVC) - http://jncc.defra.gov.uk/page-4259
The National Vegetation Classification (NVC) is one of the key common standards developed for the country nature conservation agencies. The original project aimed to produce a comprehensive classification and description of the plant communities of Britain, each systematically named and arranged and with standardised descriptions for each.

Phase I and Extended Phase I Habitat Assessment - http://jncc.defra.gov.uk/page-4258
The Phase 1 Habitat Classification and associated field survey technique provide a standardised system to record semi-natural vegetation and other wildlife habitats. Each habitat type/feature is identified by way of a brief description of its defining features.

Biodiversity Action Plan Broad Habitat classification - http://jncc.defra.gov.uk/page-4261
This classification was developed as part of the UK Biodiversity Action Plan. The Broad Habitats are the framework through which the Government is committed to meet its obligations for monitoring in the wider countryside.

Open Space Designations

Open Space: undeveloped land which has an amenity value, or has potential for an amenity value. The value could be visual, derive from a site's historical or cultural interest or from the enjoyment of facilities which it provides. It includes both public and private spaces, but excludes private gardens.

English Heritage Registered Parks and Gardens: The English Heritage 'Register of Historic Parks and Gardens of species historic interest in England', established 1983, currently identifies over 1,600 sites assessed to be of national importance. The emphasis of the Register is on 'designed' landscapes, rather than on planting or botanical importance. The majority of sites are, or started life as, the grounds of private houses, but public parks and cemeteries form important categories. Sites are divided into three grade bands to give added guidance on their significance.

- Grade I sites are of exceptional interest
- Grade II* sites are particularly important, or more than special interest
- Grade II sites are of special interest, warranting every effort to preserve them.

More information at: www.english-heritage.org.uk

Green Flag Awards: The Green Flag Award Scheme recognises and rewards the best green spaces in the country. There are three different awards:

- Green Flag Award: The benchmark national standard for parks and green spaces in the UK>.
- Green Flag Community Award: Recognises high quality spaces in England and Wales managed by voluntary and community groups.
- Green Heritage Sites: Awarded to parks and green spaces with local or national historic importance.

London Square: These are spaces protected by the London Squares Preservation Act (1931); a unique piece of legislation designed to prevent the loss of London's squares to development. 461 squares are protected under this act.

Common: The Commons Registration Act 1965 initiated a formal inventory of commons and green in England and Wales. It defines common land as 'land subject to rights of common (as defined in this Act) whether those rights are exercisable at all times or only during limited periods' and 'waste land of a manor not subject to rights of common' (Section 22).

The Commons Act 2006 provided another chance for common land to be registered. This new law aims to protect these areas, in a sustainable manner delivering benefits for farming, public access and biodiversity.

Data is obtained from Defra (2012). This database is believed to contain records for nearly all parcels of registered common land in England, with various associated data including location, area, extent of rights etc. The information for Greater London was assembled in 1985 as part of the biological survey of common land. The data are not kept up-to-date with subsequent new registrations of common land, or amendments to existing registrations. These data must be seen as a snapshot of the registers of common land at the time of the survey. Although deregistration of land registered as common land occurs very infrequently, the entries in this database cannot be guaranteed, and reliance should be placed on an inspection of the relevant register held by the commons registration authority for confirmation.

Village Green: is an area which has been allocated by an Act of Parliament for the exercise or recreation of the inhabitants of any locality, or on which the inhabitants of any locality have a customary right to indulge in lawful sports and pastimes.

Data are taken from information collected by the Greater London Council in 1965.

Metropolitan Open Land: is land designated to strategically project important open spaces within the built environment. It provides a clear break in the urban fabric and contributes to the capital's green character, often hosting outdoor facilities for Londoners away from their local area and boasting nationally or regionally significant features of landscape of historic, recreational or biodiversity value.

Green Belt: is land which has been specifically designated as such, either by legislation or through the preparation of development plans, with the aim to protect the open character of the countryside next to urban areas.

Public Open Spaces and Areas of Deficiency in Access to Public Open Space
Public Open Spaces are categorised according to a site hierarchy documented in The London Plan (Table 7.2).

Public Open Space Category	Description	Size guideline	Distances from homes
Regional Parks	Large areas, corridors or networks of open space, the majority of which will be publicly accessible and provide a range of facilities and features offering recreational, ecological, landscape, cultural or green infrastructure benefits. Offer a combination of facilities and features that are unique within London, are readily accessible by public transport and are managed to meet best practice quality standards.	400 hectares	3.2 to 8 km
Metropolitan Parks	Large areas of open space that provide a similar range of benefits to Regional Parks and offer a combination of facilities at a sub-regional level, are readily accessible by public transport and are managed to meet best practice quality standards.	60 hectares	3.2 km
District Parks	Large areas of open space that provide a landscape setting with a variety of natural features providing a wide range of activities, including outdoor sports facilities and playing fields, children's play for different age groups and informal recreation pursuits.	20 hectares	1.2 km
Local Parks and Open Spaces	Providing for court games, children's play, sitting out areas and nature conservation areas.	2 hectares	400 m
Small Open Spaces	Gardens, sitting out areas, children's play spaces or other areas of a specialist nature, including nature conservation areas.	Under 2 hectares	Less than 400 m
Pocket Parks	Small areas of open space that provide natural surfaces and shaded areas for informal play and passive recreation that sometimes have seating and play equipment.	Under 0.4 hectares	Less than 400 m
Linear Open Spaces	Open spaces and towpaths alongside the Thames, canals and other waterways; paths, disused railways; nature conservation areas; and other routes that provide opportunities for informal recreation. Often characterised by features	Variable	Wherever feasible

	or attractive areas which are not fully accessible to the public but contribute to the enjoyment of the space.		

Open Space Categories

The main site typologies are based upon previous *Planning Policy Guidance 17: Planning for Open Space, Sport and Recreation* categories.

Sub-categories are based on classifications used in the GLA open space surveys.

i. Parks and Gardens

Park refers to traditional public open spaces laid out formally for leisure and recreation. They usually include a mixture of lakes, ponds, lidos, woodland, flower beds, shrubs, ornamental trees, play spaces, formal and informal pitches, bowling greens, tennis courts, golf pitch & put, footpaths, bandstands, toilets, cafes and car parks - but not necessarily all of these. Parts of some parks might be managed as so-called natural areas. Examples of parks include the Royal Parks, municipal parks such as Battersea and Victoria, and wilder places such as Hampstead Heath which, although having distinctly informal qualities, are maintained predominantly for the same purpose, and include the usual swings and roundabouts and playing pitches. Many parks are enclosed by walls or railings, although some parks that began as common land may not be enclosed.

Formal garden refers to spaces with well defined boundaries that display high standards of horticulture with intricate and detailed landscaping. It includes the London squares common to central London, which are typically square areas of grass with some shrub borders, bounded by railings, and surrounded by buildings. Examples include Belgrave Square and Soho Square.

ii. Natural and Semi Natural

Common refers to publicly accessible open space that has few if any 'facilities'. It will typically be mainly open rough grassland (not mown playing field or recreation ground type grass) and/or woodland, and may have a limited provision of facilities. In typology terms, commons are much less formal than parks or parkland. Examples include Wimbledon Common, Wanstead Flats, and parts of Epping Forest.

Country Parks are large areas set aside for informal countryside recreation near or within towns and cities. A list of sites that call themselves Country Parks is available on the Natural England website.

Private woodland refers to woodland which is not accessible for recreational use, nor managed for nature conservation. Record this under "other" until the survey form is revised to accommodate it.

Public woodland refers to woodland which is accessible for recreational use, but not managed for nature conservation.

Nature reserve is a category reserved for an open space that is managed primarily for nature conservation. Do not tick this box just because the site has a nature conservation designation. Many parks, etc. have such designations. An SSSI is likely to have park, common or agriculture as its type. Designated Local Nature Reserves, however, are recorded here. Also do not tick this box where you find small areas set aside for nature within parks, commons and other open spaces.

iii. Green Corridors

River should only be used for rivers and streams that do not form part of another land use, such as park, common or nature reserve.

Canal implies an artificial waterway which is navigable. Include docks in this category.

Railway cutting and **railway embankment** are self-explanatory.

Disused railway trackbed is usually obvious, with some traces of its former use. Where disused trackbeds are specifically managed for nature conservation, such as Parkland Walk, record as nature reserve.

Road island/verge is self-explanatory. Record as nature reserve if specifically managed for nature conservation.

Walking / cycling route is a designated footpath / cycleway through informal open space often along former railways or canals but record these examples as Disused railway trackbed or Canal.

iv. Outdoor Sports Facilities

Recreation ground is an area of mown grass used primarily for informal, unorganised ball games and similar activities (including dog walking). Not to be confused with playing fields, below.

Playing field is a site comprising playing pitches, usually for football, but also for rugby and hockey and, in the summer, for cricket. Playing pitches may not always be laid out in the summer, so look out for notice boards or changing rooms and pavilions for evidence. Include sites here even if they appear disused. Include school playing fields. Almost always, playing fields consist only of pitches; but they will sometimes have other bits of open land around the edges. Do not include sites that partly contain playing pitches but are more properly categorised as parks or commons. Pitches are often to be found in parks and commons, but the type here is concerned with sites that are exclusively or predominantly reserved for organised team sports.

Golf course: do not include golf courses that are part of parks, commons etc. This type does not include golf driving ranges, pitch & putt or crazy golf.

Other recreational is to be used for sites that are used exclusively or predominantly for other organised sports such as bowls, tennis and golf driving ranges (but not golf courses, see below).

v. Amenity

Village green is usually an expanse of grass in the centre of old villages, often used in the summer for cricket.

Hospital includes the grounds of any clinic or health centre.

Educational refers to school or college grounds and field study centres where school education is the primary function. Nature sites which cater for schools and for the general public should be recorded under nature reserves. School playing fields should be recorded under playing fields.

Back garden land is self-explanatory. While most surveys exclude private gardens, backlands are often surveyed for planning casework.

Landscaping around premises includes communal amenity space around housing estates and community centres, and also landscaping around industrial premises.

Reservoir includes covered reservoirs unless these form part of a park.

vi. Children and Teenagers

Play space is a site set aside mainly for children. It will contain the usual paraphernalia of swings, slides and roundabouts. Do not record play spaces here if they form part of parks, commons and other open spaces.

Adventure playground is a defined play area for children in a supervised environment. Boundaries and entrances are secure.

Youth area is a defined area for teenagers including skateboard parks, outdoor basketball hoops and other more informal areas such as 'hanging out' areas and teenage shelters.

vii Allotments, Community Gardens and City Farms

Allotments should be obvious. Include them even if they appear or are disused.

Community garden includes an area that is generally managed and maintained by the local population as a garden and/or for food growing and normally restricted in their access. For examples Pheonix Garden in Holborn.

City farm includes areas that are generally managed and maintained as a small farm by the local population, containing livestock and planting and normally restricted in their access. For example Freightliners Farm in Islington.

viii. Cemeteries and Churchyards

Churchyard/cemetery includes burial grounds, graveyards, crematorium grounds and memorial gardens, and gardens or grounds of non-Christian places of worship. Some former or burial grounds that have become full have been converted to informal leisure or recreation spaces; where the gravestones have been removed, these should be recorded as parks.

ix. Other Urban Fringe

Equestrian centre includes any land used for intensive horse keeping and riding, but not extensive horse grazing, which should be recorded as agriculture.

Agriculture includes arable and grazing land, including horse grazing, and market gardening (such as vegetables, often grown under cloches, etc.).

Nursery/horticulture does not include commercial retail nurseries (although these might legitimately form a part of a park or common, etc.). Horticulture includes areas of permanent glasshouses.

x. Civic Spaces

Civic/market square includes tarmac areas or paved open spaces, which may or may not include planting. However, they do not necessarily have seats and may just be a plaza area, with some planting (usually trees) and public art. Often provide a setting for civic buildings and opportunities for open air markets, demonstrations and civic events. Examples include the area in front of the jubilee line station at Canary Wharf, and the plaza in front of Westminster Cathedral.

Other hard surfaced areas include other areas designed for pedestrians. These typically are used as 'sitting out' areas, where workers can enjoy the sun and eat their sandwiches, and as such usually have seats or benches. For example, Emma Cons Gardens opposite the Old Vic Theatre. This category excludes pedestrianised streets, car parks, servicing areas to buildings, and housing amenity space such as communal courtyards.

xi. Other

Sewage/water works includes extensive sludge drying areas, filter beds, etc.

Disused quarry/gravel pit may be water-filled, but is not necessarily so.

Vacant land is land with no formal land use. This includes many "urban commons" which are used by people for informal recreation and which may be very valuable for nature conservation. If sites have formalised access and management for nature conservation, record as commons or nature reserves as appropriate.

Land reclamation is land recently decontaminated or reclaimed from disuse, which has not yet been redeveloped.

Others could be anything that does not fit any of the above categories, such as airfields or forestry (not wooded commons or woodland nature reserves)

Annex B

CONDITION ASSESSMENT SHEETS

Condition Sheet: WETLAND Habitat Type

Habitat Type(s)

Grassland - Floodplain wetland mosaic and CFGM - See the Biodiversity Metric 4.0 User Guide.

Habitat Description

Very unusual mix of species sea barley D, common bent R, dittander LD, Narrow leaved pepperwort F, red bartsia LO.

[redacted]

See the Biodiversity Metric 4.0 User Guide for Floodplain wetland mosaic and coastal and floodplain grazing marsh (CFGM). For

Coastal and floodplain grazing marsh UK BAP Priority Habitat descripti

Priority Habitat Inventory (England) - data.gov.uk

All other wetland habitats - see UK Habitat Classification (UKHab):

[redacted]

Site name and location	Cory CCUS - Eastern Paddock	**On-site or off-site**	**On-Site**
		Survey reference (if relating to a wider survey)	
Limitations (if applicable)		**Habitat parcel reference**	
		Grid reference	

	Condition Assessment Criteria	**Criterion passed (Yes or No)**	**Notes (such as justification)**
Core Criteria - must be assessed for **all wetland habitat types**:			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. **Note - this criterion is essential for achieving Good condition.**	n	Water level in ditches 50cm+ below surface. Artificial drainage is present (tidal gate and ditches/main land drain) western comparment water levels possibly manage for coinservation (bird hide noted)
B	The parcel is a good representation of the wetland habitat type it has been identified as, based on its UKHab description - as in, the appearance and composition of the vegetation closely matches the characteristics of the specific habitat type. Indicator species for the specific wetland habitat type[1] listed	n	Community present not a clear fit for any NVC community. Ditches appeared to lower water levels as opposed to mainting and were not botannicaly rich
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	y	Water brackish but no signs of pollution
D	Cover of scrub and scattered trees are less than 10%.	y	Minimal scattered hawthorn trees/scrub
E	Cover of bare ground is less than 5%.	n	High levels of poaching from horses in eastern field, bare ground in western compartment may be due to inundation
F	There is an absence of invasive non-native plant species[2]	y	

Additional Criterion - must be assessed for **Fen and Purple moor grass and rush pasture** habitats only:			
G	No more than 25% of the habitat area has a continuous		
Additional Criterion - must be assessed for **Bog** habitats only:			
H	Sphagnum moss *Sphagnum* spp. and cottongrasses		
Additional Criterion - must be assessed for **Reedbed** habitats only:			
I	The reedbed has a diverse structure with between 60 and		
Additional Criterion - must be assessed for **Floodplain wetland mosaic and CFGM** only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet. Note – do not record ditches which are part of the Floodplain wetland mosaic and CFGM habitat within the Watercourse module.	N	*A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length* .' Dittander locally dominant, floating and submerged vegetation absent (though access limited)
sential criterion achieved (required for Good condition) Yes or No:			
	Number of criteria passed		

Condition Assessment Result	**Condition Assessment Score**	**Score Achieved ×/**
Results for habitats requiring assessment of 6 criteria (Depression on peat		
•Passes 5 or 6	Good (3)	
•Passes 3 or 4	Moderate (2)	
•Passes 2 or fewer	Poor (1)	
Results for habitats requiring assessment of 7 criteria - core criteria and		
•Passes 5 or 6	Good (3)	
•Passes 4 or 5 of	Moderate (2)	
•Passes 3 or fewer	Poor (1)	X

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 - For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic,

Condition Sheet: WETLAND Habitat Type

Habitat Type(s)

Grassland - Floodplain wetland mosaic and CFGM - See the Biodiversity Metric 4.0 User Guide.

Habitat Description

A mosaic of false oat grass with scattered brambe scrub. Considered CFGM precauitionarily due to location, clear saline influence and

[redacted]

See the Biodiversity Metric 4.0 User Guide for Floodplain wetland mosaic and coastal and floodplain grazing marsh (CFGM). For

Coastal and floodplain grazing marsh UK BAP Priority Habitat descripti

Priority Habitat Inventory (England) - data.gov.uk

All other wetland habitats - see UK Habitat Classification (UKHab):

[redacted]

Site name and location	Cory CCUS - Peabody Land	**On-site or off-site**	**On-Site**
		Survey reference (if relating	
Limitations (if applicable)		**Habitat parcel reference**	
		Grid	

	Condition Assessment Criteria	**Criterion passed (Yes or No)**	**Notes (such as justification)**
Core Criteria - must be assessed for **all wetland habitat types**:			
A	The water table is at, or near the surface throughout the year - this could be open water or saturation of soil at the surface. There is no artificial drainage, unless specifically to maintain water levels as specified above. **Note - this criterion is essential for achieving Good condition.**	n	Water level in ditches 50cm+ below surface. Artificial drainage is present (tidal gate and ditches/main land drain). Field dry and would otherwise fot classification of 'Other nuetral grassland' if not for ditch network and location
B	The parcel is a good representation of the wetland habitat type it has been identified as, based on its UKHab description - as in, the appearance and composition of the vegetation closely matches the characteristics of the specific habitat type. Indicator species for the specific wetland habitat type[1] listed	n	Ditches appeared to lower water levels as opposed to mainting and were not botannicaly rich. It is clearly saline influenced to some extent (sea barley etc) but complete inundation likely to be rare due to tidal gate.
C	The water supplies (groundwater, surface water and or rainwater) to the wetland are of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	y	Water brackish but no signs of pollution
D	Cover of scrub and scattered trees are less than 10%.	N	extensive scattered bramble, hawthorn and rare elder scrub at ~15%
E	Cover of bare ground is less than 5%.	Y	High levels of localised poaching from horses but under 5% overall.
F	There is an absence of invasive non-native plant species[2]	y	

Additional Criterion - must be assessed for **Fen and Purple moor grass and rush pasture** habitats only:			
G	No more than 25% of the habitat area has a continuous		
Additional Criterion - must be assessed for **Bog** habitats only:			
H	Sphagnum moss *Sphagnum* spp. and cottongrasses		
Additional Criterion - must be assessed for **Reedbed** habitats only:			
I	The reedbed has a diverse structure with between 60 and		
Additional Criterion - must be assessed for **Floodplain wetland mosaic and CFGM** only:			
J	All ditches recorded within the habitat achieve Good condition as assessed using the Ditch condition sheet. Note – do not record ditches which are part of the Floodplain wetland mosaic and CFGM habitat within the Watercourse module.	N	*A range of emergent, submerged and floating-leaved plants are present. As a guide >10 species of emergent, floating or submerged plants present in a 20 m ditch length* .' Dittander locally dominant, floating and submerged vegetation absent (though access limited)
sential criterion achieved (required for Good condition) Yes or No:			
	Number of criteria passed		

Condition Assessment Result	**Condition Assessment Score**	**Score Achieved ×/**
Results for habitats requiring assessment of 6 criteria (Depression on peat		
•Passes 5 or 6	Good (3)	
•Passes 3 or 4	Moderate (2)	
•Passes 2 or fewer	Poor (1)	
Results for habitats requiring assessment of 7 criteria - core criteria and		
•Passes 5 or 6	Good (3)	
•Passes 4 or 5 of	Moderate (2)	
•Passes 3 or fewer	Poor (1)	X

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 - For fens, specify what fen type is present using base-status and trophic status - alkaline, neutral, or acidic; eutrophic,

Condition Sheet: WOODLAND Habitat Type

UK Habitat Classification (UKHab) Habitat Type(s)

Woodland and forest - Lowland beech and yew woodland
Woodland and forest - Lowland mixed deciduous woodland
Woodland and forest - Native pine woodlands
Woodland and forest - Other coniferous woodland
Woodland and forest - Other Scot's pine woodland
Woodland and forest - Other woodland; broadleaved
Woodland and forest - Other woodland; mixed
Woodland and forest - Upland birchwoods
Woodland and forest - Upland mixed ashwoods
Woodland and forest - Upland oakwood
Woodland and forest - Wet woodland

Habitat Description

Completed by Paul Joyce and Mark Watson using Arb survey notes - 14/08/23

[redacted]

This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here:

[redacted]

IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of this condition assessment are not equivalent to, nor are they comparable with the scores from the EWBG condition assessment, because the EWBG assessment has been adapted for the biodiversity metric, including the removal of EWBG Indicator 7 (Proportion of favourable land cover around woodland) and Indicator 14 (Size of woodland), and minor changes to other indicators.

Site name and location	Cory CCS - Lowland Mixed Decidious Woodland Barrier	**On-site or off-site**	On-Site
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	

Condition Assessment Criteria

	Indicator	Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator	Notes (such as justification)
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	2	
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in 40% or less of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] >10% cover.	3	
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	2	
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	2	

F	**Open space within woodland**	10 - 20% of woodland has areas of temporary open space[6.] Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	1	
G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	3	
H	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback[9].	11% to 25% mortality and/or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	3	
I	**Vegetation and ground flora**	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	1	
J	**Woodland vertical structure**	Three or more storeys across all survey plots or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	2	
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1	
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	1	
M	**Woodland disturbance**	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground[14].	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground[14].	1	
				Total Score (out of a possible 39)		

Condition Assessment Result	**Condition Assessment Score**	**Result Achieved**
Total score >32 (33 to 39)	Good (3)	
Total score 26 to 32	Moderate (2)	
Total score <26 (13 to 25)	Poor (1)	

Suggested enhancement interventions to improve condition score

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)

UK Habitat Classification (UKHab) Habitat Type(s)

Grassland - Lowland calcareous grassland
Grassland - Lowland dry acid grassland
Grassland - Lowland meadows
Grassland - Other lowland acid grassland
Grassland - Other neutral grassland
Grassland - Tall herb communities (H6430) [Note Tall herb habitat that does not meet the Annex 1 definition should be recorded as 'Other neutral grassland'] [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.]
Grassland - Upland acid grassland
Grassland - Upland calcareous grassland
Grassland - Upland hay meadows
Sparsely vegetated land - Calaminarian grassland

Site name and location	Cory CCUS - Peabody Land	**On-site or off-site**	**On-Site**
Limitations (if applicable)		**Survey reference (if**	
Grid reference		**Habitat parcel reference**	

Habitat Description

A mosaic of false oat grass with scattered bramble scrub (at margins). Evidence of habitat enhancement - field scabious, agrimony, common knapweed all rare and [redacted]

	Condition Assessment Criteria	**Criterion passed (Yes or No)**	**Notes (such as justification)**
A	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Y	False oat grass dominant other nuetral grassland.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y	foot traffic and possibly mowing created two sward lengths with a shorter area within the centre
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[1].	Y	minimal bare ground from footpath.
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.	N	No Bracken, brambel scrub under 5% on edges.
E	Combined cover of species indicative of sub-optimal condition[2] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]) are present, this criterion is automatically failed.	N	No damage or INNS
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**	N	Areas of higher traffic were pereenial rye dominant and had lower diversity, False-oat grass majority had diversity of 6-10 species.
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		Yes	
	Number of criteria passed	3	

Condition Assessr	**Condition Assessment Score**	**Score Achieved ×/**
Acid Grassland Types (Result out of 5 criteria)		
Passes 5 criteria	Good (3)	
Passes 3 or 4 criter	Moderate (2)	
Passes 2 or fewer c	Poor (1)	
Non-acid grassland Types (Result out of 6 criteria)		
Passes 5 or 6	Good (3)	
Passes 3 - 5	Moderate (2)	X
Passes 2 or fewer	Poor (1)	

Suggested enhancement interventions to improve condition score

Notes

Footnote 1 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)

UK Habitat Classification (UKHab) Habitat Type(s)

Grassland - Lowland calcareous grassland
Grassland - Lowland dry acid grassland
Grassland - Lowland meadows
Grassland - Other lowland acid grassland
Grassland - Other neutral grassland
Grassland - Tall herb communities (H6430) [Note Tall herb habitat that does not meet the Annex 1 definition should be recorded as 'Other neutral grassland'] [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.]
Grassland - Upland acid grassland
Grassland - Upland calcareous grassland
Grassland - Upland hay meadows
Sparsely vegetated land - Calaminarian grassland

Site name and location	Cory CCUS - Riverside 1, grassland east of buildings	**On-site or off-site**	On-Site
Limitations (if applicable)		**Survey reference (if**	
Grid reference		**Habitat parcel reference**	

Habitat Description

Area already managed for conservation, reedbed, appears to have been seeded with agrimony, common knapweed etc. log piles and scattered trees at one end. Not

ukhab – UK Habitat

	Condition Assessment Criteria	Criterion passed (Yes or No)	Notes (such as justification)
A	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	Y	False oat grass dominant other nuetral grassland.
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	N	Had recently been uniformly mown to short sward, may have been an early mow to reduce grass vigour but in general later mowering beneficial (Knapweed etc mown before setting seed). Varied mowing pattern to leave some areas longer would be beneficial.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[1].	Y	minimal bare ground
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.	Y	No Bracken, brambel scrub under 5% on edges.
E	Combined cover of species indicative of sub-optimal condition[2] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]) are present, this criterion is automatically failed.	N	No damage or INNS
Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**	Y	~10
Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)		Yes	
	Number of criteria passed	3	

Condition Assessr	Condition Assessment Score	Score Achieved ×/
Acid Grassland Types (Result out of 5 criteria)		
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteri	Moderate (2)	
Passes 2 or fewer c	Poor (1)	
Non-acid grassland Types (Result out of 6 criteria)		
Passes 5 or 6	Good (3)	
Passes 3 - 5	Moderate (2)	X
Passes 2 or fewer	Poor (1)	

Suggested enhancement interventions to improve condition score

Notes

Footnote 1 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Condition Sheet: WOODLAND Habitat Type

UK Habitat Classification (UKHab) Habitat Type(s)

Woodland and forest - Lowland beech and yew woodland

Habitat Description

Field Maple Acer campestre, Norway Maple Acer platanoides, Ash Fraxinus excelsior and Cherry Prunus avium.

[redacted]

This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woo

[redacted]

IMPORTANT: This biodiversity metric woodland condition assessment must be used to as

Site name and location	Thames View former golf course	**On-site or off-site**
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**
Grid reference		**Habitat parcel reference**

Condition Assessment Criteria

Indicator		**Good (3 points)**	**Moderate (2 points**
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in 40% or less of whole woodland[2].
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, other invasive species[3] <10% cover.
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].

F	**Open space within woodland**	10 - 20% of woodland has areas of temporary open space[6.] Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].
G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].
H	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback[9].	11% to 25% mortality and/or crown dieback or low-risk pest or disease present[9].
I	**Vegetation and ground flora**	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.
J	**Woodland vertical structure**	Three or more storeys across all survey plots or a complex woodland[11].	Two storeys across all survey plots[11].
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].

M	**Woodland disturbance**	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground[14].
			Total Score (out

Condition Assessment Result
Total score >32 (33 to 39)
Total score 26 to 32
Total score <26 (13 to 25)

Suggested enhancement interventions to improve condition score

Footnotes

Footnotes below refer to the EWBG woodland condition assessment methodology: EWBC

[redacted]

When applying this condition sheet, good practice would be to use the methodology asso

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is nc

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within

Footnote 11 – This criterion looks at structural diversity and is useful to understand in cor

Keepers of time: ancient and native woodland and trees policy in England (publishing.serv

and:

Ancient woodland, ancient trees and veteran trees: advice for making planning decisions -

Footnote 13 – See EWBG method INDICATOR 13 for more information. This includes lo

dland Condition Survey Method, available here:

ssess woodland being input into the biodiversity metric. The outputs of

Poor (1 point)	Score per indicator	Notes (such as justification)
One age-class[1] present.	1	uniform age planted as sccreening and along fairways
Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	no deer damage evident
Rhododendron or cherry laurel present, or other invasive species[3] >10% cover.	3	some cotoneaster/cherry laurel within scrub and grassland but not found within woodland
Two or less native tree or shrub species[4] across woodland parcel.	2	four species - likely all planted as landscaping
<50% of canopy trees and <50% of understory shrubs are native[5].	3	near 100% but plantation.

<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	1	areas not extensive enough for true glades - open space is surrounding former golf course
No classes or coppice regrowth present in woodland[8].	1	uniform age
Greater than 25% tree mortality and or any high-risk pest or disease present[9].	2	trees generally in good health, some ash dieback evident.
No recognisable woodland NVC plant community[10] at ground layer present.	1	ground flora poor, brambles, (cowparsley?), hogweed, nuetral grassland where more open on edges
One or less storey across all survey plots[11].	1	uniform age trees
No veteran trees[12] present in woodland.	1	none
Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	1	minimal deadwood

More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground[14].	2	some localised nettles, bare ground from trampling in some areas.

of a possible 39)

Condition Assessment Score	Result Achieved
Good (3)	
Moderate (2)	
Poor (1)	

ɜ (No date). *Assessing your Woodland's Condition* [online]. Available

ciated with the EWBG toolkit.
ɔt a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 – 20 years
woodland in this context is temporary open space in which trees can
ɲjunction with the age of trees in a woodland. Vertical structure is
/ice.gov.uk)

- GOV.UK (www.gov.uk)
gs, large dead branches on the forest floor and stumps (<1 m tall) >20

Condition Sheet: SCRUB Habitat Type

UK Habitat Classification (UKHab) Habitat Type

Heathland and shrub - Blackthorn scrub
Heathland and shrub - Gorse scrub
Heathland and shrub - Hawthorn scrub
Heathland and shrub - Hazel scrub
Heathland and shrub - Mixed scrub
Heathland and shrub - Dunes with sea buckthorn (H2160)
Heathland and shrub - Willow scrub

Habitat Description

dense bramble scrub

For Dunes with sea buckthorn see:	Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas
For other scrub types see:	ukhab – UK Habitat Classification

Site name and location	Thames View former golf course	**On-site or off-site**	
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species[1], with no single species comprising more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* or box *Buxus sempervirens*, which can be up to 100% cover).	N	Bramble dominant with occasional ruderals (Nettle, Creeping Thistle, Hogweed and Teasel) and transition to other nuetral grassland
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran[2]) shrubs are all present.	N	Almost entirely bramble
C	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]) and species indicative of sub-optimal condition[5] make up less than 5% of ground cover.	Y	no INNS identified
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	Yes blends into long g3c grass.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	Scattered scrub is present within grassland but dense scrub present as blocks on periphery
		Number of criteria passed	

Condition Assessment Result (out of 5 criteria)	Condition Asses	Score Achieved ×/
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	Y

Suggested enhancement interventions to improve condition score

Manage to maintain margins and to create rides. Potential to increase diversity of scrub species but habitat is fundamentally bramble scrub and will have a tendancy to return to this habitat unless intensively managed.

Creation of rides could enhance from poor to moderate

Footnotes

Footnote 1 – Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) *Hedgerow Survey Handbook: A standard procedure for local surveys in the UK.*
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Footnote 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, tree-of-heaven *Alianthus altissima*, holm oak *Quercus ilex*, European turkey oak *Quercus cerris*, cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos* spp., shallon *Gaultheria shallon*, American skunk cabbage *Lysichiton americanus*, buddleia *Buddleja* spp., cotoneaster *Cotoneaster* spp., Spanish bluebell *Hyacinthoides hispanica* and hybrid bluebells *Hyacinthoides x massartiana*. There may be additional relevant species local to the region and or site.

Condition Sheet: WOODLAND Habitat Type

UK Habitat Classification (UKHab) Habitat Type(s)

Woodland and forest - Lowland beech and yew woodland

Habitat Description

Field Maple Acer campestre, Norway Maple Acer platanoides, Ash Fraxinus excelsior and Cherry Prunus avium.

ukhab – UK Habitat Classification

This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here: Woodland Wildlife Toolkit (sylva.org.uk)

IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of

Site name and location	Thames View former golf course	**On-site or off-site**	
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	

Condition Assessment Criteria

Indicator		**Good (3 points)**	**Moderate (2 points**	**Poor (1 point)**	**Score per indicator**	**Notes (such as justification)**
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	1	uniform age planted as sccreening and along fairways
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in 40% or less of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	no deer damage evident
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] >10% cover.	3	some cotoneaster/cherry laurel within scrub and grassland but not found within woodland
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	2	four species - likely all planted as landscaping
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	3	near 100% but plantation.
F	**Open space within woodland**	10 - 20% of woodland has areas of temporary open space[6.] Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	1	areas not extensive enough for true glades - open space is surrounding former golf course
G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	1	uniform age
H	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback[9].	11% to 25% mortality and/or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	2	trees generally in good health, some ash dieback evident.

I	**Vegetation and ground flora**	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	1	ground flora poor, brambles, (cowparsley?), hogweed, nuetral grassland where more open on edges
J	**Woodland vertical structure**	Three or more storeys across all survey plots or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	1	uniform age trees
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1	none
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	1	minimal deadwood
M	**Woodland disturbance**	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground[14].	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground[14].	2	some localised nettles, bare ground from trampling in some areas.
				Total Score (out of a possible 39)	22	

Condition Assessment Result	Condition Assessment Score	Result Achieved
Total score >32 (33 to 39)	Good (3)	Poor
Total score 26 to 32	Moderate (2)	
Total score <26 (13 to 25)	Poor (1)	

Suggested enhancement interventions to improve condition score

Footnotes

Footnotes below refer to the EWBG woodland condition assessment methodology: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available Woodland Wildlife Toolkit (sylva.org.uk)

When applying this condition sheet, good practice would be to use the methodology associated with the EWBG toolkit.

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 – 20 years

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can

Footnote 11 – This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)

and:

Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 13 – See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20

Condition Sheet: GRASSLAND Habitat Type (medium, high and very high distinctiveness)

UK Habitat Classification (UKHab) Habitat Type(s)

Grassland - Lowland calcareous grassland
Grassland - Lowland dry acid grassland
Grassland - Lowland meadows
Grassland - Other lowland acid grassland
Grassland - Other neutral grassland
Grassland - Tall herb communities (H6430) [Note Tall herb habitat that does not meet the Annex 1 definition should be recorded as 'Other neutral grassland'] [Not to be confused with the Tall forbs secondary code – see UKHab guidance for details.]
Grassland - Upland acid grassland
Grassland - Upland calcareous grassland
Grassland - Upland hay meadows
Sparsely vegetated land - Calaminarian grassland

Site name and location	Thames View former golf course	**On-site or off-site**	Off-Site
Limitations (if applicable)	Seasonality (sept survey). No access to driving range but clearly false-oat dominant.	**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	

Habitat Description

Other Neutral Grassland, grasshoppers, red admiral incidental records.

ukhab – UK Habitat Classification

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The grassland is a good representation of the habitat type it has been identified as, based on its UKHab description - the appearance and composition of the vegetation closely matches the characteristics of the specific grassland habitat type. Indicator species listed by UKHab for the specific grassland habitat type are consistently present. **Note - this criterion is essential for achieving Moderate or Good condition for non-acid grassland types only.**	N	The grassland is largely Arrhenatherum dominated with occasional cock's foot and loosely referable to 'Arrhenatherum neutral grassland – g3c5. Seasonally constrained survey but appears to be species poor, yarrow, wild carrot, creeping cinquefoil, creeping thistle, mallow sp and mugwort. Perrenial rye dominant on trampled pathways and areas of couch? and creeping bent locally frequent
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	N	Unmown with exception of mown/trampled paths.
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens[1].	Y	Limited bare ground - areas of bare ground could enhance invert value
D	Cover of bracken *Pteridium aquilinum* is less than 20% and cover of scrub (including bramble *Rubus fruticosus* agg.) is less than 5%.	Y	No bracken, scatterred bramble and dense bramble on edges (not included within grassland)
E	Combined cover of species indicative of sub-optimal condition[2] and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area. If any invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]) are present, this criterion is automatically failed.	Y	No INNS identified or physical damage. EPR PEA gives an accurate description, overall nettles, dock etc. account for under 5% but if grassland divided into blocks by paths somer areas will have a higher proportion of ruderal type vegetation. ' *Tall herbs are most dominant towards the east of the Site within the seasonally wet hollows and grasslands adjacent to the ponds. Heredense stands consist of Creeping Thistle, Spear Thistle, Nettle Urtica dioica and Hogweed Heracleum spondylium. Along the drier slopes dominant stands of Mugwort and Hemlock Conium maculatum are present, whilst Teasel Dipsacus fullonum, Ragwort Jacobea vulgaris and Common Mallow Malvus sylvestris are frequently dispersed throughout the grasslands and along heavily disturbed edge habitats* .'

Additional Criterion - must be assessed for all non-acid grassland types			
F	There are 10 or more vascular plant species per m^2 present, including forbs that are characteristic of the habitat type (species referenced in Footnote 2 and 4 cannot contribute towards this count). **Note - this criterion is essential for achieving Good condition for non-acid grassland types only.**	N	
	Essential criterion for Good condition achieved (for non-acid grassland) (Yes or No)	N	
	Number of criteria passed	3	

Condition Assessment Result		Condition Assessment Score	Score Achieved ×/
Acid Grassland Types (Result out of 5 criteria)			
Passes 5 criteria		Good (3)	
Passes 3 or 4 criteria		Moderate (2)	
Passes 2 or fewer criteria		Poor (1)	
Non-acid grassland Types (Result out of 6 criteria)			
Passes 5 or 6 criteria, including essential		Good (3)	
Passes 3 - 5 criteria, including essential		Moderate (2)	
Passes 2 or fewer criteria;		Poor (1)	Y

Suggested enhancement interventions to improve condition score

Enhancement to good condition likely to be limited by nutrient status and recreration pressure on habitat. Management to limit nettles etc would improve condition of individual grassland blocks under metric but may be detrimental to the 'mosaic value' of the site e.g food plants for comma etc.

The limiting factor is likely to be criterea 6 (10 or more vascular species per m). Management to vary sward height would be beneficial (as would removal of arrisings) but unlikely to result in an increase in BNG value

PEA references acid grassland is described in SINC but not identified - potential for enhancement of remenant acid grassland in areas if can be located from SINC mapping.

Perhaps worth considering pond/reedbed creation on driving range? The overal site is a mosaic of habitats - management/enhancements could be devised to create Open-Mosaic especially if acid grassland can be identified.

Notes

Footnote 1 – For example, this could include small, scattered areas of bare ground allowing for plant colonisation, or localised patches not exceeding 5% cover.

Footnote 2 - Species indicative of sub-optimal condition for this habitat type include:creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* . There may be additional relevant species local to the region and or site.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, by applying professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Condition Sheet: SCRUB Habitat Type

UK Habitat Classification (UKHab) Habitat Type

Heathland and shrub - Blackthorn scrub
Heathland and shrub - Gorse scrub
Heathland and shrub - Hawthorn scrub
Heathland and shrub - Hazel scrub
Heathland and shrub - Mixed scrub
Heathland and shrub - Dunes with sea buckthorn (H2160)
Heathland and shrub - Willow scrub

Habitat Description

dense bramble scrub

For Dunes with sea buckthorn see:	Dunes with sea-buckthorn (Dunes with Hippophae rhamnoides) - Special Areas
For other scrub types see:	ukhab – UK Habitat Classification

Site name and location	Thames View former golf course	**On-site or off-site**	
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The scrub is a good representation of the habitat type it has been identified as, based on its UKHab description (where in its natural range). The appearance and composition of the vegetation closely matches the characteristics of the specific scrub type. At least 80% of scrub is native, and there are at least three native woody species[1], with no single species comprising more than 75% of the cover (except hazel *Corylus avellana*, common juniper *Juniperus communis*, sea buckthorn *Hippophae rhamnoides* or box *Buxus sempervirens*, which can be up to 100% cover).	Y	Dog Wood Cornus sanguinea, Elder Sambucus nigra, Hawthorn, Whitebeam Sorbus aria, Norway Maple, Cherry, Blackthorn, Cotoneaster sp., and Field Maple. Occasional stands of semi-mature Scots Pine Pinus sylvestris are also present.
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran[2]) shrubs are all present.	N	fairly uniform age structure.
C	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]) and species indicative of sub-optimal condition[5] make up less than 5% of ground cover.	N	Isolated cherry laurel patch at south-west of the site. Cotoneaster sp occasionally recorded.
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	Y	Yes blends into long g3c grass.
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	N	Scrub is largely boundary screening so glade creation not necessarilly appropriate
	Number of criteria passed		

Condition Assessment Result (out of 5 criteria)	Condition Asses	Score Achieved ×/
Passes 5 criteria	Good (3)	
Passes 3 or 4 criteria	Moderate (2)	
Passes 2 or fewer criteria	Poor (1)	Y

Suggested enhancement interventions to improve condition score

Remove cotoneaster and cherry laurel where identified. In this context however Cotoneaster not detrimental to habitat value. Cherry laurel should be controlled as appears self seeded and has potential to spread into grassland.

Footnotes

Footnote 1 – Native woody species as defined and listed in the Hedgerow Survey Handbook: DEFRA (2007) *Hedgerow Survey Handbook: A standard procedure for local surveys in the UK.*
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk) and
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Footnote 5 - Species indicative of sub-optimal condition for this habitat type may include: non-native conifers, tree-of-heaven *Alianthus altissima*, holm oak *Quercus ilex*, European turkey oak *Quercus cerris*, cherry laurel *Prunus laurocerasus*, snowberry *Symphoricarpos* spp., shallon *Gaultheria shallon*, American skunk cabbage *Lysichiton americanus*, buddleia *Buddleja* spp., cotoneaster *Cotoneaster* spp., Spanish bluebell *Hyacinthoides hispanica* and hybrid bluebells *Hyacinthoides x massartiana*. There may be additional relevant species local to the region and or site.

Condition Sheet: WOODLAND Habitat Type

UK Habitat Classification (UKHab) Habitat Type(s)

Woodland and forest - Lowland beech and yew woodland
Woodland and forest - Lowland mixed deciduous woodland
Woodland and forest - Native pine woodlands
Woodland and forest - Other coniferous woodland
Woodland and forest - Other Scot's pine woodland
Woodland and forest - Other woodland; broadleaved
Woodland and forest - Other woodland; mixed
Woodland and forest - Upland birchwoods
Woodland and forest - Upland mixed ashwoods
Woodland and forest - Upland oakwood
Woodland and forest - Wet woodland

Habitat Description

ukhab – UK Habitat Classification

This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here:

Woodland Wildlife Toolkit (sylva.org.uk)

IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of this condition assessment are not equivalent to, nor are they comparable with the scores from the EWBG condition assessment, because the EWBG assessment has been adapted for the biodiversity metric, including the removal of EWBG Indicator 7 (Proportion of favourable land cover around woodland) and Indicator 14 (Size of woodland), and minor changes to other indicators.

Site name and location	Thames View former golf course	**On-site or off-site**	
Limitations (if applicable)		**Survey reference (if relating to a wider survey)**	
Grid reference		**Habitat parcel reference**	

Condition Assessment Criteria

Indicator		**Good (3 points)**	**Moderate (2 points)**	**Poor (1 point)**	**Score per indicator**	**Notes (such as justification)**
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	2	Poplar - uniform age (probaly age class 2) some colonisation by alder, hawthorm and willow sp
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in 40% or less of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	none evident
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] >10% cover.	3	none evident
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	1	alder and willow, hawthorn in drier areas (poplar non-native)
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	1	poplar dominant plantation
F	**Open space within woodland**	10 - 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	1	areas not extensive enough for true glades - open space is surrounding former golf course
G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	1	poplar colonisation by alder and hawthorn saplings
H	**Tree health**	Tree mortality less than 10%, no pests or diseases and no crown dieback[9].	11% to 25% mortality and/or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	2	Some of poplar have died off however this adds standing dead wood

I	**Vegetation and ground flora**	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	1	comparable to grassland outside of woodland. PEA identifies more intresting community in localised areas but not appearent at time of survey with exception of reed on pond margins. '*The understory supports a range of wetland species including Purple Loosestrife, Common Reed Phragmites Phragmites australis, Greater Willow Herb, Sea Club-rush, and Celery-leaved Buttercup*.'
J	**Woodland vertical structure**	Three or more storeys across all survey plots or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	1	Some secondary growth but mainly single ager structure poplar
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1	none evident
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	2	Many standing dead poplar
M	**Woodland disturbance**	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground[14].	More than 1 hectare of nutrient enrichment and or more than 20% of woodland area has damaged ground[14].	2	Ground flora
				Total Score (out of a possible 39)		

Condition Assessment Result	Condition Assessment Score	Result Achieved
Total score >32 (33 to 39)	Good (3)	Poor
Total score 26 to 32	Moderate (2)	
Total score <26 (13 to 25)	Poor (1)	

Suggested enhancement interventions to improve condition score

Footnotes

Footnotes below refer to the EWBG woodland condition assessment methodology: EWBG (No date). *Assessing your Woodland's Condition* [online]. Available from: Woodland Wildlife Toolkit (sylva.org.uk)

When applying this condition sheet, good practice would be to use the methodology associated with the EWBG toolkit.

Footnote 1 - See EWBG method INDICATOR 1 for more information. If tree species is not a birch *Betula* sp., cherry *Prunus* sp. or *Sorbus* sp.: 0 – 20 years (Young); 21 - 150 years (Intermediate); and >150 years (Old). For birch, cherry or *Sorbus* species; 0 - 20 years = Young; 21 - 60 years =Intermediate; >60 years = Old. A recognisable age-class should be a consistent recognisable layer across the woodland or stand being assessed. Presence of a few saplings would not indicate that the woodland has an 'age-class' of young trees.

Footnote 2 - See EWBG method INDICATOR 2 for more information. Browsing pressure is considered to be significant where >20% of vegetation visible within each survey plot shows damage from any type of browsing pressure listed.

Footnote 3 - See EWBG method INDICATOR 3 for more information. Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly.

Check for the presence of all plant species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), particularly the following invasive non-native species: American skunk cabbage *Lysichiton americanus*; Himalayan balsam *Impatiens glandulifera*; Japanese knotweed *Reynoutria japonica*; cherry laurel *Prunus laurocerasus*; shallon *Gaultheria shallon*; snowberry *Symphoricarpos albus*; variegated yellow archangel *Lamiastrum galeobdolon subsp. argentatum*; rhododendron *Rhododendron ponticum*; and tree-of-heaven *Alianthus altissima*.

Footnote 4 - See EWBG method INDICATOR 4 and Table 2 for more information. The number of different native tree or shrub species including young trees and shrubs. A list of commonly found native tree and shrub species is provided in Table 2. Not all species listed are native to all parts of the UK. Note a list of commonly found non-native tree species are also included and should be recorded if present.

Footnote 5 - See EWBG method INDICATOR 5 and for more information. The abundance of native tree species in upper (>5 m) and understorey (up to 5 m) layers including young trees and shrubs.

Footnote 6 - See EWBG method INDICATOR 6 for more information. Open space within woodland in this context is temporary open space in which trees can be expected to regenerate (for example, glades, rides, footpaths, areas of clear-fell). This differs from permanent open space where tree regeneration is not possible or desirable (for example, tarmac, buildings, rivers). Area is at least 10 m wide with less than 20% covered by shrubs or trees.

Footnote 11 – This criterion looks at structural diversity and is useful to understand in conjunction with the age of trees in a woodland. Vertical structure is defined as the number of canopy storeys present. Possible storey values are: 1) Upper; 2) Complex: recorded when the stand is composed of multiple tree heights that cannot easily be stratified into broad height bands (such as upper, middle or lower); 3) Middle; 4) Lower; and 5) Shrub layer. There might be no storeys where the woodland has been felled. See EWBG INDICATOR 11 for more information.

Footnote 12 - See EWBG method INDICATOR 12 for more information. See gov.uk standing advice on ancient and veteran trees. Available from:

Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)

and:
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Footnote 13 – See EWBG method INDICATOR 13 for more information. This includes logs, large dead branches on the forest floor and stumps (<1 m tall) >20 cm diameter at narrowest point and >50 cm long. Also includes standing dead trees (>1 m tall) and also deadwood on standing live trees. Diameter is measured at the narrowest point on the stem. Minimum diameter of 20 cm.

Footnote 14 - See EWBG method INDICATOR 15 for more information. Examples of disturbance are: significant nutrient enrichment; soil compaction from trampling, machinery, animal poaching or litter.

Condition Sheet: POND Habitat Type

Habitat Type(s)

Lakes - Ponds (priority habitat)

Habitat Description

All ponds held very litter water and were leaf litter filled and likely eutrophic.Previous pea records low waterlevels following drought however 09/2023 visit followed a wet summer so it is likely

ukhab – UK Habitat

For ponds (non-priority) – see the Biodiversity Metric 4.0 Technical Annex 2.

Site name and location	Thames View former golf course	**On-site or off-site**		
		Survey reference (if relating to a wider		
Limitations (if applicable)		**Habitat parcel reference**		
		Grid reference		

	Condition Assessment Criteria	**Criterion passed (Yes or No)**		**Notes (such as justification)**
Core Criteria - applicable to all ponds (woodland[1] and non-woodland):				
A	The pond is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution. Turbidity is acceptable if the pond is grazed by livestock.	N	N	
B	There is semi-natural habitat (moderate distinctiveness or above) completely surrounding the pond, for at least 10 m from the pond edge for its entire perimeter.	Y	Y	
C	Less than 10% of the water surface is covered with duckweed *Lemna* spp. or filamentous algae.	N	N	
D	The pond is not artificially connected to other waterbodies, e.g. agricultural ditches or artificial pipework.	N	Y	
E	Pond water levels can fluctuate naturally throughout the year. No obvious artificial dams[2], pumps or pipework.	Y	Y	
F	There is an absence of listed non-native plant and animal species[3].	Y	Y	
G	The pond is not artificially stocked with fish. If the pond naturally contains fish, it is a native fish assemblage at low densities.	Y	Y	
Additional Criteria - must be assessed for all non-woodland ponds:				
H	Emergent, submerged or floating plants (excluding duckweed)[4] cover at least 50% of the pond area which is less than 3 m deep.	N	N	
I	The pond surface is no more than 50% shaded by adjacent trees and scrub.	Y	Y	
	Number of criteria passed			

Condition Assessi	**Condition Assessment Score**	**Score Achieved ×/□**	
Results for woodland ponds which require assessment of 7 core criteria			
Passes 7 criteria	Good (3)		
Passes 5 or 6	Moderate (2)	Y	Y
Passes 4 or fewer c	Poor (1)		
Results for non-woodland ponds which require assessment of 9 criteria			
Passes 9 criteria	Good (3)		
Passes 6 to 8 criter	Moderate (2)		
Passes 5 or fewer c	Poor (1)		

Suggested enhancement interventions to improve condition score

Footnote 1 - A woodland pond will be surrounded on all sides by woodland habitat.

UKTAG classification of alien species working paper v8.pdf (wfduk.org)

• Frequently occurring non-native plant species include water fern *Azolla filiculoides*, Australian swamp stonecrop *Crassula helmsii*, parrot's feather *Myriophyllum aquaticum*, floating

Annex C

STATUTORY BIODIVERSITY METRIC

The Statutory Biodiversity Metric
Start page

Project details			
Planning authority:	Planning Inspectorate / London Borough of Bexley		
Project name:	Cory Decarbonisation Project		
Applicant:	Cory Environmental Holdings		
Application type:	NSIP		
Planning application reference:	EN010128		
Completed by:	Paul Joyce, WSP UK Ltd		
Date of metric completion:	08 January 2024		
Reviewer:	Marion Macnair, WSP UK Ltd		
Calculation iteration:	1		
Planning authority reviewer:			
Date of planning authority review:			
Target % net gain:	10%		
Irreplaceable habitat present at baseline:	No ✓		
Total site area - including irreplaceable habitat area (hectares):	77.15	Irreplaceable habitat site area (hectares):	0.00
Total off-site area - including irreplaceable habitat area (hectares):	16.41	Irreplaceable habitat area off-site (hectares):	N/A

Main menu

Results

Cell style conventions	
⚠	Attention required
▲	Input error/rules and principles not met
	Use of this cell is not appropriate
	Enter data
	Automatic lookup
	Result

View all

Reset view

On-site baseline map — Insert

On-site baseline map reference number	

On-site post intervention map — Insert

On-site post-intervention map reference number	

Off-site baseline map — Insert

Off-site baseline map reference number	

Off-site post intervention map — Insert

Off-site post-intervention reference number	

Unit Shortfall by Tier/Module	
Tier	Unit Shortfall
A1	0.00
A2	0.00
A3	0.00
A4	0.00
A5	0.00
H	0.00
W	0.00

*The spatial risk multiplier has been applied to all unit shortfall values.

Cory Decarbonisation Project

Headline Results

Return to results menu

Scroll down for final results ⚠

On-site baseline	*Habitat units*	348.49		
	Hedgerow units	0.00		
	Watercourse units	16.78		
On-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	353.07		
	Hedgerow units	0.00		
	Watercourse units	19.08		
On-site net change (units & percentage)	*Habitat units*	4.57	1.31%	On-site net gain is less than target set ⚠
	Hedgerow units	0.00	0.00%	
	Watercourse units	2.30	13.71%	
Off-site baseline	*Habitat units*	72.87		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Habitat units*	103.17		
	Hedgerow units	0.00		
	Watercourse units	0.00		
Off-site net change (units & percentage)	*Habitat units*	30.29	41.57%	
	Hedgerow units	0.00	0.00%	
	Watercourse units	0.00	0.00%	
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	34.87		
	Hedgerow units	0.00		
	Watercourse units	2.30		
Spatial risk multiplier (SRM) deductions	*Habitat units*	0.00		
	Hedgerow units	0.00		
	Watercourse units	0.00		

FINAL RESULTS

Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	34.87
	Hedgerow units	0.00
	Watercourse units	2.30
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	10.01%
	Hedgerow units	0.00%
	Watercourse units	13.71%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit	
Habitat units	10.00%	348.49	383.34	0.00	No additional area habitat units required to meet target ✓
Hedgerow units	10.00%	0.00	0.00	0.00	No additional hedgerow units required to meet target ✓
Watercourse units	10.00%	16.78	18.46	0.00	No additional watercourse units required to meet target ✓

8. REFERENCES

[1] UK Government. (2023). 'Statutory biodiversity metric'. Available at: Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk).

[2] CIEEM, CIRIA & IEMA. (2019). 'Biodiversity Net Gain: Good practice principles for development. A practical guide'. Available: [redacted]

[3] His Majesty's Stationary Office. (2021). 'Environment Act 2021 (as amended)'. HMSO, Norwich. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents

[4] PAS. (2024). 'Biodiversity Net Gain FAQs - Frequently Asked Questions'. Available at: https://www.local.gov.uk/pas/environment/biodiversity-net-gain-local-authorities/biodiversity-net-gain-faqs-frequently-asked#:~:text=The%20delay%20to%20implementing%20BNG,Projects%20is%20planned%20for%202025

[5] BSI. (2021). 'BS 8683:2021 Process for designing and implementing Biodiversity Net Gain'. British Standards Institute.

[6] [redacted]

[7] UKHab. (2024). 'UK Habitat Classification'. Available at: [redacted]

[8] Cory Environmental Holdings Limited. (2023). 'Preliminary Environmental Information Report: Cory Decarbonisation Project'. Available at: [redacted] /

[9] Department for Environment, Food & Rural Affairs. (2024). 'Statutory biodiversity metric tools and guides'. Available at: Statutory biodiversity metric tools and guides - GOV.UK (www.gov.uk)

[10] Thames21. (2024). 'Thames 21'. Available at: [redacted]

[11] Department for Environment, Food & Rural Affairs. (2024). 'What you can count towards a development's biodiversity net gain'. Available at: What you can count towards a development's biodiversity net gain - GOV.UK (www.gov.uk)

DECARBONISATION

10 Dominion Street
Floor 5
Moorgate, London
EC2M 2EF
Contact Tel: 020 7417 5200
Email: enquiries@corygroup.co.uk
corygroup.co.uk