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OSTERLEY PLACE

TESCO OSTERLEY, SYON LANE, TW7 5NZ

Ecological Impact Assessment

Consultant: Ramboll UK Limited



Intended for
St Edward Homes Limited



Date
September 2020

Project Number
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OSTERLEY TESCO, SYON LANE, ISLEWORTH ECOLOGICAL IMPACT ASSESSMENT

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1. INTRODUCTION

1.1 Background

Ramboll UK Limited ('Ramboll') has been appointed by St Edward Homes Limited (the 'Applicant') to undertake an Ecological Impact Assessment (EcIA) for the proposed residential-led, mixed-use redevelopment (the 'proposed development') of the Tesco Osterley site, Syon Lane, Isleworth, TW7 5NZ (the 'site').

The Applicant intends to submit an application for outline planning permission (the 'application') to the London Borough of Hounslow (LBH) for the redevelopment of the site. The redevelopment proposals comprise the demolition of the existing buildings and the construction of a residential led, mixed-use development to deliver residential and commercial floorspace, parking, access arrangements, and associated landscaping (the 'proposed development').

1.2 Objectives

The aim of this report is to provide an EcIA in relation to the site and the Zone of Influence (ZOI) of the proposed development. The EcIA comprises a description of the existing on-site ecological conditions, including:

- the ecological context of the site and its ZOI;
- an appraisal of the site's ecological importance; and
- an assessment of likely impacts and effects in relation to the proposed development and its associated activities, considering the mitigation and enhancement measures incorporated into the proposed development.

The structure and content of the report is based on current ecological report writing guidance (Chartered Institute of Ecology and Environmental Management (CIEEM) 2019¹ and BS 42020:2013 'Biodiversity – Code of practice for planning and development'²).

The EcIA has been informed by the following:

- A detailed desk study;
- An extended Phase 1 habitat survey. This was carried out to map habitats present on the site and to assess their suitability to support protected species; and
- A daytime inspection of trees on/adjacent the site to assess the potential of these to support roosting bats.

The objectives of this EcIA are to:

- identify designated nature conservation sites located either within the site or the ZOI of the proposed development;
- assess the potential for the site and the ZOI of the proposed development to support populations of protected species or species of nature conservation importance;
- record the main habitats and features of ecological interest on the site;
- assess the ecological importance of the site;
- describe the proposed mitigation measures; and
- assess the residual effects from the proposed development.

¹Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine. Chartered Institute of Ecology and Environmental Management, London.

² British Standards Institution (BSI), 2013. BS 42020:2013 Biodiversity – Code of practice for planning and development. BSI Standards Limited, London.

No Natura 2000 network designated sites³ are present within the ZOI. Therefore, a Habitat Regulations Assessment (HRA) was not considered necessary for the site.

1.3 Site Location and Description

The site is located north of the A4 Great West Road at the corner of Syon Lane (B545) and Grant Way in Isleworth, TW7 5NZ (at OS grid reference TQ 1604277649) and occupies an area of 5.4 hectares (ha).

The site currently comprises an operational Tesco Extra store (over 9,000 m² retail floorspace), hand car wash, petrol filling station, service yard and surface parking (625 spaces) for customers. In the north is an area of open space known as the 'Water Gardens'. The location and survey area are shown in Figure 1.1.

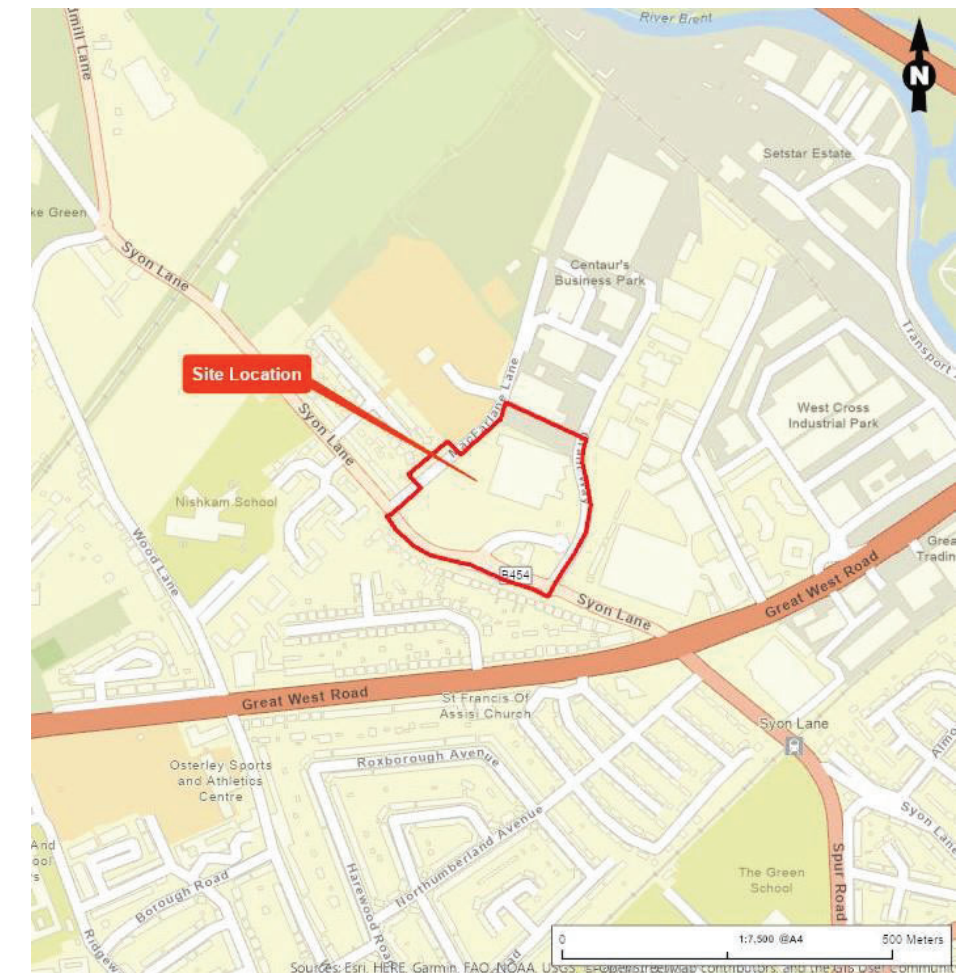


Figure 1.1: Site Location

Areas of introduced shrub and scattered trees are present within the car park. The Water Gardens and site edges are characterised by scrub, amenity grassland, dense scrub and trees.

Beyond the site boundary to the north-west, a large green space is present, consisting of Goals Gillette Corner Football Academy football pitches, Sky's football area, and Wyke Green Golf Course; to the north are commercial and industrial uses; to the east there is an open space along Grant Way beyond which are more commercial and industrial uses; to the south the dominant

³ Natura 2000 is a network of sites selected to ensure the long-term survival of Europe's most valuable and threatened species and habitats and comprise: Special Areas of Conservation (SACs); Special Protection Areas (SPAs); Ramsar sites; and both terrestrial and marine sites (Marine Protected Areas (MPAs)).

land use is residential with associated roads and infrastructure; and to the west more residential and open space uses are present.

1.4 Proposed Development

The site would be comprehensively redeveloped to deliver a residential-led, mixed-use scheme set within a landscaped perimeter. The proposed development would include residential, retail, commercial and community floorspace within buildings up to 17 storeys high.

Outline planning permission with all matters reserved except access will be sought for the following:

"Demolition of existing building and car park and erection of buildings to provide residential homes, plus flexible non-residential space comprising commercial, business and service space, and/or learning and non-residential institution space, and/or local community space, and/or public house/drinking establishment, and/or a mobility hub, along with associated access, bus turning, car and cycle parking, and landscaping arrangements."

The proposed development is defined by parameter plans, development specifications and a design code committed to deliver the following:

- Demolition the existing Tesco Store and petrol filling station;
- Up to 1,677 new homes;
- Up to 5,000 m² (GIA) of non-residential floorspace, including commercial, business and service space, and/or learning and non-residential institution space, and/or local community space, and/or public house/drinking establishment, and/or a mobility hub;
- A bus turning facility located off Grant Way, to include bus stand spaces and welfare facilities for drivers;
- Up to 400 car parking spaces, including car club bays and comprising of both on-street and off-street provision;
- A minimum of 10 car club bays;
- A minimum of 20% active electric vehicle charging points, with remaining car parking spaces to be passive electric vehicle charging points;
- Long stay and short stay cycle parking in line with Intend to Publish London Plan standards;
- A minimum of 24 trees retained;
- A minimum of 300 new trees planted;
- A minimum of 20,000 m² of publicly accessible open space, including new public open space areas;
- A minimum of 8,000 m² of communal amenity space at podium and roof level; and
- A minimum of 5,000 m² play space split between public ground floor area and communal podium/roof levels;
- A minimum of 4,000 m² of biodiverse roofs;
- A new public route through the retained and enhanced Water Gardens;
- Ten development parcels, with ten blocks ranging in height from one to 17 storeys; and
- A commitment to implement a construction environmental management plan (CEMP) during the demolition and construction stage. A framework for the CEMP is presented in ES Chapter 5: Demolition and Construction Environmental Management.

Additionally, connection to adjoining green space and parks would be improved and vehicular access to the site would be limited to avoid large areas of surface car parking. The relevant proposed development parameter plans for this assessment are provided in Appendix 2.

1.5 Legislation and Policy Framework

Various legislation and planning policies refer to the protection of wildlife. These are summarised in Appendix 3 but should not be regarded as a definitive legal opinion. When dealing with individual cases, the full texts of the relevant documents should be consulted, and legal advice obtained if necessary.

2. METHODOLOGY

2.1 Desk Study

The purpose of the desk study was to collect existing baseline data about the site and the ZOI, such as the location of designated sites or other natural features of potential ecological importance. The following ZOI has been considered:

1. All statutory designated sites up to 2 km from the site, including Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR);
2. Non-statutory designated sites: Sites of Importance for Nature Conservation (SINC) up to 2 km from the site; and
3. Records of protected species up to 2 km from the site.

Greenspace Information for Greater London (GiGL) was contacted to provide details of designated sites and protected species within 2 km of the site. The information provided by GiGL is summarised in Section 3.

In addition, the Multi Agency Geographic Information for the Countryside (MAGIC) website⁴ was searched for supplementary information on statutory sites. This included a search for European Protected Species Mitigation (EPSM) licences issued within 2 km of the site. Records are presented in Section 3 where results were returned. Supplementary information on the site and its surroundings were obtained from aerial images available from Google Earth.

2.2 Extended Phase 1 Habitat Survey

An extended Phase 1 habitat survey of the site was undertaken by Jake James-Knell (the 'Ramboll ecologist') on 8 August 2019 (during optimum late March/early April to mid-October Phase 1 habitat survey period). Jake has a Bachelor of Science degree in Environmental Science, is a qualifying member of CIEEM and has been undertaking ecological surveys for over two years. The weather during the survey was dry, sunny and calm, with temperatures of approximately 23°C.

The survey involved a site walkover and assessment of key habitats, land use and ecological features. The main habitats present were recorded using standard Phase 1 habitat survey methodology as described in the 'Handbook for Phase 1 habitat survey' (Joint Nature Conservation Committee (JNCC), 2010⁵).

A Phase 1 Habitat Map with Target Notes (TN) (refer to Appendix 1) was prepared to record habitats and features of interest. In addition to general habitat classification, a list was compiled of observed plant species (using the nomenclature of Stace, 2010⁶, with common and Latin names referred to in the first instance after which only the common names are used).

The site was assessed for its potential to support protected and notable species such as reptiles, badgers and bats, and was inspected for signs of any invasive plant species subject to legal controls. The aim of this was to identify potential ecological constraints and to guide recommendations for further survey requirements for these species if required.

⁴ MAGIC Steering Group, 2019. Interactive Map [online] Available at: <https://magic.defra.gov.uk/MagicMap.aspx> [Accessed: 13/08/2019]

⁵ Joint Nature Conservation Committee (JNCC), 2010. Handbook for Phase 1 habitat survey – a technique for environmental audit. JNCC Peterborough.

⁶ Stace C., 2010. New Flora of the British Isles 3rd Edition. Cambridge University Press.

2.3 Species

Bats – Roost Assessment for Structures

The following building types and features are considered to be particularly suitable to support roosting bats:

- Buildings of pre-20th or early 20th century construction;
- Agricultural buildings of brick, stone or timber construction;
- Large and complicated roof voids with unobstructed flying spaces;
- Large (>20 cm) roof timbers with mortise joints, cracks and holes;
- Entrances into buildings that bats could fly through;
- Poorly maintained buildings such that they provide access points for bats into roofs, walls, bridges, but at the same time not being too cool and draughty;
- Roofs that are warmed by the sun (e.g. south-facing);
- Weatherboarding and/or hanging tiles with gaps;
- Undisturbed building roofs and structures;
- Buildings and built structures in proximity to each other providing a variety of roosting opportunities throughout the year; and
- Buildings and built structures close to good foraging habitat (e.g. mature trees, parkland, woodland or wetland).

External inspections of the buildings on the site were undertaken during daylight hours as part of the extended Phase 1 habitat survey visit on 8 August 2019. The inspections were carried out by the Ramboll ecologist.

Bats – Preliminary Ground Level Roost Assessment of Trees

A ground level roost assessment of trees was undertaken on 8 August 2019. The inspection was carried out by the Ramboll ecologist. The objectives of this survey were to determine the actual or potential presence of bats and the need for further survey and/or mitigation. These surveys covered all trees within and immediately adjacent the site. The inspection involved walking around the trees visually inspecting features, such as broken or dead tree limbs, woodpecker holes, lifted bark sections and crevices/scars in the branches or tree trunks for any evidence of bat use. Inspections were assisted where necessary by use of close focus binoculars and high-powered torches. In accordance with the Bat Conservation Trust (BCT) guidelines (2016)⁷, each tree or group of trees was assessed for their potential to support bats and classified as 'negligible', 'low', 'moderate' or 'high'. In addition, the suitability of the site for foraging and commuting bats was assessed.

Table 2.1 provides criteria for each of these categories for buildings and trees.

Table 2.1: Building, Structure and Tree Bat Roost Potential Categories	
Roost Potential	Description
Confirmed	A building, structure or tree that is confirmed to support a bat roost.
High	A building, structure or tree with one or more potential roost sites that is obviously suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

⁷ Collins J., 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd Edition. Bat Conservation Trust (BCT).

Roost Potential	Description
Moderate	A building, structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.
Low	A building or structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection and/or suitable surrounding habitat to be used on a regular basis or by a large number of bats (i.e. unlikely to be suitable for hibernation or maternity). Trees of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with very limited roosting potential.
Negligible	Negligible habitat features likely to be used by roosting bats and bats very unlikely to be present.

Notes: Category descriptions drawn from Collins (2016)⁸

Bats - Emergence and Re-entry Survey

A re-entry and emergence survey were carried out on a mature oak tree which was identified as having Moderate bat roost potential (TN3 on the Phase 1 Habitat Map in Appendix 1, and Tree 81 in the arboricultural report⁹) in line with BCT guidelines on 29 August 2019 and 10 September 2019 respectively, within the optimum bat survey period and during suitable weather conditions. Two surveyors were used to survey the tree, which was considered sufficient to cover the feature adequately. The surveyors used ultrasonic bat detectors with inbuilt recorders allowing bat calls to be recorded and analysed at a later date in order to identify the bat to species level. The emergence survey was conducted from 15 minutes before sunset and carried on for at least an hour and a half after sunset. The re-entry survey was conducted two hours before sunrise and carried on for 15 minutes after sunrise.

Badgers

The presence of any suitable habitat for badger *Meles meles* within the site boundary (where access is permitted) was assessed and any field signs such as setts, paths, prints, foraging, dung pits and badger guard hairs were noted.

Birds

The bird species seen or heard during the extended Phase 1 habitat survey were recorded and their behaviour noted. The suitability of habitat features for birds on and adjacent to the site were appraised during the survey.

The site was assessed for its potential to support birds of nature conservation importance, including those listed as Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)¹⁰ (WCA), Red species in the list of Birds of Conservation Concern¹¹, and the UK or Local Biodiversity Action Plan (BAP). See Appendix 3 for relevant legislation and policy.

⁹ Tree Fabrik. 2019. Tesco Extra Osterley Park Isleworth Arboricultural Survey.

¹⁰ Secretary of State, 1981. The Wildlife and Countryside Act 1981 (as amended). HMSO.

¹¹ Eaton M.A., Aebischer, N.J., Brown, A.F., Hearn, R.D., Lock, L., Musgrove, A.J., Noble, D.G., Stroud, D.A. and Gregory, R.D., 2015. Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds 108, 708-746. Available at: britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf

Reptiles

Any reptiles seen during the extended Phase 1 habitat survey were recorded. Areas for potential as reptile habitats were identified and inspected appropriately within the scope of the extended Phase 1 survey.

Invasive Flora

Plant species identified within Schedule 9 of the WCA were searched for during the survey. Plants included in the Schedule include species such as Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandulifera* and giant hogweed *Heracleum mantegazzianum*. It is an offence under the WCA to spread or cause the spread of Schedule 9 species in the wild. See Appendix 3 for relevant legislation and policy.

Other Species

The presence of any habitat potentially suitable for species of conservation importance, other than those discussed above, including BAP species, was also noted within the site and the immediate vicinity.

2.4 Assessment of Importance of Ecological Features

The importance of ecological features (i.e. designated sites, habitats and species), identified within the ZOI has been assessed using a scale that classifies ecological features within a defined geographic context in accordance with CIEEM guidelines (2018)¹². The following frame of reference has been used for the site:

- International and European Importance;
- National Importance (England);
- Regional (Metropolitan) Importance;
- Borough Importance (London Borough of Hounslow);
- Local Importance (extending to the local area beyond the site boundary);
- Site-level Importance (limited to the site boundary and immediate surroundings); and
- Negligible Importance.

Various characteristics contribute to the importance of ecological features. These include recognised and published criteria (e.g. Ratcliffe (1977)¹³, (Wray, *et al.* (2010)¹⁴) where the ecological features are assessed in relation to their size, diversity, naturalness, rarity, fragility, typicalness, connectivity with surroundings, intrinsic value, recorded history and potential importance.

A wide range of sources can be used to assign importance to ecological features, including legislation and policy. In the case of designated sites, their importance reflects the geographic context of the designation. For example, sites designated as SACs are recognised as being of importance at an International level. Ecological features not included in legislation and policy may also be assigned importance, due to, for example, local rarity or decline or provision of a functional role for other ecological features. Professional judgement is used to assign such importance.

¹² 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. CIEEM, Winchester.

¹³ Ratcliffe, D.A. (Ed), 1977. A Nature Conservation Review. 2 vols. Cambridge University Press.

¹⁴ Wray, S., Wells, D., Long, E. and Mitchell-Jones, T., 2010. Valuing Bats in Ecological Impact Assessment, CIEEM In-Practice. 23-25.

2.5 Method of Assessment

The EcIA has been undertaken by means of existing best practice tools and techniques as recommended by CIEEM. As such, potential impacts and effects on ecological receptors (as defined by baseline conditions) have been assessed taking into consideration mitigation measures integral to the proposed development; consideration has been given to the need for additional mitigation to reduce or off-set potential significant effects, and finally all residual effects have been assessed as either significant or not significant at the relevant geographic level. As part of this, consideration was given to the avoidance, mitigation, restoration, compensation and enhancement measures (the 'mitigation hierarchy') integral to the proposed development.

2.6 Significance

The potential impacts and effects on ecological features were considered in relation to the proposed development at the site. The assessment was made by reference to the pre-development baseline conditions at the site. The impacts and effects have been characterised according to the following variables:

- Magnitude and extent – quantitative size of an impact (e.g. area of habitat/number of individuals);
- Timing – when the impact may occur;
- Duration and reversibility – timescale of effect (i.e. days, weeks, months or years) until recovery. Permanent impacts are described as such, and likelihood of recovery is detailed where appropriate;
- Frequency – frequency of effect (if appropriate, described as low to high and quantified where possible);
- Complexity – whether the effect would directly or indirectly affect the feature; and
- Negative/positive – if the effect would be beneficial or detrimental to the feature.

The assessment only describes those characteristics relevant to the ecological effect and determining the significance. For example, timing of when a habitat is destroyed may not be relevant in relation to the assessment of the effect on the habitat. However, it may be relevant to assessing the effect to the species that occur within the habitat (e.g. roosting bats).

In accordance with CIEEM guidance, each impact has been assessed as having a significant effect or not having a significant effect upon each ecological feature qualified with reference to the appropriate geographic scale. The importance level of the ecological feature concerned may be a determinant of the geographical level at which the effect is significant. For example, a significant effect to a SSSI, is likely to be significant at a national level. However, it may be the case that the effect could be considered significant at a lower geographical level than that at which the feature is important, depending on the magnitude of the impact. A significant effect is an effect that enhances or undermines the conservation status of an ecological feature. Conservation objectives may be specific (e.g. for a designated site), or broad (e.g. national conservation policy).

2.7 Limitations

It should be noted that availability and quality of the data obtained during desk studies is reliant on third party responses. This varies from region to region and for different species groups. Furthermore, the comprehensiveness of data often depends on the level of coverage, the expertise and experience of the recorder and the submission of records to the local recorder. Accordingly, the conclusions in this report are valid only to the extent that the information

provided to Ramboll was accurate, complete and available to Ramboll within the reporting schedule.

The extended Phase 1 habitat survey provides a snapshot of ecological conditions and does not record plants or animals that may be present on-site at different times of the year. The survey was undertaken during the optimum, late March/early April to mid-October Phase 1 habitat survey period when plants are generally visible (in the south). The absence of a particular species cannot definitely be confirmed by a lack of field signs and only concludes that an indication of its presence was not located during the survey effort.

Access to an area of tall ruderal vegetation with Japanese knotweed *Fallopia japonica*, in the west of the site (refer to TN 4) was not possible during the survey. However, a full assessment of the habitat could be made from adjacent areas. Accordingly, the lack of direct access to this small part of the site is not considered to limit the impact assessment undertaken of the site as a whole.

Ramboll is satisfied that this report represents a robust assessment of the site. If any action or development has not taken place on the site within 12 months of the date of this report, the findings of this survey should be reviewed by a suitably qualified ecologist and may need to be updated in line with CIEEM's 'Advice Note on the Lifespan of Ecological Reports and Surveys' (2019)¹⁵.

¹⁵ Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. Advice Note on the Lifespan of Ecological Reports and Surveys. CIEEM, Winchester. Available online: <https://cieem.net/wp-content/uploads/2019/04/Advice-Note.pdf> [Accessed 04/09/2019]

3. BASELINE CONDITIONS

3.1 Desk Study

Landscape Context

The site is located in a predominantly urban setting within Hounslow. The land use surrounding the site comprises the following:

- to the north (also north-west and north-east): industrial and commercial buildings and hardstanding; recreational fields; and a golf course beyond;
- to the east: open space; industrial, commercial and health uses; and hardstanding;
- to the south: sub-urban residential properties, education and place of worship uses; and
- to the west: sub-urban residential properties, education uses and Osterley Park grounds.

The connectivity at the site to both terrestrial and aquatic habitats is generally poor due to the dominance of hardstanding and buildings.

Designated Sites

Statutory Sites

Several designated sites have been identified within the ZOI, these are presented in Table 3.1. The closest of which is Blondin Nature Area, a Local Nature Reserve (LNR) 1.2 km to the north-east of the site.

Name	Type	Location (m)	Area (ha)	Reason for designation
Syon Park	SSSI	1,482 south-east	22.07	Fen, marsh and swamp – lowland habitat. Invertebrates.
Blondin Nature Area	LNR	1,191 north-east	2.34	Community orchard, wildflower meadow and pond.
Long Wood	LNR	1,270 north	1.20	Ancient woodland. Kingfisher <i>Alcedo atthis</i> and other breeding birds.
Isleworth Ait	LNR	1,666 south-east	3.49	Birds, beetles and rare molluscs.

Non-statutory Sites

In London there are three tiers of SINC as follows:

- Sites of Metropolitan Importance (SMINC);
- Sites of Borough Importance (Borough Grade I and Borough Grade II) (SBINC); and
- Sites of Local Importance (SLINC).

The closest SINC is Osterley Park, which is a SBINC, 350 m to the north-west from the site. The remainder SINC within the ZOI of the site are summarised in Table 3.2.

Name	Tier	Area (ha)	Grid Reference	Notable Features Supported
London's Canals	Metropolitan (SMINC)	118.52	TQ 202 833	Aquatic fauna and invertebrates which are rarities in London.

Name	Tier	Area (ha)	Grid Reference	Notable Features Supported
River Thames and Tidal Tributaries	Metropolitan (SMINC)	2,304.92	TQ 302 806	Intertidal habitat and invertebrates. Black redstart <i>Phoenicurus ochruros</i> foraging habitat.
Tide Meadow at Syon Park	Metropolitan (SMINC)	22.45	TQ 174 766	Wetland habitat and invertebrates.
Royal Botanic Gardens, Kew	Metropolitan (SMINC)	121.79	TQ 182 768	Wide diversity of flora and habitats. World Heritage Site.
Boundary Stream and the Aviary	Borough Grade I (SBINC)	5.16	TQ 140 790	Aquatic habitat and flora. Great crested newts <i>Triturus cristatus</i> breed here.
Brent River Park South: Blackberry Corner, Jubilee Meadow, Trumpers Field & Fox Meadow	Borough Grade II (SBINC)	19.89	TQ 152 794	Notable flora and a variety of habitats.
Brent River Park South: Elthorne Waterside	Borough Grade II (SBINC)	14.72	TQ 157 792	Notable flora and a variety of habitats.
Long Wood Local Nature Reserve and meadows	Borough Grade I (SBINC)	21.76	TQ 153 790	Ancient woodland. Kingfisher and other breeding birds.
Wyncote Farm	Borough Grade I (SBINC)	2.98	TQ 157 788	Wasteland habitat with good floristic diversity and invertebrate conditions. Foraging area for kestrels <i>Falco tinnunculus</i> .
Duke of Northumberland's River at Isleworth	Borough Grade I (SBINC)	1.78	TQ 164 760	Aquatic flora and veteran trees. Kingfisher and grey wagtail <i>Motacilla cinerea</i> .
Osterley Park	Borough Grade I (SBINC)	195.67	TQ 146 781	A range of habitats with high floristic diversity. Veteran trees.
St Mary's Wood and the Boundary Stream	Borough Grade I (SBINC)	6.18	TQ 140 788	Wet woodland, aquatic habitat with kingfishers.
Syon Park	Borough Grade I (SBINC)	56.6	TQ 168 766	Wide range of habitats and flora. Veteran trees.
Duke of Northumberland's River at Woodlands	Borough Grade I (SBINC)	1.47	TQ 154 757	Aquatic vegetation.
Royal Mid-Surrey Golf Course	Borough Grade I (SBINC)	81.35	TQ 179 761	Rare flora. Wetland habitat. Invertebrates.

Table 3.2: Sites of Nature Conservation Interest within ZOI				
Name	Tier	Area (ha)	Grid Reference	Notable Features Supported
Piccadilly and District Lines in Ealing	Borough Grade II (SBINC)	36.33	TQ 179 796	Wide variety of flora.
Wyke Green Golf Course	Borough Grade II (SBINC)	36.9	TQ 156 782	Ancient woodland.
Boston Manor Park	Borough Grade II (SBINC)	12.22	TQ 167 783	Veteran trees, wet grassland. Kingfisher
Trumpers Triangle	Borough Grade II (SBINC)	1.75	TQ 159 785	Trumpers Triangle contributes to the extensive wildlife habitats of Osterley Park, Wyke Green Golf Course and the canal.
Piccadilly Line Railsides in Hounslow	Borough Grade II (SBINC)	16.53	TQ 158 782	A green corridor, especially important to common birdlife.
Hounslow Loop Railsides	Borough Grade II (SBINC)	30.17	TQ 167 774	A green corridor.
Walmer Gardens Open Space	Local (SLINC)	0.3	TQ 163 795	Orchard.
Haslemere Wildlife Reserve	Local (SLINC)	0.31	TQ 163 791	Wide range of habitats.
Blondin Park Nature Area	Local (SLINC)	4.11	TQ 167 787	Floral diversity and suitable habitat for reptiles and amphibians.
Boundary Nature Area	Local (SLINC)	0.22	TQ 163 789	None supplied.
Mount Carmel School Nature Area	Local (SLINC)	0.21	TQ 173 790	None supplied.
Jersey Gardens	Local (SLINC)	2.23	TQ 151 773	Ornamental gardens supporting a range of common birds.

3.2 Habitats (Phase 1 Habitat Survey)

The following descriptions of habitats should be read in conjunction with the Phase 1 Habitat Map (see Appendix 1). TNs and associated field notes and photographs are presented in Appendix 4.

Within the northern portion of the site there is a publicly accessible amenity open space known as the 'Water Gardens' (refer to TN 6, 7 and 8). Habitats present in this location include amenity grassland, a hardstanding pathway, dense scrub and bare ground. In addition, there is a man-made depression (refer to TN 7) that may serve as a seasonal drainage feature. However, no standing water was observed at the time of survey.

Scattered trees on the site are semi-mature and early mature for the most part, including a mature pendunculate oak *Quercus robur* in the west of the site.

Within the west of the site is a fenced off area beyond Macfarlane Lane which comprises tall ruderal vegetation and scattered trees (refer to TN 4).

The centre of the site comprises the Tesco store building and associated car park hardstanding (refer to TN 13 and 14). Habitats amongst the hardstanding include blocks of introduced shrub and scattered trees, as well as tall ruderal vegetation to the east by the hand car wash (refer to TN 12).

In the south-east of the site is the main vehicle entrance off Syon Lane (refer to TN 11) including the petrol filling station building with hardstanding forecourt (refer to TN 15).

The car park and store are bordered by strips of amenity grassland, scattered trees, dense scrub and scattered scrub (refer to TN 1, 2, 9 and 10).

Artificial light sources are present throughout the site.

Hardstanding

The majority of the site consists of hardstanding, which provides car parking spaces, pedestrian pavement and roads. Hardstanding is considered to be of Negligible ecological importance.

Buildings

There are two on-site buildings, the store (refer to TN 14) and the petrol station (refer to TN 15).

The store building is approximately 10 m tall, brick built with PVC soffits and pitched tiled roofs with flat inner sections (as seen from aerial imagery).

The petrol station is a single-storey, brick-built building with a flat roof. In the courtyard, petrol pumps are located under a large canopy. The car wash structure is comprised of plastic and metal.

The buildings present on-site are of Negligible ecological importance.

An assessment of the potential of these buildings to support protected species and their associated ecological importance is made in Section 3.3 below.

Individual Trees

Scattered trees are present amongst the introduced shrub planting, amenity grassland and dense scrub across the site (refer to TN 1, 2, 3, 4, 5, 6, 8, 10 and 13). The following tree species are present on-site: hawthorn *Crataegus monogyna*, pendunculate oak, red oak *Quercus rubra*, sycamore *Acer pseudoplatanus*, cherry *Prunus avium*, silver maple *Acer saccharinum*, sweet chestnut *Castanea sativa*, rowan *Sorbus aucuparia*, field elm *Ulmus minor*, horse chestnut *Aesculus hippocastanum*, hazel *Corylus avellana*, poplar *Populus x canadensis*, willow *Salix fragilis*, lime *Tilia x europaea*, whitebeam *Sorbus aria*, silver birch *Betula pendula*, Corsican pine *Pinus nigra* and atlas cedar *Cedrus atlantica*.

Trees in relation to roosting bats are discussed in Section 3.3 below.

There are no Tree Preservation Orders (TPO) within the survey area¹⁶.

Individual trees in the area are considered to be of Site level ecological importance.

Introduced Shrub

Introduced shrub is present in blocks within the car park (refer to TN 13) and in rows on the main entrance (refer to TN 11). The following plant species were recorded within those blocks: box *Buxus sp.*, lavender *Lavandula angustifolia*, fleabane *Conyza sp.*, cherry laurel *Prunus laurocerasus* and butterfly bush *Buddleja davidii*. Introduced shrub is considered to be of Site level ecological importance.

¹⁶ London Borough of Hounslow (LBH), 2019. Planning Constraints, Tree Preservation Orders [online]. Available at https://www.hounslow.gov.uk/homepage/82/planning_constraints [Accessed 16/08/2019]

Bare Ground

Within the northern portion of the site, within the 'Water Gardens', a patch of bare ground (refer to TN 8) is located in the understory of three lime trees with dense canopy growing close to the ground. Bare ground here is considered to be of Negligible ecological importance.

Scrub

Dense scrub was located around the car park within the southern and eastern portion of the site (refer to TN 1, 9 and 10), which acts as a barrier for pedestrian movement. Dense scrub is also present within the 'Water Gardens' in the northern portion of the site (refer to TN 6). Dense scrub species include: ivy *Hedera helix*, box, hawthorn, pendunculate oak, red oak, sycamore, silver maple, firethorn *Pyracantha coccinea*, sweet chestnut, fleabane, rowan, field elm, horse chestnut, hazel, barberry *Berberis vulgaris*, bramble *Rubus fruticosus agg.*, mahonia *Mahonia japonica*, cotoneaster *Cotoneaster dammeri*, gorse *Ulex europaeus*, St-John's wort *Hypericum perforatum*, common mouse-ear *Cerastium fontanum*, hedge bindweed *Calystegia sepium* and cherry laurel.

Additionally, within the western portion of the site, along the boundary of the car park, a row of scattered scrub is present (refer to TN 2), comprising the following species: cotoneaster, silver maple, dogwood *Cornus sanguinea*, ivy, firethorn, pendunculate oak, box, hawthorn, field elm, red oak and butterfly bush.

All on-site scrub is considered to be of Site level ecological importance.

Amenity Grassland

Amenity grassland is present within the 'Water Gardens' within the northern portion of the site (refer to TN 6). A gravel pathway dissects the grassland through the middle and the sward is short-mown. Grassland species here include dandelion *Taraxacum officinale*, yarrow *Achillea millefolium*, geranium *Geranium robertianum*, red clover *Trifolium pratense*, ribwort plantain (*Plantago lanceolata*), common ragwort *Jacobaea vulgaris*, common bent (*Agrostis capillaris* and perennial rye-grass *Lolium perenne*.

Amenity grassland is also present on the boundaries of the site adjacent to Grant Way (refer to TN 9) and Syon Lane (refer to TN 10); comprising daisy *Bellis perennis*, yarrow, creeping buttercup *Ranunculus repens*, white clover *Trifolium repens*, strawberry *Fragaria vesca*, dandelion, perennial rye-grass and common bent. It is worth noting that the grass along Grant Way (refer to TN 9) was very parched at the time of survey and species identification was limited.

On-site amenity grassland is considered to be of Site level ecological importance.

Tall Ruderal

An area of tall ruderal vegetation is present within the fenced-off area along Macfarlane Lane (refer to TN 4). There were piles of refuse and some hardstanding where weeds have grown through the cracks. No access was attained during the survey; however, species composition has been assessed from the pathway looking in through the fence, which was sufficient to determine the characteristic of the habitat. Plant species here comprise: Japanese knotweed bramble, thistle *Cirsium vulgare*, nettle *Urtica dioica*, dog's mercury *Mercurialis perennis*, butterfly bush, fleabane, rowan, cotoneaster, common ragwort, sycamore, yarrow, red oak, perennial rye-grass, false oat-grass *Arrhenatherum elatius* and barren brome *Bromus sterilis*.

A further area of tall ruderal habitat is present in the east of the site. Plant species include common ragwort, fleabane, butterfly bush, yucca *Yucca sp.*, green alkanet *Pentaglottis sempervirens*, dandelion, nettle, poppy *Papaver sp.*, wall barley *Hordeum murinum*, burdock

Arctium minus and a large stand of dead hemlock *Conium maculatum* which has presumably been treated with herbicide.

Tall ruderal habitat on-site is considered to be of Site level ecological importance.

Invasive Species

Large stands of Japanese knotweed are present within the tall ruderal habitat off Macfarlane Lane (refer to TN 4). No access into this area was possible, but Japanese knotweed was observed in relatively large quantities. Japanese knotweed is listed under Schedule 9 of the WCA. No other Schedule 9 plants were observed at the time of survey.

Butterfly bush and cherry laurel were both recorded on-site during the Phase 1 habitat survey. Both feature alongside Japanese knotweed in the London Invasive Species Initiative (LISI) Species of Concern list¹⁷, under 'Category 3: Species of high impact or concern' which are widespread in London and require concerted, coordinated and extensive action to control/eradicate.

3.3 Species

The following descriptions of species should be read in conjunction with the Phase 1 Habitat Map (refer to Figure 2 in Appendix 1). Descriptions of TNs can be found in Appendix B. Descriptions of relevant legislation and policy, including acronyms, can be read in Appendix 3.

Species records provided by GiGL desk study data within 2 km of the site are also described in this section.

Badger

No evidence of badger *Meles meles* was recorded on-site during the extended Phase 1 habitat survey and the habitats on-site are not suitable to support badgers. Additionally, there are no GiGL records of badger within 2 km of the site. Therefore, badgers are considered likely to be absent and are therefore not discussed further in this report.

Birds

Data provided by GiGL indicates that 78 species of bird have been recorded within 2 km of the site. Table 3.3 shows notable species listed under the WCA, Bird of Conservation Concern (BOCC¹⁸) Red List, Birds Directive (2009/147/EC)¹⁹, Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC)²⁰, UKBAP and London BAP.

Table 3.3: Schedule 1, Red List, Birds Directive Annex 1, NERC and BAP Birds within 2 km of Site			
Common Name	Species Name	Status	Latest Record (within 6 years)
Skylark	<i>Alauda arvensis</i>	NERC Act Section 41 BAP Priority London Local Species of Conservation Concern (London BAP) Bird-Red	05/09/2014

¹⁷ London Invasive Species Initiative (LISI), 2019. LISI Species of Concern [online]. Available at: <http://www.londonisi.org.uk/what-and-where/species-of-concern> [Accessed on: 27/08/2019]
¹⁸ Eaton, M., N. Aebischer, A. Brown, R. Hearn, L. Lock, A. Musgrove, D. Noble, D. Stroud and R. Gregory. 2015. Birds of Conservation Concern 4: the Red List for Birds. *British Birds* 108. 708 – 746.
¹⁹ European Commission, 2009. Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds.
²⁰ Her Majesty's Stationery Office (HMSO), 2006. Natural Environment and Rural Communities Act 2006. HMSO.

Table 3.3: Schedule 1, Red List, Birds Directive Annex 1, NERC and BAP Birds within 2 km of Site

Common Name	Species Name	Status	Latest Record (within 6 years)
Kingfisher	<i>Alcedo atthis</i>	Birds Dir Anx 1 W&CA Sch1 Part 1 Local Species of Conservation Concern	13/11/2014
Pochard	<i>Aythya ferina</i>	Bird-Red	23/08/2014
Little Egret	<i>Egretta garzetta</i>	Birds Dir Anx 1 Local Species of Conservation Concern	20/12/2014
Herring Gull	<i>Larus argentatus</i>	BAP Priority London Local Species of Conservation Concern Bird-Red	23/06/2015
Red Kite	<i>Milvus milvus</i>	Birds Dir Anx 1 WCA Sch1 Part 1	20/03/2014
Grey Wagtail	<i>Motacilla cinerea</i>	Local Species of Conservation Concern Bird-Red	28/10/2014
Yellow Wagtail	<i>Motacilla flava</i>	BAP Priority London Local Species of Conservation Concern Bird-Red	05/09/2014
Spotted Flycatcher	<i>Muscicapa striata</i>	NERC Act Section 41 UKBAP BAP Priority London Local Species of Conservation Concern Bird-Red	18/09/2014
House Sparrow	<i>Passer domesticus</i>	NERC Act Section 41 UKBAP BAP Priority London Local Species of Conservation Concern Bird-Red	2014
Dunnock	<i>Prunella modularis</i>	BAP Priority London Local Species of Conservation Concern	2014
Firecrest	<i>Regulus ignicapilla</i>	WCA Sch1 Part 1 Local Species of Conservation Concern	2014
Whinchat	<i>Saxicola rubetra</i>	Bird-Red	21/09/2014
Common Tern	<i>Sterna hirundo</i>	Birds Dir Anx 1	12/07/2014

Table 3.3: Schedule 1, Red List, Birds Directive Annex 1, NERC and BAP Birds within 2 km of Site

Common Name	Species Name	Status	Latest Record (within 6 years)
		Local Species of Conservation Concern	
Starling	<i>Sturnus vulgaris</i>	BAP Priority London Local Species of Conservation Concern Bird-Red	23/06/2015
Redwing	<i>Turdus iliacus</i>	WCA Sch1 Part 1 Bird-Red	09/12/2014
Song Thrush	<i>Turdus philomelos</i>	BAP Priority London Local Species of Conservation Concern Bird-Red	05/07/2014
Fieldfare	<i>Turdus pilaris</i>	WCA Sch1 Part 1 Bird-Red	28/10/2014
Mistle Thrush	<i>Turdus viscivorus</i>	Local Species of Conservation Concern Bird-Red	09/12/2014

The habitats on the site are limited in extent and typical of suburban areas and as such are likely to attract a range of common bird species only. The trees, scrub and introduced shrub on-site offer suitable nesting habitat. Incidental bird sightings made during the extended Phase 1 habitat survey included ring-necked parakeet *Psittacula krameri*, pigeon *Columba livia domestica*, herring gull *Larus argentatus* and blackbird *Turdus merula*. There was no visible evidence of nesting bird activity on the roofs of the on-site buildings at the time of the visit.

The site is considered to be of Site level ecological importance for birds.

Bats

Table 3.4 presents the bat records provided by GiGL desk study data within 2 km of the site. All species of bat are protected under Schedule 5 of the WCA and Schedule 2 of The Conservation of Habitats and Species Regulations 2010 (as amended), making all species of bat European Protected Species (EPS). The legislation also protects the resting places of bats including roost sites and it is an offence to intentionally disturb bats occupying places used for shelter or protection.

Table 3.4: Bat Records within 2 km of Site

Common Name	Species Name	Latest Record
Serotine	<i>Eptesicus serotinus</i>	14/06/2016
Daubenton's Bat	<i>Myotis daubentonii</i>	16/09/2016
Leisler's	<i>Nyctalus leisleri</i>	2014
Noctule	<i>Nyctalus noctula</i>	16/09/2016
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	16/09/2016
Common Pipistrelle	<i>Pipistrellus pipistrellus</i>	15/09/2016

Common Name	Species Name	Latest Record
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>	15/04/2017
Brown Long-eared Bat	<i>Plecotus auritus</i>	15/09/2016

MAGIC indicates that one bat EPS licence was issued for the time period of 2017-2022, within 2 km and included breeding sites for brown long-eared, common pipistrelle and soprano pipistrelle.

An external inspection of the two buildings on-site (TN 14 and TN 15) was carried out during the extended Phase 1 habitat survey. Both buildings appeared to be in reasonably good structural condition and no potential bat roost features were observed at the time of the survey.

Furthermore, there was an abundance of artificial lighting around the buildings and limited foraging habitat for bats (e.g. dark corridors and thick lines of vegetation). For these reasons both on-site buildings were assessed to have a Negligible potential to support roosting bats.

All but one on-site tree was assessed to be of Negligible importance to roosting bats. The exception, a mature oak on the western edge of the car park (refer to TN 3 and tree 81 in arboricultural report), was observed to have potential roost features including a woodpecker hole, a broken branch (which may have splits or cracks) and knots. Furthermore, the tree was located close to the western edge of the site where commuting routes to more suitable areas of habitat to the west were present. This tree was assessed by a ground-level roost assessment to be of Moderate potential to support roosting bats.

No roosting bats were recorded in the mature oak tree (TN3) during the emergence survey. Low numbers of common pipistrelle, soprano pipistrelle and noctule were recorded making passes nearby.

Tree and scrub around the western site boundary were observed to provide commuting routes for low numbers of common bats and also provides connectivity to Osterley Park to the north-west of the site, which contains veteran trees suitable for roosting bats.

Therefore, the site is considered to be of Site-level ecological importance for common species of foraging and commuting bats.

Hedgehog

Desk study data provided by GiGL indicated that hedgehogs are present within 2 km of the site. The nearest record was located 600 m to the west of the site. Hedgehogs are priority species listed under Section 41 of the NERC Act 2006, and are a priority species in the London BAP.

Habitats suitable for European hedgehog *Erinaceus europaeu* were observed on-site during the extended Phase 1 habitat survey. Dense scrub on-site (refer to TN 7, 9 and 10) may support foraging, commuting and hibernating hedgehogs. Furthermore, the green space to the north-west of the site provides a link to Osterley Park and the golf course which also contains suitable habitat for hedgehogs.

The site is considered to be of Site level ecological importance for hedgehogs.

Otter

No habitat suitable for otter *Lutra lutra* is present on-site. Additionally, there are no records of otter within 2 km of the site. The site is considered to be of Negligible ecological importance for otters and therefore they are not discussed further in this report.

Water Vole

No habitat suitable for water vole *Arvicola amphibius* is present on-site. GiGL data indicates that water voles have been recorded 1.9 km from the site at the nearest point. Given the distance of this record and the lack of suitable habitat on-site, water voles are likely to be absent from the site. The site is therefore considered to be of Negligible ecological importance for water vole and have not been discussed further within this report.

Dormouse

No habitat suitable for dormouse *Muscardinus avellanarius* is present on-site. Additionally, there are no GiGL records of dormice within 2 km of the site. Therefore, dormice are considered likely to be absent from the site. The site is considered to be of Negligible ecological importance for dormouse and therefore have not been considered further within this report.

Reptiles

The site does not contain habitat suitable for reptiles. Moreover, GiGL records show just one occurrence of slow worm *Anguis fragilis* 1.3 km south-west of the site in 2017. Due to the distance of the closest record and lack of suitable habitat on-site, reptiles are considered likely to be absent. The site is of Negligible ecological importance for reptiles and therefore have not been considered further within this report.

Amphibians

Data provided by GiGL indicates that small numbers of great crested newt *Triturus cristatus* (GCN) were recorded 1.5 km to the west of the site at the closest point in 2016. Furthermore, there are records of common toad *Bufo bufo* 1.7 km north-east, palmate newt *Lissotriton helveticus* 1.6 km north, and common frog *rana temporaria* 44 m south-east. Common toad is a Section 41 species of the NERC act. All amphibians listed above are 'Local Species of Conservation Concern' in the London BAP.

The on-site 'Water Gardens' (refer to TN 6 and 7) provides potentially suitable habitat for amphibians in the form of a depression in the ground that may serve as a seasonal drainage feature. However, no standing water was observed at the time of survey.

Aerial imagery indicates that suitable habitat (e.g. freshwater streams and ditches) is present to the north-west of the site, on the golf course on the far side of Macfarlane Lane. The closest visible waterbody on the golf course is 300 m from the Water Gardens.

Taking the above into consideration, GCN are thought likely to be absent from the site. The site is considered to be of Site-level ecological importance to other amphibians.

Invertebrates

GiGL returned 21 records of beetle species, three records of mollusc species, two records of damselfly species, six records of butterfly species, 38 records of moth species, five records of true fly species, and one record of an ant species. Stag beetles *Lucanu cervus* were recorded nearby in relatively large numbers. Stag beetles are legally protected from sale in the UK and are classed as a 'priority species', listed on Schedule 5 of the WCA. Stag beetles are listed on Annex II of the Habitats Directive²¹.

Habitat suitable for common assemblages of invertebrates is present on-site in the form of amenity grassland, introduced shrub, scattered and dense scrub and individual trees. However, there is a lack of deadwood associated as a breeding feature for the stag beetle in particular.

²¹ European Commission, 1992. Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

The site is considered to be of Site level ecological importance to invertebrates.

3.4 Ecological Importance

Table 3.5 presents the ecological importance of habitats and species present on the site, in accordance with CIEEM guidance. Species assessed as being unlikely to be present on the site are not considered further in this assessment.

Table 3.5: Ecological Importance of Features Present On-Site		
Feature	Ecological Importance	Rationale
Hardstanding	Negligible	Does not contribute to biodiversity importance of the site.
Buildings	Negligible	Do not contribute to biodiversity importance of the site.
Individual trees	Site-level	Limited in extent but contributes to the biodiversity importance of the site and provides potential habitat for nesting birds and common invertebrates.
Introduced shrub	Site-level	Limited in extent but contributes to the biodiversity importance of the site and provides potential habitat for nesting birds and common invertebrates.
Bare ground	Negligible	Does not contribute to biodiversity importance of the site.
Scrub	Site-level	Limited in extent but contributes to the biodiversity importance of the site and provides potential habitat for nesting birds, hedgehog and common invertebrates.
Amenity grassland	Site-level	Limited in extent but contributes to the biodiversity importance of the site and provides potential habitat for common invertebrates.
Tall ruderal	Site-level	Limited in extent but contributes to the biodiversity importance of the site and provides potential habitat for nesting birds and common invertebrates.
Badger	Likely absent	No habitat suitable for badgers on-site.
Birds	Site-level	Suitable vegetation present is limited but likely to be used by common foraging bird species. The trees, scrub and introduced shrub may be used by small numbers of common nesting bird species.
Bats	Site-level	The site contains limited habitat for bats and is likely to only be utilised by common species of bat for commuting on the western site boundary.
Hedgehog	Site-level	The site contains potential habitat which can be utilised by foraging, commuting and hibernating hedgehogs, which is not dissimilar to the surroundings.
Otter	Likely absent	No suitable habitat on-site.
Water vole	Likely absent	No suitable habitat on-site.
Dormouse	Likely absent	No suitable habitat on-site.
Reptiles	Likely absent	No suitable habitat on-site.
Amphibians	Site-level	Lack of evidence of potential GCN habitat on-site and in the area. GCN are considered to be likely absent.

Table 3.5: Ecological Importance of Features Present On-Site		
Feature	Ecological Importance	Rationale
		However, there is potential for amphibians to be present in the water gardens during site clearance.
Invertebrates	Site-level	The site is likely to support small numbers of common invertebrates.

4. ASSESSMENT

Section 4.1 describes the potential and residual effects which would arise from the proposed development, taking into account the proposed development commitments to ecological mitigation, as well as enhancement opportunities, as further detailed in Section 4.2 and 4.3 respectively.

4.1 Potential Effects

4.1.1 Designated Sites

Given the limited footprint of the proposed development and distance of the designated sites from the site (the nearest is Blondin Nature Area LNR, 1,191 m at the closest point), no direct or indirect impacts on designated sites are predicted during the demolition and construction stage or upon completion and operation.

In addition, the implementation of a CEMP would further avoid potential for ecological effects to arise during the demolition and construction stage.

Accordingly, the proposed development is not anticipated to have a significant effect on any designated sites within 2 km of the site.

4.1.2 Habitats

The habitats present on-site are of Site level or Negligible ecological importance. While they have some ecological importance to biodiversity, the types of habitat on-site are common and widespread in the surrounding landscape and are readily replicable. The majority of the habitats present would be lost and then replaced in the longer term with landscape planting.

Existing trees shown for retention would be protected throughout the construction works in accordance with the CEMP²².

4.1.3 Species

Birds

Should the required tree removal, vegetation clearance and building demolition coincide with the bird nesting season (i.e. March-August inclusive), the proposed site clearance, demolition and/or construction could result in killing or injury to birds and destruction of birds' nests or eggs. These impacts would all be in contravention of legislation. Works outside the breeding season (i.e. September-February inclusive) would not pose harm to nesting birds.

The proposed development would result in the loss of existing habitat for nesting birds in vegetation, although evidence that these features were being used by nesting birds was not recorded during the survey.

Works on-site would be undertaken in accordance with the CEMP to avoid harm to nesting birds. Further details on avoiding these impacts is provided in Section 4.2. In addition, similar and superior habitats are available in the ZOI, such that the loss of on-site habitats would not significantly affect bird species.

A minimum of 300 trees would be planted across the new development.

Accordingly, no significant effects on birds are considered likely.

²² Tree: fabrik, 2020. Arboricultural Statement, Osterley Place, Syon Lane, Isleworth.

Mitigation and enhancement measures to be adopted for birds is provided in Sections 4.2 and 4.3.

Bats

No bat roosts were identified during the emergence and re-entry surveys. Levels of bat activity recorded during the surveys were low with a limited number of registrations of common species including commuting common pipistrelle, soprano pipistrelle and noctule. The mature oak with potential for roosting bats (refer to TN 3 and tree 81 in arboricultural report), which was not found to be used by roosting bats during the survey, would be retained within the proposed development. The implementation of the CEMP measures (as detailed Section 4.2) during site clearance, demolition and construction, the proposed development would ensure that direct effects on roosting bats are avoided.

The boundaries of the site, to the west, serve as habitat for commuting bats, and connect to habitat further west. However, it is considered that bats would not be solely reliant on the limited habitats present on the site. Superior more extensive habitat is present in the ZOI, such as Osterley Park and the golf course to the north-west. In the baseline scenario, the site is well lit and has high levels of traffic.

The species recorded are not considered to be especially light adverse. As such, no significant impacts on commuting or foraging bats are anticipated during the demolition and construction or completed development stages.

Best practice measures to be adopted are provided in Sections 4.2 and 4.3 to minimise the potential effect of lighting on bats and in the event of discovery of roosting bats.

Hedgehog

A limited amount of habitat suitable to support hedgehogs is present on-site and would be lost during development. Hedgehogs are a species of 'principal importance' under NERC. Without mitigation there is potential for killing or injuring hedgehogs which are listed under the Wild Mammals Protection Act 1996²³, which prohibits cruel treatment of hedgehogs.

Works on-site would be undertaken in accordance with the CEMP to avoid harm to hedgehogs, should they use the site.

Accordingly, no significant effects on hedgehogs are considered likely.

Mitigation measures for hedgehogs are defined in Section 4.2.

Amphibians

A limited amount of habitat potentially suitable to support amphibians is present on-site within the Water Gardens and would be lost during development. Common toads are a species of 'principal importance' under NERC.

Works on-site would be undertaken in accordance with the CEMP to avoid harm to hedgehogs, should they use the site.

Accordingly, no significant effects on common toads are considered likely.

Mitigation measures for common toads are defined in Section 4.2.

Invertebrates

There will be some habitat lost which is suitable for invertebrates (e.g. amenity grassland, introduced shrub, scrub and trees); however, this loss is not considered to have a significant

²³ Her Majesty's Stationery Office (HMSO), 1996. Wild Mammals Protection Act 1996. HMSO.

effect upon the conservation status of the common invertebrate species likely to be present on-site, and will be replaced with a higher abundance of equally suitable habitat.

Works on-site would be undertaken in accordance with the CEMP to avoid harm to invertebrates, should they use the site.

Accordingly, no significant effects on invertebrates are considered likely.

Invasive Flora

There is potential for Japanese knotweed to be spread by the enabling, demolition and construction works. This would potentially be in contravention of Schedule 9 of the WCA. Japanese knotweed's growth could also damage structures if not appropriately managed.

Works on-site would be undertaken in accordance with the CEMP to remove existing invasive species and to avoid the spread of invasive species.

Accordingly, no significant effects are considered likely.

Mitigation measures for Japanese knotweed is defined in Section 4.2.

4.2 Mitigation Measures

The Applicant is committed to ensuring all their new developments create net biodiversity gain. This is part of a strategic plan for the company called 'Our Vision'; in terms of ecology this is captured in the 'Nine Concepts Guide - Making Space for Beauty and Nature', as outlined in Figure 4.1.



Figure 4.1: Berkeley Group 'Nine Concepts Guide - Making Space for Beauty and Nature'

The following commitments have been made for the proposed development:

- Retention of a minimum of 24 trees;
- Provision of a minimum of 300 trees planted;
- Provision of a minimum of 4,000 m² biodiverse roofs;
- Provision of a minimum of 20,000 m² open space, including the retention and enhancement of the Water Gardens; and
- Implementation of a CEMP.

In addition, the following:

- Provision of native wildflower grassland areas, to provide a foraging resource for pollinating bees and other insects; and
- Delivery of the site wide surface water drainage strategy (to be secured by means of an appropriately worded planning condition) which has considered the inclusion of Sustainable Urban Drainage (SUDs) elements, improving the water quality, whilst creating biodiversity benefits. New planting will comprise of native species or of those with known importance to wildlife.

A suitably experienced ecologist would input into the final CEMP to ensure appropriate mitigation measures are in place. The CEMP would provide for the following mitigation measures, some of which are described in more detail below:

- Adherence to best practice construction methods which would be maintained for the duration of the enabling, demolition and construction works.
- Use of enabling, demolition and construction techniques, timings and methods to minimise impact on the surrounding environment (i.e. controls on emissions to air and water and on noise);
- Details for the implementation of protected species mitigation measures (including soft felling of the tree with moderate bat roosting potential);
- Timing of works to minimise impact on species or supervision by a suitably experienced ecologist (e.g. with respect to nesting birds);
- Treatment of invasive species by a specialist contractor;
- Protection of retained trees during construction activities in accordance with BS 5837:2012 'Trees in Relation to Design, Demolition and Construction'²⁴, in order to reduce the possibility of any damage, to both crown and roots of the trees (if present at the time of works commencing);
- Appointment of responsible personnel to carry out inspections, to implement and manage the CEMP;
- Implementation of measures to prevent contaminated run-off;
- Implementation of measure to control waste and noise; and
- Covering of excavations or provision of mammal ramps within excavations.

A Habitat Management Plan (HMP) would be produced to describe the long-term management and monitoring of habitats and features suitable for use by wildlife, including the biodiverse roofs. Measures such as reduced mowing of wildflower grassland areas and avoidance of pesticide would be detailed. The HMP would be secured by means of a suitably worded planning condition.

Vegetation clearance would be timed to avoid the active bird nesting season (March to August inclusive). Where this is not possible, the vegetation in question would be subject to a nesting bird check by a suitably qualified Ecologist within 48 hours of the proposed site clearance operation. If nesting birds are present when site clearance is scheduled, clearance works would be delayed until all chicks have fledged.

The tree identified within the site as having potential roost features (refer to TN 3 and tree 81 in arboricultural report) was not recorded as supporting a bat roost and is identified for retention within the proposed development. The potential to support roosting bats remains. Therefore, a precautionary approach when removing or working on trees with roost potential would be

²⁴ British Standards Institution (BSI), 2012. BS 5837:2012 - Trees in relation to design, demolition and construction. Recommendations Published April 2012.

employed, in the event that work is required, such as soft felling in the presence of a licenced Bat Ecologist.

An appropriate lighting strategy would be developed with consideration of guidance provided in the BCT and Institution of Lighting Professionals (ILP) 'Guidance Note 08/18 – Bats and artificial lighting in the UK'. The following would be considered when choosing luminaires:

- All luminaires should lack ultra-violet (UV) elements when manufactured. Metal halide, fluorescent sources would not be used;
- Light-emitting diode (LED) luminaires would be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability;
- A warm white spectrum (ideally <2,700 Kelvin) would be adopted to reduce blue light component;
- Luminaires would feature peak wavelengths higher than 550 nm (nanometres);
- Specialist bollard or low-level downward directional luminaires would be considered to retain darkness above;
- Column heights would be minimised to limit light spill;
- Only luminaires with an upward light ratio of 0 % and with good optical control would be specified; and
- Luminaires would be mounted on the horizontal, i.e. no upward tilt.

The effects of habitat fragmentation for species such as hedgehogs would be mitigated through the use of modified boundary fences/walls, should any be provided within the detailed design. Any fences and walls would be installed with a 13 cm gap between the fence and the ground or with 13x13 cm holes at ground level to create hedgehog highways in line with Hedgehog Street guidance²⁵.

A precautionary approach would be made when clearing the site. Site operatives would be made aware of the potential for hedgehogs and amphibian species, such as common toad, to be present on-site. In the event of works being undertaken during the hedgehog hibernation period (i.e. October-March) and a hibernating hedgehog being encountered, the individual would be moved to a pre-determined, suitable hibernation receptor site adjacent to the work area within suitable habitat.

In the event of an amphibian being encountered, the individual would be moved to a pre-determined, suitable receptor site adjacent to the work area within suitable habitat.

4.3 Enhancement

In order to comply with planning policy to achieve net gain in biodiversity, biodiversity enhancement measures would be introduced to the site.

The proposed development would have bird nesting features included in the design and an Ecologist would advise on the most suitable locations. Such nesting features would be designed to deter feral pigeons from nesting but attract the house sparrow and starling as well as other song birds. These would be incorporated into the building fabric or comprise externally affixed boxes. Concrete structures such as Schwegler boxes (or suitable alternative) would be used where possible due to their longer design life.

At least ten bird boxes would be provided, including inbuilt boxes suitable for swifts, starlings, house sparrows and black redstart, and traditional wooden boxes attached to trees.

²⁵ People's Trust for Endangered Species (PTES) and British Hedgehog Preservation Society, (Hedgehog Street),2019. Hedgehogs and development [online]. Available at: <https://www.britishhedgehogs.org.uk/wp-content/uploads/2019/05/developers-1.pdf>

Bat boxes would be provided, integrated within the building fabric or external boxes affixed to the building or suitably mature retained trees, to provide new roosting habitat for use by bats. These would be positioned in areas without lighting or minimal lighting and link to vegetated corridors leading to suitable habitat within the ZOI.

At least six bat boxes, including two hibernation boxes, would be provided. The precise location of boxes would be designed with input from a suitably experienced ecologist.

Additional enhancement for invertebrate species would be provided through provision of log piles, pebbles, cobbles and boulders and insect boxes (insect hotels) within the landscape planting. Biodiverse roofs would have additional features such as biodiverse wildflower planting, boulders and pebbles, log piles, integrated bird boxes and insect hotels.

At least eight invertebrate boxes would be provided. Site derived material such as felled trees and rocks dug up during re-profiling would be reused on the site to provide such features for invertebrates.

Consideration would be given to the provision of information boards, advising visitors on the ecological features present and their importance for wildlife.

4.4 Residual Effects

There is unlikely to be any significant negative residual effects beyond the Site-level as a result of the proposed development, and with the implementation of the mitigation and enhancement described here including biodiverse roofs, there is potential for significant positive effects.

5. CONCLUSIONS

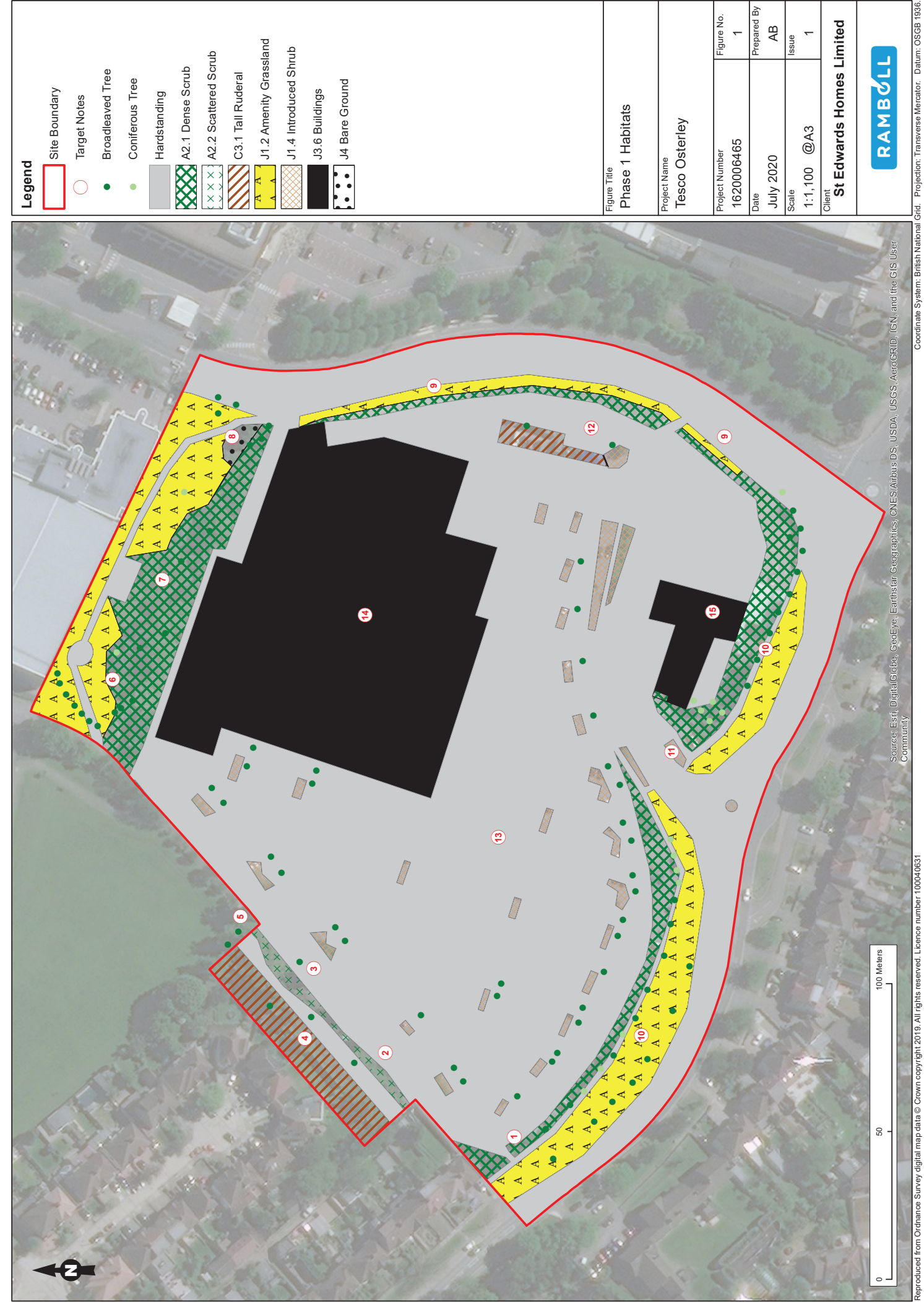
The site's ecological baseline has been described through a desk study and an extended Phase 1 habitat survey with mapping and target notes. As a result, the site has been confirmed to contain habitats which vary in nature conservation importance from Negligible to Site level. Additionally, there is potential habitat for breeding birds, commuting bats, foraging, commuting and hibernating hedgehogs, and common assemblages of invertebrates.

Commitments to ecological mitigation and enhancement made in this report are summarised in Table 5.1. By undertaking the work in accordance with these commitments, the proposed development is likely to be in conformity with relevant planning policy and legislation relating to ecology. There is unlikely to be any significant negative residual effects beyond the Site-level as a result of the proposed development, and with the implementation of the mitigation and enhancement described here including biodiverse roofs, there is potential for significant positive effects.

Receptor	Mitigation and Enhancement Measures
Designated Sites	N/A
Habitats	Retention of existing and provision of new trees and landscaping to achieve net gain of habitats.
	Implementation of root protection zones around any retained trees and those adjacent to the site in accordance with BS 5837:2012 completed tree survey.
	Implementation of a CEMP which would include detailed actions to be followed during the enabling, demolition and construction stage of the proposed development to limit the potential negative impact on surrounding habitats
	Provision of landscape planting with native and non-native fruiting and nectar-producing species.
	Provision of green infrastructure such as biodiverse roofs and SUDs.
Invasive flora	Consultation with an invasive species specialist to treat Japanese knotweed and other invasive species present on-site and in accordance with the CEMP.
Birds	Completion of vegetation clearance between September-February, outside of the bird nesting season, or following checks by an experienced ecologist.
	Provision of bird boxes.
	Provision of habitat suitable for nesting and foraging birds through the incorporation of appropriate soft landscaping. This would include fruit producing species for food as well as dense shrub species and tree planting to provide nesting opportunities.
Bats	As part of the CEMP, implementation of a precautionary method of works during enabling, demolition and construction, including soft felling of trees in the event of the removal of tree with moderate bat roost potential.
	Provision of landscape planting and green infrastructure with native and non-native evening flowering plant species to provide foraging habitat.
	Provision of bat boxes.
	Implementation of sensitive lighting strategy.

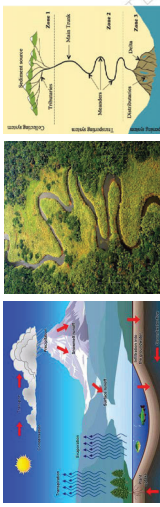
Receptor	Mitigation and Enhancement Measures
Hedgehogs	Provision of replacement of dense scrub and provision of 'hedgehog highways' and linear habitats such as hedgerows. In the event of a hibernating hedgehog being encountered, the individual will be moved to a pre-determined, suitable hibernation receptor site adjacent to the work area within suitable habitat, details of which will be provided in the CEMP.
Invertebrates	Provision of green infrastructure and rubble or log piles and invertebrate boxes/insect hotels.
Amphibians	As part of the CEMP, implementation of a precautionary approach to clearing the vegetation in the Water Gardens and briefing of staff on the potential to find amphibians.

**APPENDIX 1
FIGURES**



APPENDIX 2 PROPOSED DEVELOPMENT DRAWINGS

Inspired By Nature



The Meander Green Space



Syon Lane Frontage



Landscape Character Areas

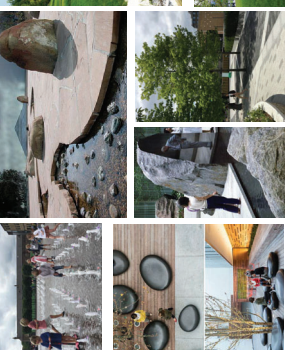
1. The Water Gardens
2. The Clearing Plaza
3. The Boulevard
4. The Lanes
5. Syon Lane frontage
6. The Meander Green Space
7. Mobility Hub and Blue facility
8. Shared footway/cycleway



The Water Gardens



The Clearing Plaza



The Streets



Legend

	Site boundary		Shrub
	Existing trees		Recreation path
	Proposed trees		Water jets & waterfall
	Willow planting		Natural play
	Shoreline planting		Shoreline cycle lanes (on no. lanes on the opposite)
	Play planting		Play planting



APPENDIX 3 RELEVANT LEGISLATION AND POLICY

RELEVANT LEGISLATION AND POLICY

Ecological features are protected under various United Kingdom (UK) and European legislative instruments. These are described below. European legislation is not included as it is incorporated in UK legislation by domestic provisions.

Legislation

The Conservation of Habitats and Species Regulations 2017

The Habitats Directive (Council Directive 92/43/EEC)²⁶ came into force in 1992 and provides for the creation of a network of protected wildlife areas across the European Union (EU), known as 'Natura 2000'. The Natura 2000 network consists of Special Areas of Conservation (SAC) designated under the Habitats Directive and Special Protection Areas (SPA) designated under the Birds Directive (Council Directive 79/409/EEC)²⁷. These sites are part of a range of measures aimed at conserving important or threatened habitats and species.

The Conservation of Habitats and Species Regulations 2017²⁸ (commonly known as the 'Habitats Regulations') transposes the Habitats Directive into national law and set out the provisions for the protection and management of species and habitats of European importance, including Natura 2000 sites. The 2017 bill consolidated all previous versions of the regulations and subsequent amendments since initial transposition, bringing them all under the single heading, and made some minor amendments. It extends to England and Wales, and to a limited extent Scotland and Northern Ireland. Further amendments were made via The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2018²⁹ to ensure they reflect recent European case law (C-323/17 People Over Wind and Sweetman v Coillte Teoranta) in relation to the assessment of plans and projects on sites protected under Council Directive 92/43/EEC on the conservation of natural habitats of wild fauna and flora (the 'Habitats Directive').

In addition to providing for the designation and protection of Natura 2000 sites, the Habitats Regulations provide strict protection for plant and animal species as European Protected Species. Derogations from prohibitions are transposed into the Habitats Regulations by way of a licensing regime that allows an otherwise unlawful act to be carried out lawfully for specified reasons and providing certain conditions are met. Under the Habitats Regulations, competent authorities have a general duty, in the exercise of any of their functions, to have regard to the Habitats Directive and Wild Birds Directive including in the granting of consents or authorisations. They may not authorise a plan or project that may adversely affect the integrity of a European site, with certain exceptions (considerations of overriding public interest).

Following the UK's exit from the EU, EU environmental law continues to operate in the UK. References to EU legislation will be removed from UK legislation from 1 January 2021, and international targets and agreements will be enshrined in UK legislation through the proposed Environment Bill. There will be a new statutory body - The Office for Environmental Protection (OEP)³⁰.

²⁶ European Commission, 1992. Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

²⁷ European Commission, 1979. Council Directive 79/409/EEC on the conservation of wild birds.

²⁸ Her Majesty's Stationery Officer (HMSO), 2017. The Conservation of Habitats and Species Regulations 2017. HMSO.

²⁹ Her Majesty's Stationery Officer (HMSO), 2018. The Conservation of Habitats and Species and Planning (Various Amendments) (England and Wales) Regulations 2018. HMSO.

³⁰ <https://www.gov.uk/guidance/upholding-environmental-standards-if-theres-a-no-deal-brex>

The Countryside and Rights of Way Act 2000

The Countryside and Rights of Way Act 2000³¹ primarily extends to England and Wales. It provides a new statutory right of access to the countryside and modernises the rights of way system, bringing into force stronger protection for both wildlife and the countryside.

The Act is divided into five distinct sections, Part III is of relevance to ecology:

- Part III – Nature Conservation and Wildlife Protection: The Act details measures to promote and enhance wildlife conservation. These measures include improving protection for Sites of Special Scientific Interest (SSSI) and increasing penalties for deliberate damage to SSSIs. Furthermore, the Act affords statutory protection to Ramsar Sites which are wetlands designated under the International Convention on Wetlands³².

The Wildlife and Countryside Act 1981 (As Amended)

The Wildlife and Countryside Act 1981 (as amended)³³ forms the basis of much of the statutory wildlife protection in the UK. Part I deals with the protection of plants, birds and other animals and Part II deals with the designation of SSSIs.

This Act covers the following broad areas:

- Wildlife – listing endangered or rare species in need of protection and creating offences for killing, disturbing or injuring such species. Additionally, the disturbance of any nesting bird during breeding season is also noted as an offence, with further protection for species listed on Schedule 1. Measures for preventing the establishment of non-native plant and animal species as listed on Schedule 9 are also provided;
- Nature Conservation – protecting those sites which are National Nature Reserves (NNR) and SSSIs;
- Public Rights of Way – placing a duty on the local authority (to maintain a definitive map of footpaths and rights of way. It also requires that landowners ensure that footpaths and rights of way are continually accessible; and
- Miscellaneous General Provisions.

The Act is enforced by local authorities.

Natural Environment and Rural Communities Act 2006

Under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006³⁴, public authorities must show regard for conserving biodiversity in all their actions. Public authorities should consider how wildlife or land may be affected in all the decisions that they make. The commitment to the biodiversity duty must be measured by public authorities.

Section 41 also requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England.

Protection of Badgers Act 1992

The Protection of Badgers Act 1992³⁵ consolidated previous legislation relating specifically to badgers. The Act makes it an offence to kill, injure or take a badger, or to damage or interfere with a sett unless a licence is obtained from a statutory authority (i.e. Natural England).

³¹ Her Majesty's Stationery Officer (HMSO), 2000. The Countryside and Rights of Way Act 2000. HMSO.

³² United Nations Educational, Scientific and Cultural Organization (UNESCO), 1971. Convention on Wetlands of International Importance especially as Waterfowl Habitat, as amended in 1982 and 1987. Ramsar, Iran Published in Paris, 1994.

³³ Her Majesty's Stationery Office (HMSO), 1981. The Wildlife and Countryside Act 1981 [as amended in Quinquennial Review and by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006]. HMSO.

³⁴ Her Majesty's Stationery Office (HMSO), Natural Environment and Rural Communities Act 2006. HMSO.

³⁵ Her Majesty's Stationery Office (HMSO), 1992. Protection of Badgers Act 1992. HMSO.

Planning Policy

Biodiversity in the Planning Process

Administrative and policy guidance on the application of some of these statutory obligations is provided through relevant government policy guidance and advice. In England, this includes National Planning Policy Framework 2012, National Planning Practice Guidance, Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, Biodiversity 2020 and Natural Environment White Paper The natural choice: securing the value of nature.

Administrative and policy guidance on the application of some of these statutory obligations is provided through relevant Government policy guidance and advice. In England, this includes National Planning Policy Framework 2019, national Planning Practice Guidance, Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System, Biodiversity 2020 and Natural Environment White Paper 'The natural choice: securing the value of nature'.

National Planning Policy Framework (2019)

The National Planning Policy Framework (NPPF)³⁶ sets out the Government's planning policies for England and how these are expected to be applied. Objective 15 - Conserving and enhancing the natural environment' states that the planning system should contribute to and enhance the natural and local environment by:

- "...protecting and enhancing valued landscapes, geological conservation interests and soils;
- recognising the wider benefits of ecosystem services; and
- minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures..."

It furthermore advises local planning authorities to conserve and enhance biodiversity when considering planning applications, by applying principles aimed at protecting and enhancing biodiversity and designated sites and incorporating biodiversity in and around developments

Planning Practice Guidance (2019)

The Planning Practice Guidance³⁷ is a web-based resource (last updated 1 October 2019). This guidance is divided into sections, of which Natural Environment: Biodiversity, Ecosystems and Green Infrastructure provides information on biodiversity issues within planning and guidance on where to find further information on biodiversity issues.

Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System

This circular³⁸ provides administrative guidance on the application of the law relating to planning and nature conservation as it applies in England. It complements the national planning policy in the NPPF and PPG.

Natural Environment White Paper. The Natural Choice: Securing the Value of Nature

³⁶ Ministry of Housing, Communities and Local Government, 2019. National Planning Policy Framework (NPPF), last updated 19 June 2019. London: HMSO.

³⁷ Ministry of Housing, Communities & Local Government, 2019. Planning Practice Guidance [online]. Available at:

<http://planningguidance.planningportal.gov.uk/>

³⁸ Office of the Deputy Prime Minister, 2005. Circular 06/2005: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. Available at: <https://www.gov.uk/government/publications/biodiversity-and-geological-conservation-circular-06-2005>

The Natural Environment White Paper³⁹ outlines the Government's vision for the natural environment over the next 50 years, shifting the emphasis to an integrated landscape-scale approach. It describes the actions that would be taken to deliver that goal.

Biodiversity 2020

The Biodiversity 2020⁴⁰ strategy for England builds on the Natural Environment White Paper and provides a comprehensive picture of how England is implementing its international and EU commitments. It sets out the strategic direction for biodiversity policy on land (including rivers and lakes) and at sea.

The mission for this strategy is 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.

It is anticipated that this would be delivered through:

- a more integrated large-scale approach to conservation on land and at sea;
- putting people at the heart of biodiversity policy;
- reducing environmental pressures; and
- improving our knowledge.

Biodiversity Action Plans (BAP)

In 1994, the Government produced the UK Biodiversity Action Plan (BAP)⁴¹, a national strategy for the conservation of biodiversity. This led to the creation of the UK Biodiversity Steering Group, which has listed 1,150 Species Action Plans (SAPs) and 65 Habitat Action Plans (HAPs). Regional and District/Borough BAPs apply the UK BAP at a local level.

From July 2012, the 'UK Post-2010 Biodiversity Framework'⁴² succeeds the UK BAP. This is a result of a change in strategic thinking following the publication of the 'Convention on Biological Diversity's Strategic Plan for Biodiversity 2011-2020'⁴³ and its 20 'Aichi targets'⁴⁴, at Nagoya, Japan in October 2010, and the launch of the new EU Biodiversity Strategy (EUBS) in May 2011.

The UK Post-2010 Biodiversity Framework constitutes the UK's response to these new 'Aichi' strategic goals and associated targets. The Framework recognises that most work which was previously carried out under the UK BAP is now focussed on the individual countries of the UK (and Northern Ireland) and delivered through each countries' own strategies.

Following the publication of the new Framework, the UK BAP partnership no longer operates. However, many of the tools and resources originally developed under the UK BAP remain of use. The UK list of priority species has been used to help draw up statutory lists of priorities in England, Scotland, Wales and Northern Ireland. For England, this is in line with Section 41 of NERC.

³⁹ Department for Environment, Food and Rural Affairs (Defra), 2011. Natural Environment White Paper. The natural choice: securing the value of nature. Available at: <https://www.gov.uk/government/publications/the-natural-choice-securing-the-value-of-nature>

⁴⁰ Department for Environment, Food and Rural Affairs (Defra), 2011. Biodiversity 2020. Available at: <https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

⁴¹ Her Majesty's Stationery Office (HMSO), 1994. Biodiversity: The UK Action Plan. HMSO.

⁴² JNCC and Defra (on behalf of the Four Countries' Biodiversity Group), 2012. UK Post-2010 Biodiversity Framework. July 2012.

jncc.defra.gov.uk/pdf/UK_Post2010_Bio-Fwork.pdf

⁴³ <https://www.cbd.int/sp/>

⁴⁴ <https://www.cbd.int/sp/targets/>

Regional Planning Policy

London Biodiversity Action Plan (2007)

The overarching biodiversity action plan for the Greater London area is contained within the London BAP⁴⁵. This sets out the priority habitats and species for the area and provides action plans for these priority habitats and species, as listed in the table below. Further important habitats and species do not currently have their own BAPs; these are also listed in the table below. The London Biodiversity Partnership was disbanded in 2013.

London BAP Habitats	London BAP Species
Acid grassland	Bats
Chalk grassland	Black poplar
Heathland	House sparrow
Parks and urban greenspaces	Mistletoe
Private gardens	Reptiles
Reed beds	Sand martin
Rivers and streams	Stag beetle
Standing water	Water vole
Tidal Thames	Other Important Species
Wasteland	Black redstart
Woodland	Common dormouse
Other Important Habitats	Grey heron
Built structures	Otter
Meadows and pastures	Peregrine falcon
Fen, marsh and swamp	
Open landscapes with ancient/old trees	

The Mayor's Biodiversity Strategy (2002)

The Mayor's Biodiversity Strategy⁴⁶ aims to protect and enhance the natural habitats of London together with their species. It presents 14 detailed policies and 72 implementation proposals around a number of themes including the protection of biodiversity, blue ribbon network, managing wildlife habitats and connecting people to nature.

Of note are the following proposals:

- Proposal 5: The Mayor will, and boroughs should, take account of the protection of wildlife habitats and biodiversity in the consideration of all planning applications; and
- Proposal 8: Where biodiversity assessments are submitted, the Mayor expects the options to be refined only after full investigation of the existing ecological conditions and consideration of the potential impacts of options.

The Mayor's Biodiversity Strategy, 2002

⁴⁵ London Biodiversity Partnership, 2007. London Biodiversity Action Plan.: <http://www.gigl.org.uk/about-gigl/londons-biodiversity-action-plan/>

⁴⁶ Greater London Authority (2002) Connecting with London's Nature - The Mayor's Biodiversity Strategy. London. GLA

The Mayor's Biodiversity Strategy⁴⁷ aims to protect and enhance the natural habitats of London together with their species. It presents 14 detailed policies and 72 implementation proposals around a number of themes including the protection of biodiversity, blue ribbon network, managing wildlife habitats and connecting people to nature. Of note are the following proposals:

- Proposal 5: The Mayor will, and boroughs should, take account of the protection of wildlife habitats and biodiversity in the consideration of all planning applications; and
- Proposal 8: Where biodiversity assessments are submitted, the Mayor expects the options to be refined only after full investigation of the existing ecological conditions and consideration of the potential impacts of options.

The London Plan, 2016

The London Plan 2016⁴⁸ is the statutory spatial development strategy for the Greater London area which consolidates previous iterations of the report. Policies of particular relevance to ecology are:

- Policy 2.18: Green Infrastructure: the multi-functional network of green and open spaces;
- Policy 5.10: Urban Greening;
- Policy 5.11: Green roofs and development site environs;
- Policy 7.19: Biodiversity and access to nature; and
- Policy 7.21 Trees and Woodlands.

A new Draft London Plan⁴⁹ is currently being consulted.

Draft New London Plan, August 2018

A new, updated draft London Plan (August 2018) has been subject to examination in public and reviewed by a panel appointed by the Secretary of State (SoS) inspectors. Recommendations that were made are now under consideration by the Mayor, with the plan expected to be published at the beginning of 2020. Although the current 2016 London Plan is still the adopted Development Plan, the Draft London Plan is a material consideration in planning decisions.

Of particular relevance to this ecological assessment is Draft Policy G6 'Biodiversity and Access to Nature', which states:

- Development proposals should aim to secure net biodiversity gain and be informed by the best available ecological information which should be considered from the start of the development process.
- Proposals which reduce deficiencies in access to wildlife sites should be considered positively.

Local Planning Policy

London Borough of Hounslow Local Plan 2015-2018

Hounslow's Local Plan⁵⁰ is a local development plan document that sets out the council's proposals for the future development of the borough. Chapter 7 details Green and Blue infrastructure, with Policy GB7 covering Biodiversity.

⁴⁷ Greater London Authority, 2002. Connecting with London's Nature - The Mayor's Biodiversity Strategy. London. GLA.

⁴⁸ Greater London Authority. 2016. The London Plan: The Spatial Development Strategy For London Consolidated With Alterations Since 2011. https://www.london.gov.uk/sites/default/files/the_london_plan_2016_jan_2017_fix.pdf.

⁴⁹ Greater London Authority. 2019. The Draft London Plan https://www.london.gov.uk/sites/default/files/draft_london_plan_-_consolidated_changes_version_-_clean_july_2019.pdf

⁵⁰ London Borough of Hounslow. 2015. London Borough of Hounslow Local Plan 2015-2018. https://www.hounslow.gov.uk/info/20167/local_plan/1108/local_plan

Hounslow Biodiversity Action Plan 2011 - 2016

The Hounslow Biodiversity Action Plan (HBAP)⁵¹, prepared by the Hounslow Biodiversity Action Plan Partnership, is a delivery mechanism for the conservation of biological diversity and the sustainable use of biological resources in the borough.

There are ten habitat action plans:

- Lowland Heath and Acid Grassland;
- Neutral Grassland;
- Woodland;
- Reedbed;
- Gardens, Allotments and Orchards;
- Built Environment;
- Hedgerows;
- Parkland and Veteran Trees;
- Rivers and Streams; and
- The Tidal Thames

In addition, there are a further three habitats with habitat statements. These are:

- Wastelands;
- Woodlands; and
- Standing Water.

The HBAP does not appear to have been updated since 2016.

⁵¹ London Borough of Hounslow. 2011. Hounslow Biodiversity Action Plan 2011 - 2016

<http://democraticservices.hounslow.gov.uk/documents/s55221/Final%20draft%20of%20biodiversity%20action%20plan%20for%20consultation.pdf>

APPENDIX 4 PHASE 1 HABITAT MAP TARGET NOTES

Ecological Appraisal

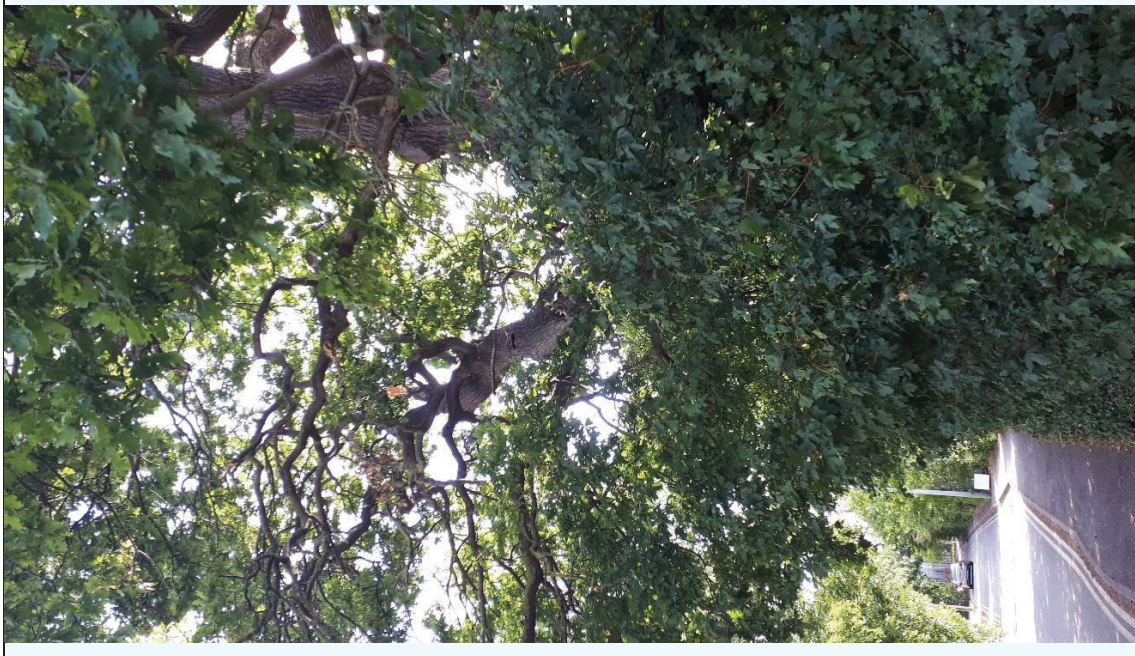
Target Note (TN)	Description
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1	Entrance to the west of the Site car park off Syon Lane with a block of dense scrub and broadleaved trees approximately 5 meters in height. Plant species included: Ivy (<i>Hedera helix</i>), box (<i>Buxus</i> sp.), hawthorn (<i>Crataegus monogyna</i>), pendunculate oak (<i>Quercus robur</i>), red oak (<i>Quercus rubra</i>), sycamore (<i>Acer pseudoplatanus</i>), silver maple (<i>Acer saccharinum</i>), firethorn (<i>Pyracantha coccinea</i>), sweet chestnut (<i>Castanea sativa</i>), fleabane (<i>Conyza</i> sp.), rowan (<i>Sorbus aucuparia</i>), field elm (<i>Ulmus minor</i>), horse chestnut (<i>Aesculus hippocastanum</i>), and hazel (<i>Aesculus hippocastanum</i>). Trees in this block of dense scrub were assessed to be of Negligible importance in relation to the roosting potential of bats.
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Ecological Appraisal

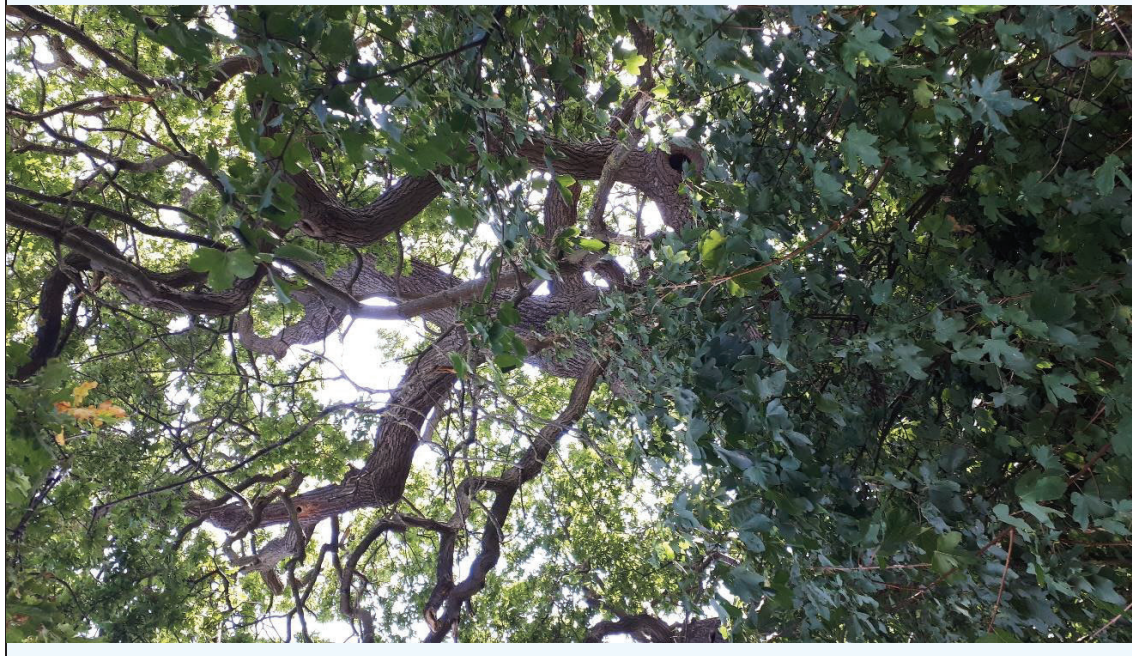
- 2 A row of scattered scrub with some broadleaved trees between Macfarlane Lane and the Site car park. Plant species included: Cotoneaster (*Cotoneaster dammeri*), silver maple, dogwood (*Cornus sanguinea*), ivy, firethorn, pendunculate oak, box, hawthorn, field elm, red oak and butterfly bush (*Buddleja davidii*).



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- 3 A mature pendunculate oak with multiple potential bat roost features. This tree was assessed to have a Moderate potential to support roosting bats.



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Target Note (TN)	Description
4	<p>A disused and fenced off area (~0.1ha) of bare ground which has scrubbed over to become tall ruderal habitat, including three semi-mature broadleaved trees with a negligible potential to support roosting bats. Plant species included: Japanese knotweed (<i>Fallopia japonica</i>), bramble (<i>Rubus fruticosus</i>), thistle (<i>Cirsium vulgare</i>), nettle (<i>Urtica dioica</i>), dog's mercury (<i>Mercurialis perennis</i>), butterfly bush, fleabane, rowan, false oat grass (<i>Arrhenatherum elatius</i>), cotoneaster, ragwort (<i>Jacobaea vulgaris</i>), sycamore, perennial rye grass (<i>Lolium perenne</i>), yarrow (<i>Achillea millefolium</i>), barren brome (<i>Bromus sterilis</i>) and red oak. This assessment was made from the pathway looking in through the fence. No access was attained during the survey.</p>
5	<p>Two broadleaved trees on the edge of the playing field adjacent to the Site including a sycamore and a semi-mature poplar (<i>Populus x canadensis</i>).</p>
6	<p>An area (water gardens) including amenity grassland and dense scrub with scattered trees behind the Tesco building to the north, with a through path for pedestrians. Grass species included: Dandelion (<i>Taraxacum officinale</i>), yarrow, geranium (<i>Geranium robertianum</i>), red clover (<i>Trifolium pratense</i>), common bent (<i>Agrostis capillaris</i>), ribwort plantain (<i>Plantago lanceolata</i>), and ragwort. Dense scrub plant species included: Barberry (<i>Berberis vulgaris</i>), bramble, ivy, mahonia (<i>Mahonia japonica</i>), rowan, cotoneaster, gorse (<i>Ulex europaeus</i>), St John's wort (<i>Hypericum perforatum</i>), mouse ear (<i>Cerastium fontanum</i>) and cherry laurel (<i>Prunus laurocerasus</i>). Scattered trees included: Horse chestnut, atlas cedar (<i>Cedrus atlantica</i>), hawthorn and willow (<i>Salix fragilis</i>).</p>

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Target Note (TN)	Description
7	<p>There was a depression in the ground with a boardwalk in the middle of this area. The area had scrubbed over but may hold water periodically. No water was observed at the time of survey.</p>
8	<p>A patch of lime (<i>Tilia x europaea</i>) trees with dense foliage which has caused the understorey to become bare ground.</p>

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A row of dense scrub and amenity grassland followed Grant Way to the east of the Site. The amenity grassland in this area was very parched and identification of species were limited, however the following grass species were identified; yarrow, and dandelion. Plant species within the dense scrub included: Hawthorn, silver maple, cotoneaster, rowan, mahonia, and sweet chestnut.



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Target Note (TN)

Description

10
 Amenity grassland and dense scrub with scattered trees were present on the frontage of the Site. Amenity grassland species included; daisy (*Bellis perennis*), yarrow, buttercup (*Ranunculus repens*), clover (*Trifolium repens*), strawberry, dandelion and common bent.
 Dense scrub species included; cotoneaster, firethorn, box, dogwood, cherry laurel, fleabane, bindweed (*Calystegia sepium*), rowan and sycamore.
 Scattered trees included; red oak, sweet chestnut, cherry, Corsican pine (*Pinus nigra*), horse chestnut and whitebeam (*Sorbus aria*).



11

Vehicular and pedestrian main entrance to the Site from Syon Lane. The road leads in past the petrol station to a roundabout and the main car park. There is introduced shrub to the pathways of the entrance which are composed of dense box planting about a quarter of a meter in height.

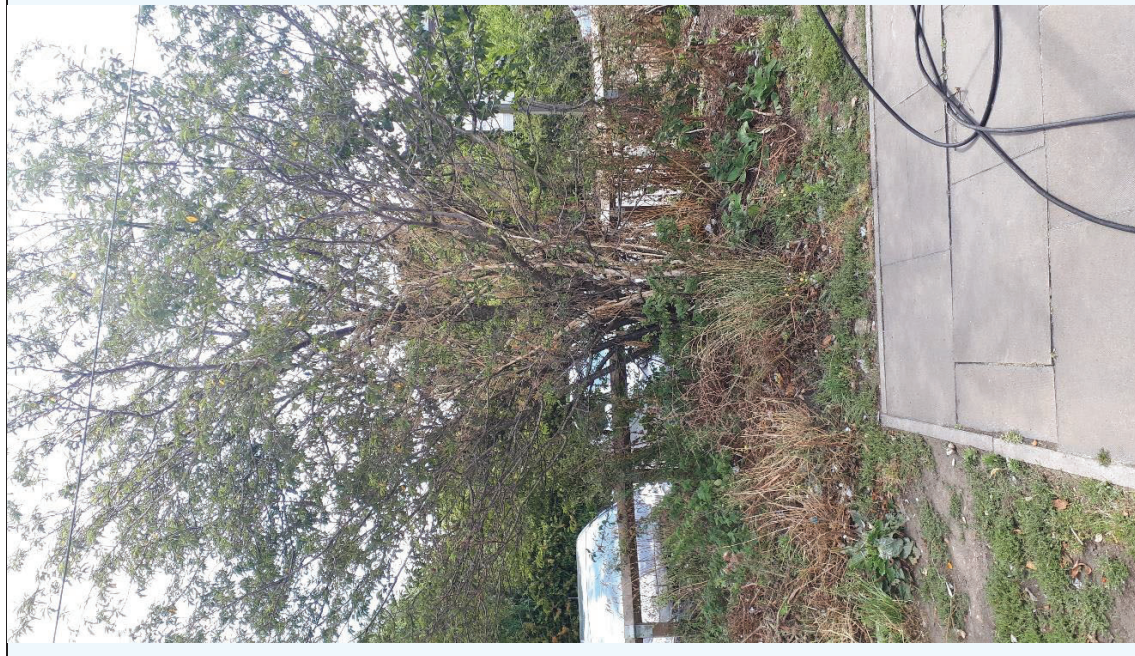


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Delivery area and hand car wash. Tall ruderal vegetation in this area included ragwort, fleabane, butterfly bush, yucca (*Yucca* sp.), green alkanet (*Pentaglottis sempervirens*), dandelion, nettle, poppy (*Papaver* sp.), wall barley (*Hordeum murinum*), burdock (*Arctium minus*) and large stands of dead hemlock (*Conium maculatum*) under a shrubby red oak (see photo to the right).



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Target Note (TN)

13

Introduced shrub and scattered trees to the edges of parking bays within the main car park and to the entrance of the car park. Plant species of introduced shrub included; box, lavender (*Lavandula angustifolia*), fleabane, cherry laurel and butterfly bush. Scattered trees within the blocks of introduced shrub included rowan, cherry, silver maple and silver birch (*Betula pendula*).



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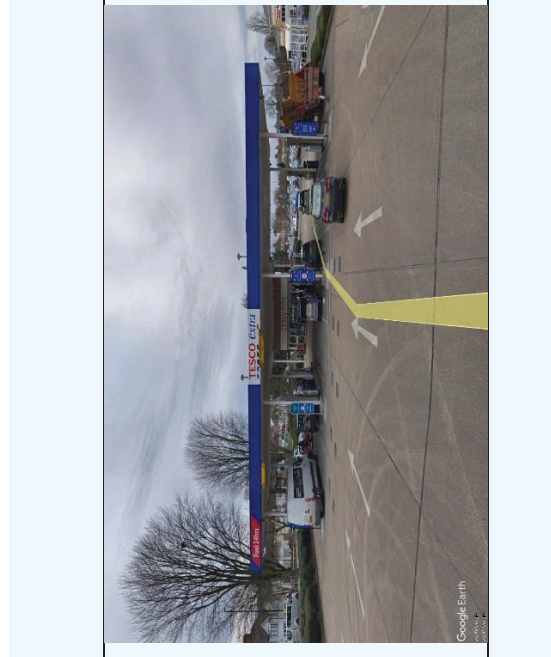
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<p>14</p>	
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The main Tesco building was approximately 5m tall, brick built with PVC soffits and pitched tiled roofs with flat inner sections (as seen from aerial footage). The building was generally in good condition with tight fittings. This building was assessed to be of Negligible potential to support roosting bats.

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Target Note (TN)	Description
<p>15</p>	
<p>-</p>	<p>Incidental bird sightings included: Ring-necked parakeet (<i>Psittacula krameri</i>), herring gull (<i>Larus argentatus</i>), pigeon (<i>Columba livia domestica</i>) and blackbird (<i>Turdus merula</i>).</p>

Petrol station and car wash with asphalt surface – Negligible potential to support roosting bats.

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