MIDDLEMARCH

Orchard Lane / East Molesey

Preliminary Ecological Appraisal

November 2022 I A3711

ORCHARD LANE, EAST MOLESEY

PRELIMINARY ECOLOGICAL APPRAISAL

A Report to: CIRC Management LLP

Report No: RT-MME-153535-01

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Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
Tel: 01676 525880 Fax: 01676 521400
E-mail: admin@middlemarch.eco Web: www.middlemarch.eco

REPORT VERIFICATION AND DECLARATION OF COMPLIANCE

This study has been undertaken in accordance with British Standard 42020:2013 “Biodiversity, Code of practice for planning and development”.

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	20/10/2020	Harry Stone MSc (Ecological Project Officer) and Olivia Hine (Ecological Project Assistant)	Paul Roebuck BSc, MSc, MCIEEM (South East Manager)	Tom Docker CEcol MCIEEM (Managing Director)
RevA	05/10/2022	Harry Stone MSc ACIEEM (Ecological Consultant)	Tim Hextell MCIEEM (Principal Technical Ecological Consultant)	
RevB	17/10/2022	Harry Stone MSc ACIEEM (Ecological Consultant)	Paul Roebuck MSc MCIEEM (Regional Manager: South)	

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management’s Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

VALIDITY OF DATA

The findings of this study are valid for a period of 24 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified ecologist to assess any changes in the habitats present on site, and to inform a review of the conclusions and recommendations made.

NON-TECHNICAL SUMMARY

In September 2020, CIRC Management LLP commissioned Middlemarch to undertake a Preliminary Ecological Appraisal of the site of a proposed development at Orchard Lane, East Molesey. This assessment is required to inform a planning application associated with the redevelopment of the site. To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on the 23rd September 2020. To update the validity of this survey an additional walkover survey was undertaken on 22nd July 2022.

The desk study exercise identified one European statutory site within 5 km of the survey area, two UK statutory sites within 2 km and one non-statutory sites within 1 km. The site is not located within 10 km of a statutory site designated for bats. The desk study also provided records of protected and notable species including bats and stag beetle.

To ensure compliance with wildlife legislation and relevant planning policy, the following recommendations are made (see Chapter 7 for full details):

R1 **South West London Waterbodies and Busy Park and Home Park:** The proposed development could potentially impact upon South West London Waterbodies SPA/SAC/Ramsar/SSSI. Further assessment should be undertaken to determine whether the proposed project could have a Likely Significant Effect on the qualifying criteria for this site and which, if any, stages of the Habitats Regulations Assessment process will need to be undertaken. Natural England should be consulted prior to any works commencing to discuss the likelihood of any impacts on this nature conservation site.

R2 **Habitat Retention and Protection:** The development proposals should be designed (where feasible) to allow for the retention and protection of existing notable habitats, including mature scattered trees and the River Ember adjacent to the site.

R3 **Biodiversity Enhancement:** In accordance with the provision of Chapter 15 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed development to work towards delivering net gains for biodiversity.

R4 **Roosting Bats:** All recommendations made within the Preliminary Bat Roost Assessment must be adhered to (Report RT-MME-153535-02 RevA).

R5 **Terrestrial Mammals including Badger and Hedgehog:** Any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each work day to prevent animals entering/becoming trapped.

R6 **Herpetofauna:** A reasonable avoidance method statement should be compiled detailing how the proposed works will be undertaken in a sensitive manner to avoid any potential breach of legislation. This document should describe working methods, timings and should detail any ecological control measures that will be implemented e.g. vegetation management and ecological supervision.

R7 **Nesting Birds:** Vegetation and building clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation / buildings to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing.

R8 **Kingfisher:** Construction activities likely to impact upon the riparian zone of the river should be avoided during the breeding season for kingfisher (March-August). If this is not possible then prior to any construction activities, including but not limited to the installation of lighting and scaffolding, occurring here should be checked for kingfisher by a suitably qualified ecologist. If kingfisher are found to be nesting any works which may affect them must be delayed until the young have fledged and the nest has been abandoned naturally.

R9 **Stag Beetle:** Any deadwood located within the site should be retained in situ. If this is not feasible, then it should be carefully moved under ecological supervision to a suitable undisturbed location within the site, outside of the built development footprint.

R10 **Invasive Species:** Floating pennywort, Himalayan balsam, buddleia, cherry laurel and green alkanet have been recorded on site and immediately adjacent to the site. A Method Statement must be developed for the proposed works to ensure that they do not result in the spread of any invasive non-native species. This method statement should reflect established best management practices for the treatment of these species

CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

In September 2020, CIRC Management LLP commissioned Middlemarch to undertake a Preliminary Ecological Appraisal of the site of a proposed development at Orchard Lane, East Molesey. This assessment is required to inform a planning application associated with the redevelopment of the site.

To assess the existing ecological interest of the site an ecological desk study was carried out, and a walkover survey was undertaken on the 23rd September 2020. To update the validity of this survey an additional walkover survey was undertaken on 22nd July 2022.

Middlemarch has undertaken the following ecological assessments for CIRC Management at this site:

- Preliminary Bat Roost Assessment (RT-MME-153535-02 RevA);
- Dusk Emergence and Dawn Re-entry Bat Surveys (RT-MME-153851-02 RevA);
- Herpetofauna Reasonable Avoidance Method Statement (RT-MME-153851-03 RevA);
- Invasive Species Method Statement (RT-MME-153851-04 RevA); and,
- Biodiversity Net Gain Assessment (RT-MME-156895 RevA).

1.2 SITE DESCRIPTION AND CONTEXT

The site under consideration comprises an approximately 0.75 ha parcel of land located in Orchard Lane, East Molesey. The site is centred at National Grid Reference TQ 14620 67336.

At the time of the survey, the site was dominated by buildings and associated hardstanding, with patches of amenity grassland and areas of introduced shrub. There were scattered trees of varying maturity throughout the site with dense bramble scrub in the north-west of the site. In the north-east of the site was a large horticultural area which contained poor semi-improved grassland and scattered scrub.

The site was bordered by the gardens of residential houses to the east and by Orchard Lane to the south. The River Ember was adjacent to the site's western boundary and an area of rough grassland and woodland was present to the north of the site that forms part of the River Ember and River Mole green corridor. The wider landscape was dominated by residential development to the east and by the River Ember, River Mole Island Barn Reservoir (a Site of Nature Conservation Importance) and other habitats including woodland, rough grassland and scrub to the west.

1.3 DOCUMENTATION PROVIDED

The conclusions and recommendations made in this report are based on information provided by the client regarding the scope of the project. Documentation made available by the client is listed in Table 1.1.

Document Name / Drawing Number	Author
Landscape Proposal	Exterior Architecture
Tree Retain + Removal Plan / 2241-EXA-XX-GF-DR-L-00150 Rev P02	Exterior Architecture
General Arrangement Plan Ground Floor / 2241-EXA-GF-DR-L-00101 Rev P01	Exterior Architecture
Roof Plan / A3711-ASA-ZZ-RP-DR-A-0215 Rev P21	Assael Architecture

Table 1.1: Documentation Provided by Client

2. METHODOLOGIES

2.1 DESK STUDY

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

The consultees for the desk study were:

- Natural England - *MAGIC* website for statutory conservation sites; and,
- Surrey Biodiversity Information Centre.

The desk study included a search for European statutory nature conservation sites within a 5 km radius of the site (extended to 10 km for any statutory site designated for bats), UK statutory sites within a 2 km radius and non-statutory sites and protected/notable species records within a 1 km radius.

The data collected from the consultees is discussed in Chapter 4. Selected raw data are provided in Appendix 1. In compliance with the terms and conditions relating to its commercial use, the full desk study data is not provided within this report.

The desk study also included a review of relevant local planning policy with regard to biodiversity and nature conservation (see Chapter 3).

2.2 PHASE 1 HABITAT SURVEY

The walkover survey was conducted following the Phase 1 Habitat Survey methodology of the Joint Nature Conservation Committee (JNCC, 2010) and the Institute of Environmental Assessment (IEA, 1995). Phase 1 Habitat Survey is a standard technique for classifying and mapping British habitats. The aim is to provide a record of habitats that are present on site. During the survey, the presence, or potential presence, of protected species was noted.

Whilst every effort is made to notify the client of any plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981, as amended) present on site, it should be noted that this is not a specific survey for these species.

Data recorded during the field survey are discussed in Chapter 5.

3. LEGISLATION AND POLICY

This chapter provides an overview of the framework of legislation and policy which underpins nature conservation and is a material consideration in the planning process in England. The reader should refer to the original legislation for the definitive interpretation.

3.1 GENERAL BIODIVERSITY LEGISLATION AND POLICY

Conservation of Habitats and Species Regulations 2017 (The Habitats Regulations 2017)
The Habitats Regulations 2017 consolidate and update the Habitats Regulations 2010 (as amended). The Habitat Regulations 2017 are the principal means by which the EEC Council Directive 92/43 (The Habitats Directive) as amended is transposed into English and Welsh law.

The Habitats Regulations 2017 place duty upon the relevant authority of government to identify sites which are of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are, in conjunction with the European Commission, designated as Sites of Community Importance, which are subsequently identified as Special Areas of Conservation (SAC) by the European Union member states. The regulations also place a duty upon the government to maintain a register of European protected sites designated as a result of EC Directive 79/409/EEC on the Conservation of Wild Birds (The Birds Directive). These sites are termed Special Protection Areas (SPA) and, in conjunction with SACs, form a network of sites known as Natura 2000. The Habitats Directive introduces for the first time for protected areas, the precautionary principle; that is that projects can only be permitted having ascertained no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest.

The Habitats Regulations 2017 also provide for the protection of individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively. Schedule 2 includes species such as otter and great crested newt for which the UK population represents a significant proportion of the total European population. It is an offence to deliberately kill, injure, disturb or trade these species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations.

The Wildlife and Countryside Act (WCA) 1981 (as amended)
The WCA, as amended, consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It complements the Habitat Regulations 2017, offering protection to a wider range of species. The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs).

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

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

The Natural Environment and Rural Communities (NERC) Act 2006
Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity. These lists superseded Section 74 of the CRoW Act 2000.

The Hedgerow Regulations 1997
The Hedgerow Regulations make provision for the identification of important hedgerows which may not be removed without permission from the Local Planning Authority.

UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (BAP), published in 1994, was the UK Government's response to signing the Convention on Biological Diversity (CBD) at the 1992 Rio Earth Summit. The new UK Post-2010 Biodiversity Framework replaces the previous UK level BAP. The UK Post-2010 Biodiversity Framework covers the period 2011-2020 and forms the UK Government's response to the new strategic plan of the United Nations Convention on Biological Diversity (CBD), published in 2010 at the CBD meeting in Nagoya, Japan. This includes five internationally agreed strategic goals and supporting targets to be achieved by 2020. The five strategic goals agreed were:

- Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society;
- Reduce the direct pressures on biodiversity and promote sustainable use;
- To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity;
- Enhance the benefits to all from biodiversity and ecosystem services; and,
- Enhance implementation through participatory planning, knowledge management and capacity building.

The Framework recognises that most work which was previously carried out under the UK BAP is now focused on the four individual countries of the United Kingdom and Northern Ireland, and delivered through the countries' own strategies. Following the publication of the new Framework the UK BAP partnership no longer operates but many of the tools and resources originally developed under the UK BAP still remain of use and form the basis of much biodiversity work at country level. In England the focus is on delivering the outcomes set out in the Government's 'Biodiversity 2020: a Strategy for England's Wildlife and Ecosystem Services' (DEFRA, 2011). This sets out how the quality of our environment on land and at sea will be improved over the next ten years and follows on from policies contained in the Natural Environment White Paper.

Species and Habitats of Material Consideration for Planning in England

Previous planning policy (and some supporting guidance which is still current, e.g. ODPM Circular 06/2005, now under revision), refers to UK BAP habitats and species as being a material consideration in the planning process. Equally many local plans refer to BAP priority habitats and species. Both remain as material considerations in the planning process but such habitats and species are now described as Species and Habitats of Principal Importance for Conservation in England, or simply priority habitats and priority species under the UK Post-2010 Biodiversity Framework. The list of habitats and species remains unchanged and is still derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006. As was previously the case when it was a BAP priority species hen harrier continues to be regarded as a priority species although it does not appear on the Section 41 list.

3.2 NATIONAL PLANNING POLICY FRAMEWORK AND PRACTICE GUIDANCE

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

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

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

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

veteran trees) should be refused unless there are wholly exceptional reasons for the development, and a suitable compensation strategy is provided.

Chapter 15 identifies that development whose primary objective is to conserve or enhance biodiversity should be supported and opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature.

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

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

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

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

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

3.3 LOCAL PLANNING POLICY – ELMBRIDGE BOROUGH

Core Strategy 2011

The Core Strategy was adopted by the Council on the 20th July 2011. It sets out a long-term vision, spatial strategy and core policies for shaping the Borough's development up to 2026 and is key to the delivery of the Elmbridge Sustainable Community Strategy. The following policy is of relevance to ecology:

CS15 - Biodiversity

The Council will seek to avoid loss and contribute to a net gain in biodiversity across the region and the objectives of the Surrey Biodiversity Action Plan (BAP) by:

1. Protecting and seeking to improve all sites designated for their biodiversity importance, as identified on the proposals map, in accordance with PPS9: Biodiversity and Geological Conservation and CS13-Thames Basin Heaths Special Protection Area (SPA), including those sites considered as being relevant to the integrity of the South West London Waterbodies SPA and Ramsar site. Criteria based policies against which proposals will be judged for any development on, or affecting, sites of regional or local significance will be brought forward through future DPDs that address Development Management and Site Allocations.

2. Support the implementation of the Regional Forestry and Woodland Framework by:
- Protecting all woodland, including ancient woodland, as shown on the proposals map, from damaging development and land uses;
- Promoting the effective management, and where appropriate, extension and creation of new woodland areas including, in association with areas of major development, where this helps to restore and enhance degraded landscapes, screen noise and pollution, provide recreational opportunities, helps mitigate climate change, and contributes to floodplain management;
- Replacing woodland unavoidably lost through development with new woodland on at least the same scale;
- Promoting and encouraging the economic use of woodlands and wood resources, including wood fuel as a renewable energy source;
- Promoting the growth and procurement of sustainable timber products.

3. Protecting and enhancing BAP priority habitats and species and seeking to expand their coverage by supporting the development of the Biodiversity Opportunity Areas as shown on the proposals map.

4. Managing and maintaining a mosaic of habitats and rich variety of wildlife across the Council's landholdings in accordance with the Elmbridge Countryside Strategy.

5. Working in partnership to re-store and enhance:
- the Thames Basin Heath SPA, in accordance with CS13-Thames Basin Heaths SPA, which is an area of strategic opportunity for biodiversity improvement.
- Brooklands Community Park and Esher Commons Site of Special Scientific Interest (SSSI) in accordance with the Council’s most up-to-date mitigation strategy for the Thames Basin Heath SPA and the Esher Commons SSSI Restoration and Management Plan.

6. Maximising the contribution of other green spaces and features, where appropriate, to the area's biodiversity resources including identifying and developing wildlife corridors to provide ecological 'stepping stones' and form a coherent local and regional biodiversity network in accordance with CS12-The River Thames and its tributaries and CS14-Green Infrastructure.

7. Directing development to previously developed land in accordance with CS1-Spatial Strategy, taking account of its existing biodiversity value.

8. Ensuring new development does not result in a net loss of biodiversity and where feasible contributes to a net gain through the incorporation of biodiversity features.

Development Management Plan

The Development Management Plan was adopted by the Council on the 15th April 2015. It contains the detailed policies that planning applications can be assessed against and will ensure that development contributes to the wider, strategic aims of the Core Strategy (above). The policies relevant to ecology are:

Policy DM6 - Landscape and trees

Development proposals should be designed to include an integral scheme of landscape, tree retention, protection and/or planting that:
a. Reflects, conserves or enhances the existing landscape and integrates the development into its surroundings, adding scale, visual interest and amenity,
b. Contributes to biodiversity by conserving existing wildlife habitats, creating new habitats and providing links to the green infrastructure network,

c. Encourages adaptation to climate change, for instance by incorporating Sustainable Drainage Systems (SuDS), providing areas for flood mitigation, green roofs, green walls, tree planting for shade, shelter and cooling and a balance of hard and soft elements,
d. Does not result in loss of, or damage to, trees and hedgerows that are, or are capable of, making a significant contribution to the character or amenity of the area, unless in exceptional circumstances the benefits would outweigh the loss,
e. Adequately protects existing trees including their root systems prior to, during and after the construction process,
f. Would not result in the loss or deterioration of irreplaceable habitats including ancient woodland and ancient or veteran trees, unless in exceptional circumstances the benefits would outweigh the loss, and
g. Includes proposals for the successful implementation, maintenance and management of landscape and tree planting schemes.

To ensure high quality landscape schemes and depending on the scale, nature and location of the development, the Council will seek appropriate conditions attached to planning permissions to secure various improvements. These may include tree retention and protection, the submission and implementation of a landscape or tree planting scheme, surface materials, screen walls, fences and planting.

Tree Preservation Orders (TPOs)
In considering consent for works to trees protected by TPO, the Council will:
i. Assess the amenity value of the tree or woodland and the likely impact of the proposal on the amenity of the area, and,
ii. In the light of this assessment consider whether or not the proposal is justified, having regard to the reasons put forward in support of it.

Trees in conservation areas
In considering works to trees protected by virtue of their location within a conservation area the Council will assess the amenity value of the tree or woodland and the likely impact of the proposal on the amenity of the area. The Council will then either:
i. Make a TPO if justified in the interests of amenity. The proposal would then have to be the subject of a formal application under the TPO, or
ii. Decide not to make a TPO and allow the six week period to expire, at which point the proposed work may go ahead as long as it is carried out within two years from the date of the notice.

Policy DM21 - Nature conservation and biodiversity
a. In accordance with Core Strategy policy CS15 – Biodiversity, all new development will be expected to preserve, manage and where possible enhance existing habitats, protected species and biodiversity features. The Council will work in partnership to explore new opportunities for habitat creation and restoration.
b. Support will be given to proposals that enhance existing and incorporate new biodiversity features, habitats and links to habitat networks into the design of buildings themselves as well as in appropriate design and landscape schemes of new developments with the aim of attracting wildlife and promoting biodiversity. Conditions will be used to secure the provision of mitigation measures, as appropriate.
c. Development affecting designated international sites of biodiversity importance and compensatory sites will be considered against Core Strategy policies CS13 – Thames Basin Heaths Special Protection Area, CS15 – Biodiversity, the Framework and relevant legislation.
d. Development affecting national sites of biodiversity importance will not be permitted if it will have an adverse effect, directly or indirectly, individually or in combination, on the site or its features. In exceptional circumstances, proposals that have an adverse effect on a national site may be permitted if the benefits of the development clearly outweigh the harm. If a development is approved under these circumstances, appropriate avoidance, mitigation and compensation will be sought wherever possible.
e. Development affecting locally designated sites of biodiversity importance or sites falling outside these that support national priority habitats or priority species will not be permitted if it will result in significant harm to the nature conservation value of the site or feature.
f. Sites identified on the Policies Map as having potential to be designated in future as Suitable Accessible Natural Greenspace (SANG) will be protected from development that may compromise its ability to serve that function, taking into account the level of existing SANG when the development is proposed and any wider benefits of the proposal.

4. DESK STUDY RESULTS

4.1 INTRODUCTION

The data search was carried out in September 2020 by Surrey Biodiversity Information Centre. All relevant ecological data provided by the consultees was reviewed and the results from these investigations are summarised in Sections 4.2 to 4.4. Selected data are provided in Appendix 1.

4.2 NATURE CONSERVATION SITES

Statutory and non-statutory nature conservation sites located in proximity to the survey area are summarised in Table 4.1.

Site Name	Designation	Proximity to Survey Area	Description
European Statutory Sites			
South West London Waterbodies	Ramsar, SAC, SPA, SSSI	2.16 km west	South West London Waterbodies consists of several reservoirs and former gravel pits in the Thames Valley, located adjacent to Heathrow Airport between Windsor and Hampton Court. The waterbodies are important in supporting internationally important numbers of gadwall *Anas strepera* and shoveler *Anas clypeata*.
UK Statutory Sites			
Molesey Heath	LNR	940 m west	The site is a reclaimed landfill site which was formerly a gravel pit. The site has been colonised naturally by rough grassland and scrub and is rich in bird life including redshanks *Tringa totanus* and little ringed plover *Charadrius dubius.* There is also a variety of burrowing bees and wasps.
Bushy Park and Home Park SSSI	SSSI	1.44 km north-east	Bushy Park and Home Park SSSI is of special interest for its nationally important saproxylic (dead and decaying wood associated) invertebrate species, population of veteran trees and acidic grassland communities. The site has a high diversity of specialised deadwood invertebrates and supports a substantial number of nationally scarce and otherwise uncommon beetle. The grassland areas support a range of locally uncommon plants including autumn squill *Scilla autumnalis*, sand spurrey *Spergularia rubra* and early hair-grass *Aira praecox*.
Non-statutory Sites			
Island Barn Reservoir	SNCI	320 m south-west	The site is designated as a SCNI for its importance for wintering wildfowl and its position within the wider ecological unit. This allows for an interchange of birds with other reservoirs in area, including those in the South West London Waterbodies (as described above).
Key: SSSI: Site of Special Scientific LNR: Local Nature Reserve SNCI: Site of Nature Conservation Importance SAC: Special Area of Conservation SPA: Special Protection Area Ramsar: Site listed on The Convention on Wetlands of International Importance (Ramsar Convention)			

Table 4.1: Summary of Nature Conservation Sites

The site is located within SSSI Impact Risk Zone for Bushy Park and Home Park SSSI, located 1.44 km north east, and South West London Waterbodies SSSI/ SAC/ SPA/Ramsar located 2.15 km west of the survey area.

4.3 PROTECTED / NOTABLE SPECIES

Table 4.2 and the following text provide a summary of protected and notable species records within a 1 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Species of Principal Importance?	Legislation / Conservation Status
Mammals - bats					
Unidentified myotis *Myotis* sp.	1	2017	600 m north	-	ECH 4, WCA 5, WCA 6
Pipistrelle *Pipistrellus* sp.	1	2017	600 m north	#	ECH 4, WCA 5, WCA 6
Soprano pipistrelle *Pipistrellus pygmaeus*	3	2019	600 m north	✓	ECH 4, WCA 5, WCA 6
Common pipistrelle *Pipistrellus pipistrellus*	3	2019	600 m north	-	ECH 4, WCA 5, WCA 6
Leisler's bat *Nyctalus leisleri*	1	2017	600 m north	-	ECH 4, WCA 5, WCA 6
Nathusius's Pipistrelle *Pipistrellus nathusii*	1	2017	600 m north	-	ECH 4, WCA 5, WCA 6
Noctule *Nyctalus noctula*	2	2019	740 m north	✓	ECH 4, WCA 5, WCA 6
Unidentified bat *Chiroptera* sp.	1	2017	740 m north	#	#
Brown long-eared bat *Plecotus auritus*	1	2008	Potentially within a 1 km radius**	✓	ECH 4, WCA 5, WCA 6
Invertebrates					
Stag beetle *Lucanus cervus*	11	2019	280 m east	✓	ECH 2, WCA 5 S9(5)

Key:
**: Grid reference provided was two figures only.

ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation.
ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection

WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds).
WCA 5 S9(5): Schedule 5 Section 9(5) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal
WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods

Species of Principal Importance: Species of Principal Importance for Nature Conservation in England.

Note. This table does not include reference to the Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats), the Bonn Convention on the Conservation of Migratory Species of Wild Animals or the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Table 4.2: Summary of Protected/Notable Species Records Within 1 km of Survey Area

Birds
In addition to the species identified in Table 4.2, the desk study provided records of two bird species listed as Species of Principal Importance located within a 1 km radius of the survey area comprising herring gull *Larus argentatus* and starling *Sturnus vulgaris.* The desk study also identified records of three species listed on the RSPB Red List of species of conservation concern consisting of grey wagtail *Motacilla cinerea*, kittiwake *Rissa tridactyla* and pochard *Aythya farina.* In addition, records of twelve species listed on the RSPB Amber List of species of conservation concern were provided in the desk study and included bar-tailed godwit *Limosa lapponica,* gadwall *Anas strepera* and shelduck *Tadorna tadorna.*

Invertebrates
The desk study identified one butterfly species listed as a Species of Principal Importance within a 1 km radius of the survey area comprising wall *Lasiommata megera.*

Plants
A single record of cornflower *Centaurea cyanus* was provided in the desk study, a Species of Principal Importance for Nature Conservation in England.

4.4 INVASIVE SPECIES

Table 4.3 provides a summary of invasive species records within a 1 km radius of the study area. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.

Species	No. of Records	Most Recent Record	Proximity of Nearest Record to Study Area	Legislation / Conservation Status
Himalayan balsam *Impatiens glandulifera*	7	2016	Potentially on site+	WCA 9
Cotoneaster *Cotoneaster horizontalis*	1	2009	110 m north-east	WCA 9
Floating pennywort *Hydrocotyle ranunculoides*	3	2016	560 m north-west	WCA 9
Japanese knotweed *Fallopia japonica*	1	2007	Potentially within a 1 km radius*	WCA 9
Japanese rose *Rosa rugosa*	2	2011	Potentially within a 1 km radius*	WCA 9
Three-cornered garlic *Allium triquetrum*	1	2003	Potentially within a 1 km radius*	WCA 9
Giant hogweed *Heracleum mantegazzianum*	2	2010	Potentially within a 1 km radius*	WCA 9
Nuttall's waterweed *Elodea nuttallii*	1	2004	Potentially within a 1 km radius**	WCA 9

Key:
+: Grid reference provided was six figures and as such, the record may be located within 100 m of the study site.
*: Grid reference provided was four figures only.
**: Grid reference provided was two figures only.

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

Table 4.3: Summary of Invasive Species Records Within 1 km of Survey Area

5. PHASE 1 HABITAT SURVEY

5.1 INTRODUCTION

The results of the Phase 1 Habitat Survey are presented in the following sections. An annotated Phase 1 Habitat Survey Drawing (Drawing C156895-01-01-RevB) is provided in Chapter 8. This drawing illustrates the location and extent of all habitat types recorded on site. Any notable features or features too small to map are detailed using target notes. Photographs taken during the field survey are presented in Chapter 9.

The surveys were carried out on the 23rd September 2020 and 22nd July 2022. Table 5.1 details the weather conditions at the time of the surveys.

Parameter	23/09/2020	22/07/2022
Temperature (ºC)	15	19-23
Cloud (%)	100	0-100
Wind (Beaufort)	F2	F0-F3
Precipitation	Light rain	Dry

Table 5.1: Weather Conditions During Field Survey

5.2 SURVEY CONSTRAINTS AND LIMITATIONS

No constraints were experienced during the walkover survey. The site boundary was revised on 11th October 2022 to add a parcel of land approximately 0.1 ha north of the proposed development. This area has not been surveyed and its habitats not classified.

5.3 HABITATS

The following habitat types were recorded on site during the field survey:

- Adjacent Habitat: Running water;
- Amenity grassland;
- Bare ground;
- Building;
- Dense scrub;
- Hardstanding;
- Introduced shrub;
- Poor semi-improved grassland; and,
- Scattered trees.

These habitats are described below. They are ordered alphabetically, not in order of ecological importance.

Adjacent Habitat: Running water
The River Ember was situated immediately adjacent to the site's western boundary and occupying a channel approximately 10 m in width (Plates 9.11 and 9.12). The eastern riverbank consisted of very steep (vertical or near-vertical) hardstanding and was therefore considered unsuitable for burrowing species such as otter *Lutra lutra*, kingfisher *Alcedo atthis* and water vole *Arvicola amphibius*. This hardstanding was approximately 2 m at its lowest sections and constructed from a mix of concrete and brick. The western riverbank, by contrast, was more graduated and dominated by riparian vegetation. The riverbed was a mix of gravel, sand and silt. Various macrophytes were present including branched bur-reed *sparganium erectum*, pendulous sedge *Carex pendula*, watercress *Rorippa nasturtium-aquaticum*, water lily *Nymphaea alba* and common duckweed *Lemna minor*. Invasive aquatic plants Himalayan balsam *Impatiens glandulifera* and floating pennywort *Hydrocotyle ranunculoides* were also present in abundance.

Amenity grassland
Areas of regularly mown grassland were present in the north and east of the site, with a small area located in the south surrounded by introduced shrub. The sward was approximately 5 cm tall and was dominated by common species including perennial ryegrass *Lolium perenne*, annual meadow grass *Poa annua,* common yarrow *Achillea millefolium*, Yorkshire fog *Holcus lanatus*, small-flowered crane's-bill *Geranium pusillum*,

dandelion *Taraxacum officinale* agg., daisy *Bellis perennis*, ribwort plantain *Plantago lanceolata*, broadleaf plantain *Plantago major*, hawksbeard *Crepis* sp., red deadnettle *Lamium purpureum*, white clover *Trifolium repens* and creeping buttercup *Ranunculus repens.* Common comfrey *Symphytum officinale*, burdock *Arctium* sp. and green alkanet *Pentaglottis sempervirens* were recorded in localized areas. In the north-west of the site wood sedge *Carex sylvatica* was recorded. A dovecote was located in the amenity grassland in the north-west corner of the site (Target Note 1).

Bare ground
A small patch of bare ground was located against the fence line at the western boundary that had several tree stumps present (Target Note 3, Plate 9.8).

Building
There were 7 buildings onsite comprising six residential buildings (B1 to B6) and a horticultural centre (B7) (Plate 9.4). Buildings B2, B4, B5 and B6 were of a similar structure and design while buildings B1 and B7 appeared to be newer. The buildings were a mix of single and two storeys. The layout of the buildings is illustrated in Drawing C156895-01-01-RevB in Chapter 8. Several additional buildings were present on site including a large glass greenhouse in the horticultural area (Target Note 4) and a terrace of sheds that adjoined building B4. Three wooden garden sheds were also clustered nearby.

Dense scrub
Dense scrub was present in the north-west corner of the site growing at the base of mature cypress *Cupressus* sp. trees and a mature blue gum *Eucalyptus* sp. tree (Plate 9.5). The scrub was dominated by bramble *Rubus fruticosus* agg. with dense ivy *Hedera helix*, common nettle *Urtica dioica* and buddleia *Buddleja davidii*, Oregon grape *Mahonia aquifolium* and wild honeysuckle *Lonicera periclymenum* were also present. Horse chestnut *Aesculus hippocastanum* and ash *Fraxinus excelsior* saplings were growing among the scrub. Small patches of ruderal, mostly represented by common hogweed *Heracleum sphondylium* and prickly sow-thistle *Sonchus asper*, were present within this habitat.

Hardstanding
Hardstanding was present throughout the site with hardstanding footpaths surrounding the buildings and a large area in the centre of the site for car parking and access. In the horticultural area in the north-east of the site, gravel and paving also covered large areas.

Introduced shrub
Areas of introduced shrub was present surrounding some of the buildings, particularly B1 as well as in the residential gardens surrounding B6. Introduced shrub was also present in raised flower beds to the south of the horticultural centre (Target Note 2). Species included Japanese anemone *Anemone hupehensis*, bay *Laurus nobilis*, spurge *Euphorbia* sp., rosemary *Rosmarinus officinalis*, firethorn *Pyracantha coccinea*, lavender *Lavandula angustifolia*, rose *Rosa* sp., common burdock *Arctium minus,* Japanese meadowsweet *Spiraea japonica*, pendulous sedge, Wilson's honeysuckle *Lonicera nitida*, holly *Ilex aquifolium*, Chinese barberry *Berberis julianae*, and leatherleaf viburnum *Viburnum rhytidophyllum* In addition, cherry laurel *Prunus laurocerasus* was present in the residential garden of B6, and herb Robert *Geranium robertianum* was also growing in places.

Poor semi-improved grassland
An area of poor semi-improved grassland was present in the north-east corner of the site to the north of the horticultural area (Plate 9.4). The grass was mostly thick and tussocky with a sward height over 75 cm. It was dominated by false oatgrass *Arrhenatherum elatius* and Yorkshire fog. Cocksfoot *Dactylis glomerata*, common sorrel *Rumex acetosa*, common nettle, foxglove *Digitalis lutea*, meadow buttercup *Ranunculus acris,* large-flowered evening-primrose *Oenothera glazioviana*, timothy grass *Phleum pratense* and common yarrow also grew in the tall sward area. In shorter sward areas the following additional species were recorded: creeping buttercup*,* red deadnettle, ground ivy, wall barley *Hordeum murinum*, common dandelion, hawksbeard, bristly oxtongue *Helminthotheca echioides*, ribwort plantain and broadleaf plantain. Under the UKHAB classification system this grassland meets the criteria for 'g3c5: Arrhenatherum neutral grassland' – a neutral grassland dominated by false oatgrass.

Scattered trees
A number of mature trees were scattered throughout the site, predominantly along the northern and western boundaries and in the area of amenity grassland by the eastern boundary. Species included sour cherry *Prunus cerasus*, horse chestnut, blue gum, apple *Malus pumila*, cypress, Himalayan birch *Betula utilis*, silver

birch *Betula pendula*, rowan *Sorbus aucuparia,* Père David's maple *Acer davidii* and cedar of Lebanon *Cedrus libani.* Most of these trees were mature and in good health, with the blue gum and cypress trees in the north of the site approximately 15 m in height (at least twice as tall as the buildings).

5.4 FAUNA

During the survey field signs of faunal species were recorded. The time of year at which the survey is undertaken will affect species or field signs directly recorded during the survey.

Mammals
A badger *Meles meles* footprint was recorded on the eastern riverbank during the survey. American mink *Neovision vision,* an invasive non-native mammal species, were also recorded (Plate 9.9).

Birds
Kingfishers *Alcedo atthis* were observed fishing on the river immediately adjacent to the site. Green woodpecker *Picus viridis*, dunnock *Prunella modularis*, goldfinch *Carduelis carduelis*, woodpigeon *Columba palumbus*, robin *Erithacus rubecula* and magpie *Pica pica* were also recorded on site.

Fish
Chub *Squalius cephalus* were recorded in the river.

5.5 INVASIVE SPECIES

Invasive Plant Species
The River Ember adjacent to the site's western boundary contained floating pennywort growing in the water and Himalayan balsam growing on its banks and shores. These aquatic species are both listed on Schedule 9 of Wildlife and Countryside Act 1981 (as amended).

In addition, numerous species listed as Species of Concern under the London Invasive Species Initiative were recorded within the main area of the site. These species included buddleia, cherry laurel and green alkanet.

Invasive Animal Species
A family of American mink was recorded on the western riverbank. This species is listed on Schedule 9 of Wildlife and Countryside Act 1981 (as amended). The presence of American mink is a strong indication of the absence the water vole *Arvicola amphibius,* which are commonly predated into local extinction by this species.

6. DISCUSSIONS AND CONCLUSIONS

6.1 SUMMARY OF PROPOSALS

The redevelopment of the site will entail demolition (or partial demolition) of all existing buildings and the erection of 3 buildings comprising 74 residential units (15 x 1 bed, 48 x 2 bed and 11 x 3 bed) and ancillary facilities for residents, underground and surface level car and cycle parking, mechanical plant, soft and hard landscaping and associated diversion of existing Thames Water pipe.

It is understood that 8 mature trees at the site's northern boundary are to be removed by Thames Water to facilitate pipe works. A further ten trees across the site will be removed to facilitate the residential redevelopment, resulting in a total loss of 18 trees. 9 Leyland cypress trees will be retained at the site's western riverside boundary. Across the developed site 32 new trees will be planted. Ten of these trees will be native species (*Salix alba*, *Alnus glutinosa*, *Sorbus aucuparia* and *Prunus padus*). Bat and/or bird boxes will be erected on the trees.

Seven areas of green roofing, totalling 0.034 ha, will be created. The green roofing will meet UKHAB/Biodiversity Metric 3.1 criteria for 'Biodiverse Green Roofing' by having a wide range of dry grassland wildflowers and sedum species, together with features such as logs piles and stone/gravel piles, and a substrate depth varying between 80 and 150 mm with at least 50% of the roof 150 mm deep.

Approximately half of the dense scrub habitat at the site's western (riverside) boundary will be retained and enhanced as part of the proposed development. Adjacent to this, amenity grassland area will be replaced with a mix of introduced shrub habitat and 'Wildflower/Species Rich Lawn Turf'. A band of bioswale habitat will be created in the north of the site.

6.2 NATURE CONSERVATION SITES

The desk study exercise identified one European statutory site within 5 km of the survey area, two UK statutory sites within 2 km and one non-statutory sites within 1 km. The site is not located within 10 km of a statutory site designated for bats. The significance of these sites to the proposed development is discussed below.

European Statutory Sites
South West London Waterbodies Ramsar/SPA/SAC/SSSI is located 2.16 km west of the survey area. The proposed development site is located within the SSSI Impact Risk Zone for this site. The 'All Planning Applications' risk category states: *all planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures'.*

The proposed development site is located at the edge of an existing residential area, abutted by the River Ember to the west and a large area of rough grassland and woodland that forms part of the River Ember and River Mole green corridor to the north. It is considered that the works could fall into the risk category of the SSSI Impact Risk Zone (as detailed above). Therefore, South West London Waterbodies Ramsar/SPA/SAC/SSSI is considered a material consideration in relation to the proposed development and a recommendation has been made in Section 7.1**.**

UK Statutory Sites
The desk study identified two UK statutory sites within 2 km of the survey area, the closest of which was Molesey Heath LNR located 940 m west. Due to the distance and the lack of direct connectivity between this site and the survey area, it is unlikely that it will be directly or indirectly impacted by the proposed development. In addition, it is unlikely that any operational impacts such as increased recreational pressures will impact this site once the development is built as the proposed development site is located within an existing town and will not significantly alter the number of potential visitors. Therefore, this site is not a notable consideration in relation to the proposed development.

Bushy Park and Home Park SSSI was the second UK statutory site located 1.44 km north-east of the survey area. The River Ember, which flows directly adjacent to the site, converges with the River Thames, which flows adjacent to the boundary of this conservation site. Due to the hydrological connectivity between this conservation site and the survey area, there is potential for runoff into the river. The survey area also falls

within the SSSI Impact Risk Zone of this conservation site (as discussed within the previous section). Therefore, it is considered that the works could fall into the risk category of the SSSI Impact Risk Zone and consequently Bushy Park and Home Park SSSI is a notable consideration in relation to the proposed development and therefore a recommendation has been made in Section 7.1.

Non-Statutory Sites
One non-statutory site, Island Barn Reservoir, was located 320 m south-west from the survey site. As the proposed development is located at the edge of a residential area in a town, it is unlikely that any operational impacts such as increased recreational pressures will impact the site once the development is built. In addition, due to the distance between the proposed development site and the non-statutory site and the lack of direct connectivity, it is unlikely that Island Barn Reservoir will be directly or indirectly impacted by the proposed development. Therefore, non-statutory sites are not a notable consideration in relation to the proposed development.

6.3 HABITATS

The ecological importance of the habitats present on site is determined by their presence on the list of Habitats of Principal Importance in England and on the Local BAP. It also takes into account the intrinsic value of the habitat. Those habitats which are considered to be of intrinsic importance and have the potential to be impacted by the site proposals are highlighted as notable considerations.

A discussion of the implications of the site proposals with regard to the habitats present on site is provided in the text below. A separate discussion of the value of the habitats on site to protected or notable species is provided in Section 6.4.

Adjacent Habitat: Running water
The River Condition Assessment carried out as part of the Biodiversity Net Gain Assessment (RT-MME-156895 RevA) found the river to be in 'Fairly Poor' condition. The river does not meet the criteria (JNCC, 2007) to be classified as a Habitat of Principal Importance for Nature Conservation in England.

The river could potentially be impacted indirectly by the construction phase of the works due to run-off, additional pollution, spread of invasive species, increased dust, noise and lighting. Post-construction impacts include increased human disturbance and inappropriate lighting of the riparian corridor. Therefore, rivers are a notable consideration in relation to the proposed development and a recommendation has been made in Section 7.2.

Amenity grassland, bare ground and hardstanding
Amenity grassland, bare ground and hardstanding are common habitats that are well represented locally and are deemed to have negligible ecological value. In addition, these habitats can easily be replicated post-development. Therefore, they are not a notable consideration in relation to the proposed development.

Building
Buildings are well represented locally and will be replaced within the new development and therefore they are not a notable consideration. However, the buildings on site may support protected/notable species which is discussed further in Section 6.4. It is understood that five of the buildings are to be demolished as part of the proposed works.

Dense scrub, introduced shrub and poor semi-improved grassland
Dense scrub, introduced shrub and poor semi-improved grassland are common habitats that are well represented locally and can be replaced post-development. It is understood that approximately half of the dense scrub on site will be retained and enhanced, while the area of poor semi-improved grassland and all existing introduced shrub will be removed to facilitate the development. A recommendation regarding habitat enhancement is made in Section 7.2

Scattered trees
It is understood that 18 trees will be removed and 32 trees will be planted. The mature trees on site are of intrinsic value as they cannot be easily replaced in the short to medium term. Scattered trees are a notable consideration and a recommendation regarding the retention and protection of trees is made in Section 7.2.

Habitats considered to be of relevance to the proposed development are summarised in Table 6.1.

Habitat Type	Habitat of Principal Importance?	Local BAP Habitat?	Summary of Potential Impacts
River	-	-	Pollution via runoff, addition of sediments, increased lighting, spread of invasive species.
Scattered trees	-	-	Direct loss, damage or disturbance, root compaction.

Table 6.1: Summary of Potential Impacts on Notable Habitats

6.4 PROTECTED/NOTABLE SPECIES

The following paragraphs consider the likely impact of the site proposals on protected or notable species. This is based on those species highlighted in the desk study exercise (Chapter 4) and other species for which potentially suitable habitat occurs within or adjacent to the survey area.

Bats
The desk study provided fourteen records of bats within a 1 km radius of the survey area, the closest records were located 600 m north and were of several bat species including common and soprano pipistrelle and Leisler's bat. A Preliminary Bat Roost Assessment was completed on the buildings at the time of the walkover survey and many of the buildings were deemed to have roosting potential for bats. It is also considered that the site and surroundings provide suitable foraging and commuting habitat. Further information regarding bats is provided in the Preliminary Bat Roost Assessment detailed in report RT-MME-153535-02 RevA.

Terrestrial mammals
Badger
No records of badger were provided in the desk study. Evidence of badger activity was recorded during the walkover survey, on the eastern riverbank, however no setts or mammal holes within or adjacent to the survey area were noted at the time of the survey**.** The dense scrub, introduced shrub and poor semi-improved grassland offer suitable foraging opportunities for badger and there are links to alternative suitable habitat in the surrounding area to the north. The area of rough grassland and woodland north of the site was inspected and no evidence of badger activity, such as sett building, was recorded. Therefore, it is considered likely that badgers use and pass through the site, and as such they are a notable consideration. In the absence of appropriate mitigation, there is the potential for badgers to be directly harmed or injured during the development works. As such, a recommendation regarding the safeguarding of foraging terrestrial mammals is made in Section 7.3.

Hedgehog
No records of hedgehog were provided in the desk study. The habitats onsite such as the dense scrub and poor semi-improved grassland offer suitable refuge and foraging habitat for hedgehog and the connectivity to the rough grassland and woodland to the north of the site is likely to lead to hedgehogs using and passing through the site. Therefore, hedgehogs are a notable consideration in relation to the proposed development works. To prevent any harm to hedgehog during the construction phase, a recommendation regarding the safeguarding of foraging terrestrial mammals is made in Section 7.3.

Aquatic mammals
Otter
No records of otter were provided in the desk study and no evidence of otter was observed during the walkover survey. The River Ember adjacent to the site provides a suitable habitat for otter with links to other rivers and waterbodies nearby such as the River Mole. However, the eastern riverbank was considered unsuitable for otter holts as it consisted of continuous hardstanding. Furthermore, the steepness of this hardstanding combined with fencing at the western boundary reduces the likelihood of otters entering the site at its western boundary. The River Ember's eastern riverbank was considered unsuitable for otter holt-building due to the frequency of dog walkers in this area. The nearby River Mole was similarly unsuitable for otter holts as its riverbanks were a mix of hardstanding and closely mown amenity grassland. However, due to the proximity of both rivers to the site, and the area of rough grassland to the north of the site, there is

potential for otter to commute across the works area. Protection measures to avoid any harm to commuting mammals are made in Section 7.3.

Indirect impacts from the construction phase of the development such as pollution, run-off or lighting has the potential to impact aquatic mammals by impacting the quality of the river habitat. Therefore, a recommendation is made in Section 7.2.

Water vole

No records of water vole were provided in the desk study. The western bank of the river adjacent to the site provides a suitable habitat for water vole with links to other rivers and waterbodies nearby.

Indirect impacts from the construction phase of the development such as pollution, run-off or lighting has the potential to impact aquatic mammals by impacting the quality of the river habitat. Therefore, a recommendation to avoid and manage pollution and inappropriate lighting is made in Section 7.2.

Amphibians

No records of amphibians were provided in the desk study. As the site is dominated by hardstanding and buildings and no breeding habitat was present on site, it is considered that the site provides suboptimal breeding habitat for amphibians. There are small areas of suitable terrestrial habitat, such as longer areas of grassland, areas of scrub and some areas of introduced shrub; however, these are generally limited in size.

Reference to Ordnance Survey data and aerial imagery indicates that one pond is located c.330 m north of the survey area; however this is separated from the site by the River Mole and River Ember, which are considered to pose a barrier to dispersal of any amphibians that may use this pond to the site.

Although there is limited suitable terrestrial habitat on site, there is an extensive area of suitable terrestrial habitat located directly north of the site, comprising a mosaic of grassland, trees and scrub, The presence of this nearby terrestrial habitat potentially increases the likelihood of amphibians utilising the areas of terrestrial habitat on site. However, due to the limited extent of the terrestrial habitat on site, an apparent lack of breeding habitat within the vicinity and the lack of records in the area, it is considered that the risk of direct harm/injury posed to amphibians as a result of the clearance of any onsite terrestrial habitat is low. To reduce this risk to negligible, a recommendation is provided in Section 7.3.

Reptiles

No records of reptiles were provided in the desk study. Whilst a large proportion of the site offers sub-optimal terrestrial habitat for reptiles, the poor semi-improved grassland provides suitable habitat that has links to the surrounding landscape to the north which provides additional suitable habitat and shelter for reptiles. The river corridor adjacent to the habitat also increases the suitability of this offsite habitat for reptiles. As such, there is potential that reptiles may be using the onsite habitat in some capacity. Clearing these suitable habitats during the construction phase of the development could cause direct harm/injury to reptiles as a result. Reptiles are therefore a notable consideration in relation to the proposed development works and, as such, a recommendation is provided in Section 7.3.

Freshwater fish

During the walkover survey, spawning chub were recorded in the river. The river also provides suitable habitat to support a range of other fish species. Indirect impacts from the construction phase of the development has the potential to detrimentally impact the river through the run-off of pollution and sediment into the water, and therefore reducing the quality of habitat for any fish species. Therefore an appropriate recommendation has been provided in Section 7.2.

Birds

Records of two bird species listed as Species of Principal Importance were identified in the desk study located within a 1 km radius of the survey site. Two kingfishers, a species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), were observed during the walkover survey by the River Ember. These birds were recorded fishing and it is feasible that during nesting bird season they could utilise the western bank of the River Ember, directly opposite the site, for breeding purposes. If works are undertaken during the nesting bird season then they risk impacting upon nesting birds, including kingfisher, therefore a recommendation is made in Section 7.3.

Invertebrates

Stag beetle

Eleven records of stag beetle *Lucanus cervus* were provided in the desk study, with the closest record located 280 m east from the survey site and was dated from 2019. The site had a small area of bare ground that contained tree stumps, which have the potential to provide suitable habitat for stag beetles. Therefore, stag beetle has the potential to be adversely impacted by the development and a recommendation is provided in Section 7.3.

Although other invertebrate species present within the site may be temporarily displaced during the construction phase of the proposed development, providing that habitats are compensated for (e.g. good condition biodiverse green roofing), the long-term impact on terrestrial invertebrates is not considered significant. A recommendation regarding general habitat enhancement to increase the value of the site for invertebrates is made in Section 7.2.

Plants

A single record of cornflower *Centaurea cyanus* was provided in the desk study. No notable plant species (including cornflower) were recorded on site during the field survey, which was undertaken at a suitable time for botanical assessments. It considered unlikely any notable species would be present given the common nature of the habitats present on site and therefore plants are not a notable consideration in relation to the proposed development.

Other Species

The following protected species are not considered to be material considerations due to the lack of desk study records and absence of suitable habitats within the development site and its surroundings: dormouse, *Muscardinus avellanarius*, pine marten *Martes martes*, polecat *Mustela putorius*, red squirrel *Sciurus vulgaris*. While the River Ember provides suitable habitat for white-clawed crayfish *Austropotamobius pallipes,* it is considered unlikely that this species is present due to the absence of local records and the restricted known distribution of this species

Summary

Species considered to be of relevance to the proposed development are summarised in Table 6.2.

Species / Species Group	Species of Principal Importance?	Summary of Potential Impacts
Bats	#	Loss of suitable habitat, direct harm/injury, fragmentation, disturbance to foraging routes through increased lighting.
Badger	-	Loss of suitable habitat, direct harm or injury.
Hedgehog	✓	Loss of suitable habitat, direct harm or injury.
Otter	✓	Indirect impacts on habitat quality, direct harm or injury.
Water vole	✓	Indirect impacts on habitat quality.
Amphibians	#	Direct harm/injury, temporary habitat loss / disturbance
Freshwater fish	-	Indirect impacts on habitat quality.
Reptiles	✓	Direct harm/injury, temporary habitat loss / disturbance.
Birds	#	Loss of suitable habitat, direct harm/injury.
Invertebrates (including stag beetles)	#	Habitat loss/disturbance.
Key: # Dependent on species		

Table 6.2: Summary of Potential Impacts on Notable Species

6.5 INVASIVE PLANT SPECIES

The desk study identified records of eight invasive non-native plants species located within a 1 km radius of the survey area, with the closest record of Himalayan balsam located potentially onsite (the grid reference provided was six figures and therefore the location of the record can be within 100 m of the study site). The walkover survey identified floating pennywort and Himalayan balsam growing in abundance within the River Ember immediately adjacent to the sites western boundary. These species are both listed on Schedule 9 of Wildlife and Countryside Act 1981 (as amended).

As these species are listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) it is an offence to cause them to spread in the wild. Therefore, a recommendation has been made in Section 7.4.

Buddleia, cherry laurel and green alkanet are listed as Species of Concern under the London Invasive Species Initiative and were recorded throughout the site. While these plants may have ecological value on a small scale – for example by providing nectar sources or, in the case of cherry laurel, potential nesting habitat for birds – at the landscape scale they are considered undesirable and potentially harmful from an ecological perspective. Therefore, a recommendation has been made in Section 7.4.

7. RECOMMENDATIONS

All recommendations provided in this section are based on Middlemarch Environmental Ltd's current understanding of the site proposals, correct at the time the report was compiled. Should the proposals alter, the conclusions and recommendations made in the report should be reviewed to ensure that they remain appropriate.

The ecological mitigation hierarchy should be applied when considering development which may have a significant effect on biodiversity. The ecological mitigation hierarchy, as set out in the National Planning Policy Framework (NPPF), and the National Planning Practice Guidance (NPPG) should follow these principles:

- **Avoidance** – development should be designed to avoid significant harm to valuable wildlife habitats and species.
- **Mitigation** – where significant harm cannot be wholly or partially avoided, it should be minimised by design or through the use of effective mitigation measures.
- **Compensation** – where, despite whatever mitigation would be effective, there would still be significant residual harm, as a last resort, compensation should be used to provide an equivalent value of biodiversity.

7.1 NATURE CONSERVATION SITES

The following recommendation is made regarding nature conservation sites:

R1 **South West London Waterbodies and Busy Park and Home Park:** The proposed development could potentially directly/indirectly impact upon South West London Waterbodies SPA/SAC/Ramsar/SSSI. Further assessment should be undertaken to determine whether the proposed project could have a Likely Significant Effect on the qualifying criteria for this site and which, if any, stages of the Habitats Regulations Assessment process will need to be undertaken. Natural England should be consulted prior to any works commencing to discuss the likelihood of any impacts on this nature conservation site.

7.2 HABITATS

The following recommendations are made regarding the habitats present on site:

R2 **Habitat Retention and Protection:** The development proposals should be designed (where feasible) to allow for the retention and protection of existing notable habitats, including mature scattered trees and the River Ember adjacent to the site. Protection measures comprise:

- Trees: Any trees on or overhanging the site, which are retained as a part of any proposed works should be protected in accordance with British Standard 5837: 2012 "Trees in relation to design, demolition and construction - recommendations". Protection should be installed on site prior to the commencement of any works on site.
- Watercourses: Environment Agency Pollution Prevention Guidelines should be adhered to throughout the works. Although formerly withdrawn in December 2015, the guidelines provide a framework for the design of working practices to avoid pollution and siltation. PPG5 (Environment Agency et al, 2007), relating to works and maintenance in or near water, is considered to be of relevance to the proposed project.

If retention is not possible, appropriate replacement planting should be incorporated into the soft landscape scheme in accordance with the ecological mitigation hierachy. Only native and wildlife attracting species should be planted.

R3 **Biodiversity Enhancement:** In accordance with the provision of Chapter 15 of the National Planning Policy Framework (Conserving and Enhancing the Natural Environment) and Local Planning Policy, biodiversity enhancement measures should be incorporated into the landscaping scheme of any proposed development to work towards delivering net gains for biodiversity. This will involve, for example:

- Planting of habitats which will be of value to wildlife, such as:
  - native seed/fruit bearing species to provide foraging habitat for mammals and birds; nectar-rich species to attract bees, butterflies and moths;

  - biodiverse green roofing;
  - wildflower grassland margins to provide larval food for caterpillars and to attract butterfly and moth species such as wall and small heath; and,
  - species which attract night flying insects which will be of value to foraging bats, for example: evening primrose *Oenothera biennis*, goldenrod *Solidago virgaurea*, honeysuckle *Lonicera periclymenum* and fleabane *Pulicaria dysenterica*.
- Inclusion of hedgehog passes under any fence lines to allow connectivity between the site and the wider area.
- Provision of nesting/roosting habitat, such as installation of nest boxes for species such as house sparrow, dense scrub for species such as song thrush, and bat boxes for species such as pipistrelle.
- Appropriate translocation of dead wood habitat for herpetofauna and invertebrate species such as stag beetle.

7.3 PROTECTED / NOTABLE SPECIES

To ensure compliance with wildlife legislation and relevant planning policy [Elmbridge Core Strategy 'Policy CS15 – Biodiversity'], the following recommendations are made:

R4 **Roosting Bats:** All recommendations made within the Preliminary Bat Roost Assessment must be adhered to (Report RT-MME-153535-02 RevA).

R5 **Terrestrial Mammals including Badger and Hedgehog:** Any excavations that need to be left overnight should be covered or fitted with mammal ramps to ensure that any animals that enter can safely escape. Any open pipework with an outside diameter of greater than 120 mm must be covered at the end of each work day to prevent animals entering/becoming trapped.

R6 **Herpetofauna:** A reasonable avoidance method statement should be compiled detailing how the proposed works will be undertaken in a sensitive manner to avoid any potential breach of legislation. This document should describe working methods, timings and should detail any ecological control measures that will be implemented e.g. vegetation management and ecological supervision.

R7 **Nesting Birds:** Vegetation and building clearance should be undertaken outside the nesting bird season. The nesting bird season is weather dependent but generally extends between March and September inclusive (peak period March-August). If this is not possible then any vegetation / buildings to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them should be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

R8 **Kingfisher:** The construction phase of the development risks disturbing breeding kingfishers, which given the Schedule 1 protected status afforded to this species, would be considered an offence. Construction activities likely to impact upon the riparian zone of the river should be avoided during the breeding season for kingfisher, which extends from March until August. If this is not possible then prior to any construction activities, including but not limited to the installation of lighting and scaffolding, occurring in proximity to the riverbank should be checked for nesting kingfisher by a suitably qualified ecologist. If kingfisher birds are found to be nesting any works which may affect them should be delayed until the young have fledged and the nest has been abandoned naturally, for example via the implementation of an appropriate buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

R9 **Stag Beetle:** Any deadwood located within the site should be retained in situ. If this is not feasible, then it should be carefully moved under ecological supervision to a suitable undisturbed location within the site, outside of the built development footprint.

7.4 INVASIVE PLANT SPECIES

The following recommendation is made regarding invasive plant species:

R10 **Invasive Species:** Floating pennywort, Himalayan balsam, buddleia, cherry laurel and green alkanet have been recorded on site and immediately adjacent to the site. A Method Statement must be developed for the proposed works to ensure that they do not result in the spread of any invasive non-native species. This method statement should reflect established best management practices for the treatment of the species.

8. DRAWINGS

Drawing C156895-01-01-RevB – Phase 1 Habitat Map

514600

167400

SI

B1

B8

5

1

6

A

3

B4

B7

4

B5

B2

7

B6

B3

7

2

0 20 40 m

514600

Legend

- Site boundary
- Scattered tree
- Running water
- A — Amenity grassland
- Bare ground
- Building
- Dense scrub
- Hardstanding
- Introduced shrub
- Other habitat: weedproof membrane
- SI — Poor semi-improved grassland
- Area not surveyed
- Target note

1 Log piles
2 Cherry laurel
3 Standing deadwood
4 Tree stumps
5 Greenhouse
6 Raised planters
7 Himalayan balsam and floating pennywort

N

Project	Orchard Lane, East Molesey
Drawing	Phase 1 Habitat Map
Client	CIRC Management LLP
Drawing Number	C156895-01-01-RevB
Revision	RevB
Scale @ A3	1:500
Date	October 2022
Approved By	HS
Drawn By	VO

MIDDLEMARCH

Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
T:01676 525880 F:01676 521400
E:admin@middlemarch-environmental.com

C156895-01-01-RevB

9. PHOTOGRAPHS

Plate 9.1: Introduced shrub (right), amenity grassland (left) and scattered trees (far left)

Plate 9.2: Poor semi-improved grassland

Plate 9.3: Poor semi-improved grassland

Plate 9.4: Poor semi-improved grassland

Plate 9.5: Amenity grassland

Plate 9.6: Wood sedge

Plate 9.7: Bare ground with tree stumps

Plate 9.8: Dead wood

Plate 9.9: American mink

Plate 9.10: River Ember

Plate 9.11: River Ember

Plate 9.12: River Ember

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APPENDICES

APPENDIX 1: Summary of Statutory Nature Conservation Sites

APPENDIX 2: Overview of Relevant Species Specific Legislation

APPENDIX 1

Summary of Statutory Nature Conservation Sites

UK Statutory Site Search

Site Check Report: Report generated on Mon Sep 28 2020
Centroid Grid Ref: TQ14606734
The following features have been found in your search area:

Local Nature Reserves (England)

Reference
1009381
Name
MOLESEY HEATH
Hectares
17.79
Hyperlink
https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1009381
Reference
1009381
Name
MOLESEY HEATH
Hectares
17.79
Hyperlink
https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1009381

Sites of Special Scientific Interest (England)

Name
Bushy Park and Home Park SSSI
Reference
1477753
Natural England Contact
Conservation Delivery Team
Natural England Phone Number
0845 600 3078
Hectares
540.39
Citation
2000738
Hyperlink
http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000738
Name
Bushy Park and Home Park SSSI
Reference
1477753
Natural England Contact
Conservation Delivery Team
Natural England Phone Number
0845 600 3078
Hectares
540.39
Citation
2000738
Hyperlink
http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000738

Ancient Woodland (England)

No Features found

National Nature Reserves (England)

No Features found

SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)

1. DOES PLANNING PROPOSAL FALL INTO ONE OR MORE OF THE CATEGORIES BELOW?
2. IF YES, CHECK THE CORRESPONDING DESCRIPTION(S) BELOW. LPA SHOULD CONSULT NATURAL ENGLAND ON LIKELY RISKS FROM THE FOLLOWING:
All Planning Applications
All planning applications (except householder) outside or extending outside existing settlements/urban areas affecting greenspace, farmland, semi natural habitats or landscape features such as trees, hedges, streams, rural buildings/structures.
Infrastructure
Airports, helipads and other aviation proposals.

Wind & Solar Energy
Minerals, Oil & Gas
Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
Rural Non Residential
Residential
Rural Residential
Air Pollution
Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons > 200m² & manure stores > 250t).
Combustion
General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste
Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.
Composting
Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.
Discharges
Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream (NB This does not include discharges to mains sewer which are unlikely to pose a risk at this location).
Water Supply
Notes 1
Notes 2
GUIDANCE - How to use the Impact Risk Zones
/Metadata_for_magic/SSSI IRZ User Guidance MAGIC.pdf

European Statutory Site Search

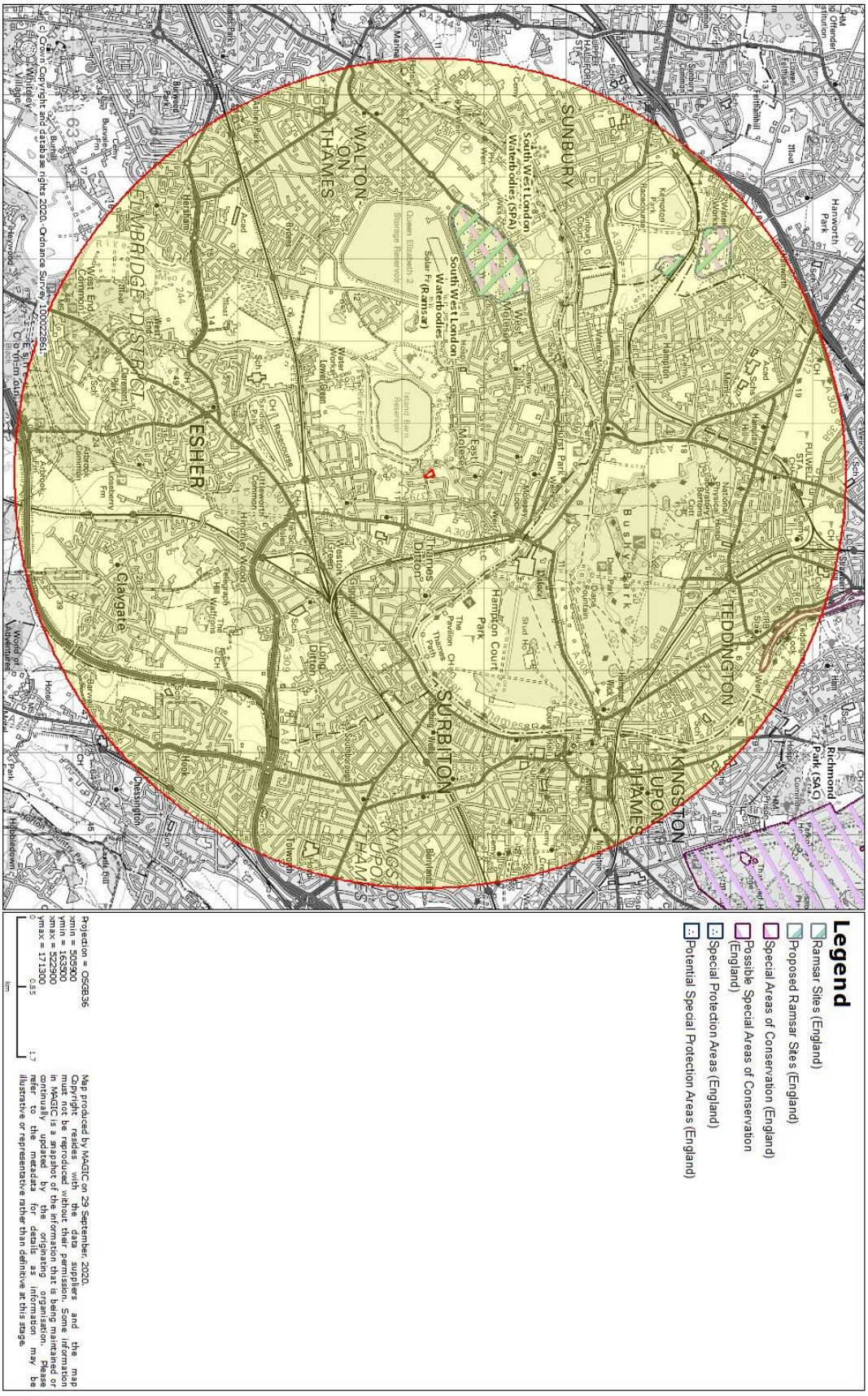
Ramsar Sites (England)
Name
SOUTH WEST LONDON WATERBODIES
Reference
UK11065
Hectares
830.26
Special Areas of Conservation (England)
Name
SOUTH WEST LONDON WATERBODIES
Reference
UK9012171
Hectares
830.26
Hyperlink
http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?eucode=UK9012171
Special Protection Areas (England)
Name
SOUTH WEST LONDON WATERBODIES
Reference
UK9012171
Hectares
830.26
Name
SOUTH WEST LONDON WATERBODIES
Reference
UK9012171
Hectares
830.26
Proposed Ramsar Sites (England)
No Features found
Possible Special Areas of Conservation (England)
No Features found
Potential Special Protection Areas (England)
No Features found

MAGIC

UK Statutory Site Search within 2 km Radius

MAGIC

European Statutory Site Search within 5 km Radius



APPENDIX 2

Overview of Relevant Species Specific Legislation

Bats
Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

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

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

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

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

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

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

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

The following bat species are Species of Principal Importance for Nature Conservation in England: Barbastelle Bat *Barbastella barbastellus*, Bechstein's Bat *Myotis bechsteinii*, Noctule Bat *Nyctalus noctula*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Brown Long-eared Bat *Plecotus auritus*, Greater Horseshoe Bat *Rhinolophus ferrumequinum* and Lesser Horseshoe Bat *Rhinolophus hipposideros.*

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

- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.

- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

A badger sett is defined in the legislation as:

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

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

Badger sett interference can result from a multitude of operations including excavation and coring, even if there is no direct damage to the sett, such as through the disturbance of badgers whilst occupying the sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England[30]. In England a licence must be obtained from Natural England before any interference with a badger sett occurs.

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

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

Otter
The otter benefits from world-wide protection under Appendix I of the Convention on International Trade in Endangered Species of Wild Flora and Fauna. It also receives European protection under Appendix II of the Bern Convention and Annexes II and IV of the EU Habitats Directive 94/43/EEC, which is transposed into UK Law by means of The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017).

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill an otter;
- deliberately disturb otters; or
- damage or destroy a breeding site or resting place.

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

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

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

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

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

Amphibians
Common frogs, common toad, smooth newt and palmate newt are protected in Britain under Schedule 5 of the Wildlife and Countryside Act (1981, as amended) with respect to sale only. They are also listed under Annex III of the Bern Convention 1979. Any exploitation of wild fauna specified in Appendix III shall be regulated in order to keep the populations out of danger. The convention seeks to prohibit the use of all indiscriminate means of capture and killing and the use of all means capable of causing local disappearance of, or serious disturbance to, populations of a species.

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

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

Sand lizard and smooth snake are protected under the Wildlife and Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 which together make it illegal to kill, injure, capture, handle or disturb these animals. Places they use for breeding, resting, shelter and protection are protected from being damaged or destroyed. It is also illegal to obstruct these animals from using such areas.

In England and Wales, this Act has been amended by the Countryside and Rights of Way Act 2000 (CRoW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions and increases penalties. All native reptiles are Species of Principal Importance for Nature Conservation in England.

The reader is referred to the original legislation for the definitive interpretation.

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

English Nature (2004) has stated that:

Reptiles are likely to be threatened, and the law potentially breached, by activities such as the following:

- *Archaeological and geotechnical investigations*
- *Clearing land, installing site offices or digging foundations*
- *Cutting vegetation to a low height*
- *Laying pipelines or installing other services*
- *Driving machinery over sensitive areas*
- *Storing construction materials in sensitive areas*
- *Removing rubble, wood piles and other debris.*

In general English Nature would expect reasonable avoidance to include measures such as altering development layouts to avoid key areas, as well as capture and exclusion of reptiles.

For sand lizards and smooth snakes, licences may be issued for some activities (such as disturbance and capture) that would otherwise be prohibited.

Stag beetle

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

Birds

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

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

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

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

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

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

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