APPENDIX 13.1
PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

Stag Brewery, Mortlake

Preliminary Ecological Appraisal

For Reselton Properties

March 2022

Client Name:	Reselton Properties Limited
Document Reference:	WIE18761-103-1-2-4-PEA
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Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS OHSAS 18001:2007)

Issue	Date	Prepared by	Checked by	Approved by
Final	February 2022	Lee Mantle Ecologist	Sebastian Fitzgerald Principal Ecologist	Steve Brindle Associate Director

Comments

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1. Introduction

1.1. This Preliminary Ecological Appraisal (PEA) has been prepared by Waterman Infrastructure & Environment Ltd (Waterman) on behalf of Reselton Properties Limited (the "Applicant") in support of two linked planning applications ("the Applications") for the comprehensive redevelopment of the former Stag Brewery Site in Mortlake ("the Site") within the London Borough of Richmond upon Thames (LBRuT).

1.2. The Site (**Figure 1**) is centred on Ordnance Survey Grid Reference TQ 204 760 and is bounded by Lower Richmond Road to the south, the River Thames and the Thames Bank to the north, Williams Lane to the east and Bulls Alley (off Mortlake High Street) to the west. The Site is bisected by Ship Lane. The Site currently comprises a mixture of large-scale industrial buildings and structures, large areas of hardstanding and playing fields.

Historical Ecological Survey Work

1.3. Historical ecological surveys were undertaken in 2016 and 2017 to accompany three separate planning applications for the Site, which were submitted to the London Borough of Richmond-Upon-Thames (LBRuT) in 2018 (ref. 18/0547/FUL, 18/0548/FUL and 18/0549/FUL) as detailed below:

- Application A – hybrid planning application for comprehensive mixed-use redevelopment of the former Stag Brewery site consisting of:
    i. Land to the east of Ship Lane applied for in detail (referred to as 'Development Area 1' throughout); and
    ii. Land to the west of Ship Lane (excluding the school) applied for in outline (referred to as 'Development Area 2' throughout).
- Application B – detailed planning application for the school (on land to the west of Ship Lane).
- Application C – highways and landscape works at Chalkers Corner.

1.4. The ecological survey work in support of the LBRuT planning applications detailed above comprised an initial PEA (ref. WIE10667-100-R-1-3-1-PEA). Based on the results of this PEA further surveys as detailed in a Protected Species Report (PSR) (ref. WIE10667-100-R-7-3-1-PSR) were also undertaken between 2016 and 2017.

1.5. Following the Applicant submitting revisions to those applications to the Greater London Authority (GLA) in 2020 (ref. 4172 (Application A), 4172a (Application B) 4172b (Application C - withdrawn)) ecological survey works comprising an updated PEA (ref. WIE15582-102_R_1_2_3_PEA) together with further update surveys as detailed in a Protected Species Report (ref. WIE15582-102-R-2-3-1-PSR) were also undertaken in 2019.

1.6. A summary of all the historical ecological survey work undertaken in support of the above planning applications is presented in **Table 1**.

Table 1: Historical Ecological Survey Work

Planning Application Ref	Ecological Survey Work Undertaken	Date of Assessment and Reporting
LBRuT -18/0547/FUL, 18/0548/FUL, and 18/0549/FUL (the 2018 Planning Applications)	PEA (ref. WIE10667-100-R-1-3-1-PEA) - comprising an ecological data search, 'Extended' Phase 1 Habitat Survey, a search for common invasive floral species, and a Preliminary Roost Assessment (PRA) (ground based and external only) of buildings and trees for bats.	PEA components undertaken between January 2016 to April 2017 with reporting finalised in February 2018.
	PSR (ref. WIE10667-100-R-7-3-1-PSR) - comprising a Preliminary Roost Assessment (ground based and external only) of accessible buildings, evening emergence and pre-dawn re-entry bat surveys at buildings and trees, bat activity and automated surveys, and breeding bird surveys (specifically for black redstart *Phoenicurus ochruros*)	PSR components undertaken between May 2016 to September 2017 with reporting finalised in February 2018.
	PRA (ref. WIE10667-103-BN-21-2-LM) – comprising an external and endoscope inspection of the northern boundary wall.	PRA the northern boundary wall undertaken in October 2018 with reporting also finalised in October 2018.
GLA - ref 4172, 4172a, and 4172b (withdrawn) (the 2020 Planning Applications)	PEA (ref. WIE15582-102-R-1-2-3-PEA) - comprising an ecological data search, 'Extended' Phase 1 Habitat Survey, a search for common invasive floral species, and a PRA (ground based and external only) of buildings and trees.	PEA components undertaken in July 2019 with reporting finalised in May 2020.
	PSR (ref. WIE15582-102-R-2-3-1-PSR) - comprising a PRA of the northern boundary wall (external and endoscope inspection of), evening emergence and pre-dawn re-entry bat surveys at buildings and trees, bat activity and automated surveys.	PSR components undertaken between July 2019 to September 2019 with reporting finalised in May 2020.

Proposed Development

1.7. The current proposals for the Site (hereafter referred to as the proposed Development) are for a redevelopment that will provide homes (including affordable homes), complementary commercial uses, community facilities, a new secondary school alongside new open and green spaces throughout. Associated highway improvements are also proposed, which include works at Chalkers Corner junction.

1.8. The Applications seek planning permission for:

Application A:

"*Hybrid application to include the demolition of existing buildings to allow for comprehensive phased redevelopment of the site:*

Planning permission is sought in detail for works to the east side of Ship Lane which comprise:

a) Demolition of existing buildings (except the Maltings and the façade of the Bottling Plant and former Hotel), walls, associated structures, site clearance and groundworks

b) Alterations and extensions to existing buildings and erection of buildings varying in height from 3 to 9 storeys plus a basement of one to two storeys below ground

c) Residential apartments

d) Flexible use floorspace for:

i. Retail, financial and professional services, café/restaurant and drinking establishment uses

ii. Offices

iii. Non-residential institutions and community use

iv. Boathouse

e) Hotel / public house with accommodation

f) Cinema

g) Offices

h) New pedestrian, vehicle and cycle accesses and internal routes, and associated highway works

i) Provision of on-site cycle, vehicle and servicing parking at surface and basement level

j) Provision of public open space, amenity and play space and landscaping

k) Flood defence and towpath works

l) Installation of plant and energy equipment

Planning permission is also sought in outline with all matters reserved for works to the west of Ship Lane which comprise:

m) The erection of a single storey basement and buildings varying in height from 3 to 8 storeys

n) Residential development

o) *Provision of on-site cycle, vehicle and servicing parking*

p) *Provision of public open space, amenity and play space and landscaping*

q) *New pedestrian, vehicle and cycle accesses and internal routes, and associated highways works"*

Application B:

"Detailed planning permission for the erection of a three-storey building to provide a new secondary school with sixth form; sports pitch with floodlighting, external MUGA and play space; and associated external works including landscaping, car and cycle parking, new access routes and other associated works"

Together Applications A and B described above, including the proposed Section 278 Highways works are the 'Development'.

1.9. Full details and scope of the detailed planning application is detailed in the submitted Planning Statement, prepared by Gerald Eve LLP.

Objectives of this PEA

1.10. As detailed within industry guidance[1], a PEA should be used to identify any ecological constraints and opportunities at a proposed development site. The results of the PEA should be used to inform the emerging scheme design process and suggest recommendations for ecological mitigation, compensation and enhancement measures. The purpose of this report is to:

- Identify the potential for Important Ecological Features (IEFs) to be present within the identified Zone of Influence (ZoI) and any resulting constraints or significant ecological effects to the Development;
- Allow any further ecological surveys/assessments needed to inform any subsequent planning application(s) to be identified and appropriately designed with relevant consultees;
- Inform master-planning to allow significant ecological effects to be avoided or minimised wherever possible;
- Allow likely mitigation and enhancement measures (in line with the Mitigation Hierarchy[2]) to be developed; and
- Form a basis for agreeing the scope of the Protected Species Report and Ecology Chapter in support of the EIA with relevant consultees, as/if required.

[1] CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal.* Technical Guidance Series. Chartered Institute of Ecology and Environmental Management, Winchester.

[2] BS 42020:2013 Clause 5.2

2. Methodology

Scope of the Assessment

2.1. This section summarises the methodologies used for undertaking the PEA based on current guidelines. This PEA includes an ecological data search, UK Habitat Classification (UK Hab) field survey, a PRA at buildings, walls and trees (external and ground based), and survey for common invasive plant species.

2.2. This Report provides a preliminary review of the ecological conditions recorded on Site, and in the surrounding area. Recommendations for further surveys are made where required. It should be noted that this report has been updated since the recommendations were made, and the additional survey works are reported in a Protected Species Report, that should be read alongside this Preliminary Ecological Assessment.

Zone of Influence and Important Ecological Features

2.3. The ZoI is the area(s) over which ecological features may be impacted by the biophysical changes caused by the proposed Development. Based on the scale and nature of the Development, it has been assessed that the ZoI arising from these works is unlikely to be greater than those distances used for the ecological data search (see below).

2.1. The field survey area comprised primarily the Site. However, adjacent land was viewed where possible from the Site and aerial photography for the area has also been reviewed[3].

2.2. As referenced in industry guidance[4], potential IEFs that are anticipated to be affected by the Development have been identified and recommended for further assessment. In this report, designated sites, habitats and species that fall into the categories in **Table 2** have been identified as being ecologically important and / or legally protected / controlled and form the scope of data gathering during the data search and Site surveys.

Table 2: Important Ecological Feature Categories

Geographical Level of Importance	Category
International	Statutory designated sites: Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites (including candidate SACs and proposed SACs, SPAs and Ramsar sites). A viable area of a habitat type listed in Annex I of the Habitats Directive, or smaller areas of such habitat essential to maintain the viability of a larger whole. Regularly occurring populations of a species, large enough in number to be of **international importance** where: • The loss or degradation of these populations would adversely affect the conservation status or distribution of the species at this geographic scale; or • The population forms a critical part of a wider population at an international level; or • The species is at a critical phase of its life cycle at this scale.
National	Statutory designated sites: Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR);

[4] CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal.* Technical Guidance Series. Chartered Institute of Ecology and Environmental Management, Winchester

Geographical Level of Importance	Category
	Ancient Woodland; A viable area of a Habitat of Principal Importance as listed on Section 41 of the Natural Environments Rural Communities (NERC) Act 2006 or smaller areas of such habitat essential to maintain the viability of a larger whole. Resident, or regularly occurring, populations of species, significant at an International, European, UK or National level where: • The loss of these populations would adversely affect the conservation status or distribution of the species at a **national** level; or • The population forms a critical part of a wider population at this scale; or The species is at a critical phase of its life cycle at this scale.
Regional/County	Local Nature Reserves (LNR). Non-statutory designated wildlife sites of county value (i.e. Site of Metropolitan Importance (SMI) for London). Areas which meet the published selection criteria for county site designations, but which are not themselves designated as such. Species – as per National level but where the loss of these populations would negatively affect the conservation status or distribution of the species at a **county** level and where populations/species are critical at the **county** scale. This may include locally significant populations of a species listed in a County BAP on account of its regional rarity or localisation (i.e. London Environment Strategy (LES) Priority Habitats and Species).
District/Borough	Non-statutory designated wildlife sites of district/borough value (i.e. Site of Borough Grade 1 and Grade 2 Importance (SBI) for London). Species – as per County level but where the loss of these populations would negatively affect the conservation status or distribution of the species at a **district** level and where populations/species are critical at the **district** scale. This may include locally significant populations of a species listed in a District/Borough BAP on account of its regional rarity or localisation (i.e. Richmond Biodiversity Action Plan (RBAP) habitats and species).
Local	Non statutory designated sites of local value (i.e. Site of Local Importance for Nature Conservation (SLI) for London). Areas of habitat considered to appreciably enrich the habitat resource within the local context (e.g. species-rich hedgerows, ponds). It may also include sites that retain other elements of semi-natural vegetation that due to their size, quality or the wide distribution of such habitats within the local area are not considered for local designations. Populations/assemblages of species that appreciably enrich the biodiversity resource within the local context. Populations of county level important species that are not threatened or rare in the county and are not integral to maintaining those populations.
Site	Habitats and/or species that are of limited ecological importance due to their size, species composition or other factors. Areas of heavily modified or managed vegetation of low species diversity. Low or moderate numbers of common and widespread species.
Legislation	Species included on Schedules II and V of The Conservation of Habitats and Species Regulations 2017 (as amended); Species included on Schedules 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended), excluding species that are only protected in relation to their sale (Section 9[5] and 13[2]); and Badgers, which are protected under the Protection of Badgers Act 1992.

Ecological Data Search

2.3. The aim of the ecological data search is to collate existing ecological records for the Site and adjacent areas. Obtaining existing records is an important part of the evaluation process, as it provides additional information that may not be apparent during a site survey.

2.4. The ecological data search comprised;

- A review of records provided by the Greenspace Information for Greater London (GiGL) and a search on the Multi-Agency Geographic Information for the Countryside (MAGIC)[5] website of important statutory and non-statutory sites designated (including ancient woodland) as referred to in **Table 2** for their nature conservation value within 2km of the Site (as extended to 10km for International and European designated sites).
- A review of records provided by GIGL of protected species, species listed on the LES, RBAP, and / or other notable fauna and flora within 1km of the Site.
- A review of data on the MAGIC website of Habitats of Principle Importance (HoPI) and Species of Principle Importance (SoPI) listed under Section 41 (S41) of the NERC Act 2006, as well as Priority Habitats on the RBAP.
- A review of OS mapping and aerial photography along with the previous ecological survey work undertaken at the Site by Waterman for the planning applications as referenced in **Table 1.**

2.5. Given the scale of the proposed Development works, along with the habitats recorded at the Site, it was considered that undertaking a search of records within 2km (as extended to 10km for International and European designated sites) of the Site would provide sufficient data to inform this PEA.

2.6. The ecological data search findings for designated sites, are presented in **Figure 2**.

Field Survey

2.7. A UK Hab[1] field survey of the Site was undertaken on 31st August 2021 by Lee Mantle MCIEEM (CV provided in **Appendix B**). UK Hab supersedes previous systems such as Phase 1[6], allowing for direct interpretation of baseline habitat survey data into Priority Habitat Types and Annex I Habitat[7] types.

2.8. A fine scale Minimum Mapping Unit (MMU) was deemed an appropriate level for mapping habitats i.e. a habitat area was only mapped if the habitat was greater than 25m^2 or 5m in length.

2.9. Each habitat was assigned a Primary Code of the Professional Edition of the UK Hab Field Key[8] at a minimum of the Level 3 hierarchy, using the UK Hab Habitat Definitions[9] for reference. Secondary Codes (SC) were then applied to provide additional context to the habitats, with no more than six Secondary Codes being assigned.

2.10. All habitat types within the Site were mapped (**Figure 3**).

2.11. The field survey methodologies were 'Extended' by undertaking an assessment of the Site to support protected and notable faunal species as detailed in the Guidelines for Baseline Ecological

[5] Magic.defra.gov.uk. (2014). *Magic*. [online] Available at: http://magic.defra.gov.uk/ [Accessed January 2022].
[6] JNCC. (2010). *Handbook for Phase 1 Habitat Survey*. Nature Conservancy Council
[7] Habitats listed in Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora.
[8] UK Habitat Classification Working Group (2018*). UK Habitat Field Key*
[9] UK Habitat Classification Working Group (2018*). UK Habitat Classification Definitions V1.0 at https://ukhab.org/ukhab-documentation/*

Assessment[10] (IEMA, 1995). The field survey of the Site was conducted under conditions deemed appropriate for the survey - dry and sunny.

Habitat Condition Assessment

2.12. As part of the field survey, and to inform the Biodiversity Net Gain assessment for the proposed Development, a condition assessment of those semi-natural habitats has been undertaken in accordance with the Defra 3.0 metric Technical Supplement[11].

Invasive Plant Species Assessment

2.13. The list of invasive plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is extensive and these plants are found in a range of different habitats, including aquatic habitats. The Field Survey checked for the presence of common invasive species including Japanese knotweed *Reynoutria japonica*, giant knotweed *Fallopia sachalinensis*, hybrid knotweed *Fallopia baldschuanica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

2.14. Invasive species listed on the London Invasive Species Initiative (LISI) were also searched for. The field survey checked for LISI invasive species including cotoneaster *Cotoneaster sp.*, rhododendron *Rhododendron ferrugineum*, buddleia *Buddleija davidii*, and tree of Heaven *Ailanthus altissima.*

Preliminary Bat Roost Inspections

2.15. As part of the PRA, an external ground-based building/wall and tree assessment (where access was provided – see limitations section) for bats was undertaken at the Site during the Field survey. The survey was undertaken by Lee Mantle MCIEEM (CV provided in **Appendix B**) who holds a Natural England Class 2 Licence (2015-14934-CLS-CLS) for all bat species and counties of England. The survey was based on current best practice guidelines[12].

2.16. An assessment of each building / wall and tree was made in terms of its suitability to support roosting bats. The survey consisted of a visual inspection (including the use of binoculars and torches where required) of the exterior of the building / structure and tree for suitable roosting features and evidence of bat use (e.g. droppings, scratch marks, staining and sightings).

2.17. A number of factors were considered when assigning suitability including proximity to foraging habitats or cover; and potential for disturbance, such as high levels of lighting. Notes were made relating to relevant characteristics of features providing potential access points and roosting opportunities for bats.

Table 3: Adapted Building and Tree Assessment Guidelines

Assigned Bat Roosting Potential	Description
Known or confirmed roost	Evidence of roosting bats within the building/wall/tree.
High	A building/wall/tree with one or more Potential Roost Features (PRFs) that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to

[10] IEA (1995). Guidelines of baseline ecological assessment.
[11] Panks et al. (2021): Biodiversity metric 3.0: Auditing and accounting for biodiversity – User Guide. Natural England.
[12] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

Assigned Bat Roosting Potential	Description
	their size, shelter, protection, conditions and surrounding habitat.
Moderate	A building/wall/tree with one or more PRFs that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only).
Low	A building/wall with one or more PRF that could be used by individual bats opportunistically. However, these PRFs do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.
Negligible	Negligible habitat features at building/wall/tree likely to be used by roosting bats.

Important Ecological Feature Assessment

2.18. Data gathered as part of this update PEA has been used to identify potential IEFs (i.e. designated sites, habitats and species as listed in **Table 2**) that are anticipated to be affected by the Development within the ZoI (up to 2km from the Site, unless stated).

2.19. It should be noted that not all the IEFs within the ZoI have the potential to be significantly affected by the proposed Development, or the legislation pertaining to them to be contravened. Therefore, where features are unlikely to be affected by the proposed Development, or where any effects that impact IEFs are unlikely to be significant[13], for the reasons listed below, such features have been scoped out of the assessment:

No pathway of effect has been identified, for example the feature is sufficient distance from the Site or there is the presence of a barrier between its location and the Site[14]; or

The feature is of insufficient biodiversity conservation value within the ZoI, due to its quality, extent or population size[15].

2.20. For all remaining features scoped into the assessment, the pathway of effect (for example habitat loss, lighting, noise) and potential impact of this on the feature have been identified.

Constraints and Limitations

2.21. At the time of survey, no internal PRA was possible at the buildings / structures due to the presence of Asbestos Containing Materials (ACMs). However, this is not assessed to be a significant constraint given the historical knowledge of the Site on bats from the extensive survey work undertaken in 2016 / 2017 and 2019.

[13] Positive or negative effects on ecological features that have the potential to influence a planning decision are considered to be significant.

[14] Whilst the ZoI of potential effects arising from the development is up to 2km from the Site, the ecological ZoI (within which the feature could be affected) for each feature may vary and for some features may be much less, e.g. great crested newts generally move up to a maximum of 500m from a breeding pond and movement can be restricted by barriers such as busy roads and fast flowing rivers

[15] E.g. whilst a Priority Species such as skylark *Alauda arvensis* or house sparrow *Passer domesticus* is of National importance (**Table 1 and 2**), the impact of development on individual or a small population of such a species, which are generally commonly found, is unlikely to be assessed as significant

2.22. All other contractors, designers and the client should be aware of the following: The design recommendations within this report are assessed to be the most effective ecological solution at this stage of the project. No other pre-construction information has been provided, obtained or referred to during the preparation of this report (including, but not limited to, services information, geotechnical reports and ordnance reports). In deciding whether and how to progress with this project, it will be incumbent upon the client, designers and contractors to obtain and refer to relevant pre-construction and maintenance information, as required by the Construction (Design and Management) Regulations to ensure compliance.

3. Results

Desk Study

Statutory Designated Sites

3.1. The Site is not located within or adjacent to any statutory designated sites however several such sites are located within 2km of the Site itself, as detailed in **Table 4** below.

3.2. The nearest statutory designated site is Richmond Park SAC, NNR and SSSI located approximately 1.3km south of the Site. The Site also lies within a SSSI impact risk zone for Richmond Park, however, the proposed Development type does not fall within the categories listed which trigger LPA consultation with Natural England regarding likely risks of impacts to the SSSI from a proposed development[16]. The Site also lies within 3.5km of Wimbledon Common SAC to the south west of the Site.

Non-Statutory Designated Sites

3.3. The Site is not subject to any non-statutory designations, however, twenty-two such sites are present with 2km of the Site. The closest of these., that is, those within 1km of the Site are detailed in **Table 4**. It should be noted that the distances provided in **Table 4** are taken from the Site boundary and therefore are approximate.

Table 4: Summary of Desk Study Records of Statutory and Non-statutory Designated Sites

Site Name	Designation	Approximate Distance from Site (km)	Description / Citation
River Thames and Tidal Tributaries	Non-statutory SMI	Adjacent to the northern boundary of the Site.	The River Thames and the tidal sections of creeks and rivers which flow into it comprise a number of valuable habitats not found elsewhere in London. The mud-flats, shingle beach, inter-tidal vegetation, islands and river channel itself support many species of fish and birds and plants, creating a wildlife corridor running right across the capital.
North Sheen and Mortlake Cemeteries	Non-statutory SLI	0.14km north-west of the Site.	These extensive cemeteries, which are bisected by Mortlake Road, are among the largest in the LBRuT. They are both in active use and managed relatively intensively, with most of the grasslands being mown frequently. They have considerable wildlife interest due to their large size and the diversity of plants and animals that they support.
Old Mortlake Burial Ground	Non-statutory SLI	0.43km south-east of the Site.	This small cemetery is quite intensively managed, but its grasslands contain a reasonable diversity of wildflowers.
Kew Meadow Path	Non-statutory SBI Grade 2	0.5km north-west of the Site.	This public footpath, totally unremarkable in appearance, is one of only a handful of British sites for the two-lipped door snail *Alinda biplicata*.
Dukes Hollow	Statutory LNR and non-statutory SMI	0.65km north-east of the Site.	The Site of a former boathouse burnt down in the 1970's, this site has developed into one of the most important wildlife refuges in urban west London, regularly inundated by the tidal Thames and supporting an unusual range of species. The most

[16] https://magic.defra.gov.uk/MagicMap.aspx

Site Name	Designation	Approximate Distance from Site (km)	Description / Citation
			significant habitats include wet woodland and a rich intertidal zone containing a number of locally scarce waterside plants, birds and molluscs.
Hounslow Loop Railsides	Non-statutory SBI Grade 2	0.71km north-east of the Site	Rail sides with a mix of grassland, scrub and tall herbs, forming an important green corridor.
Beverley Brook in Wandsworth	Non-statutory SBI Grade 1	0.91km south-east of the Site	A wildlife rich brook in the west of Wandsworth borough forming a valuable green corridor.
Pensford Field	Non-statutory SLI	0.92km north-west of the Site	A community nature area with a colourful meadow and a pond.
Bank of England Sports Club Grounds	Non-statutory SBI grade 2	0.98km south-east	Sports pitches with an area of woodland and some scattered trees, the most important part of the site for nature conservation is the secondary woodland on its eastern edge.

Protected, BAP and Other Notable Habitats

3.4. No protected, LES, RBAP or other notable habitats as listed on the under Section 41 (S41) of the NERC Act 2006 are present on Site, however the River Thames (notable habitat under LES, RBAP and S41) is present immediately adjacent to the north of the Site. There is no ancient woodland within 2km of the Site.

Protected, BAP and Other Notable Species

3.5. Records of legally protected or otherwise notable species of flora and fauna within 2km of the Site were provided by GIGL. A summary of the most significant results of relevance to the Site are provided in **Table 5**. Full results can be obtained from the data providers but cannot be presented in this report due to copyright. For some records only a four-figure grid reference has been provided by GIGL and therefore 'within 2km' has been stated in **Table 5**. It should be noted that the distances provided in **Table 5** are taken from the Site boundary and are, therefore, approximate.

Table 5: Summary of Desk Study Records of Flora and Fauna

Species	Category of Importance*	Number of Records	Date of most Recent Record	Location of records relevant to the study area (km)
Amphibians				
Common toad *Bufo bufo*	WCA, S41	16	14/08/2016	0.47 west
Common Frog *Rana temporaria*	WCA	321	08/03/2019	0.29 south east
Reptiles				
Slow-worm *Anguis fragilis*	WCA, S41	1	24/05/2016	1.10 south east
Grass Snake *Natrix helvetica*	WCA, S41	1	06/06/2005	1.60 south
Common Lizard *Zootoca vivipara*	WCA, S41	3	19/05/2017	1.68 south

Species	Category of Importance*	Number of Records	Date of most Recent Record	Location of records relevant to the study area (km)
Bats				
Serotine *Eptesicus serotinus*	Hab Regs, WCA, S41, LES	12	16/08/2017	1.01 north east
Myotis *Myotis*	Hab Regs, WCA, S41, LES	4	May 2011	1.56 north east
Daubenton's *Myotis daubentonii*	Hab Regs, WCA, S41, LES	60	14/08/2020	1.46 south east
Nyctalus species *Nyctalus*	Hab Regs WCA S41, LES	2	01/10/2019	1.69 east
Leisler's *Nyctalus leisleri*	Hab Regs WCA S41, LES	15	25/09/2019	1.64 north
Noctule *Nyctalus noctula*	Hab Regs WCA S41, LES	50	21/09/2020	0.64 north west
Pipistrelle species *Pipistrellus*	Hab Regs WCA S41, LES	49	25/09/2019	0.35 north
Nathusius's Pipistrelle *Pipistrellus nathusii*	Hab Regs WCA S41, LES	10	27/09/2019	0.23 north east
Common Pipistrelle *Pipistrellus pipistrellus*	Hab Regs WCA S41, LES, RBAP	76	21/09/2020	0.57 east
Soprano Pipistrelle *Pipistrellus pygmaeus*	Hab Regs WCA S41, LES	119	21/09/2020	0.22 south east
Brown Long-eared *Plecotus auritus*	Hab Regs WCA S41, LES	6	25/09/2019	1.18 south west
Birds				
Lesser Redpoll *Acanthis cabaret*	WCA, S41, Red, LES	18	22/10/2017	0.65 north east
Common Sandpiper *Actitis hypoleucos*	WCA, LES	8	25/09/2016	1.93 north east
Eurasian Skylark *Alauda arvensis*	WCA, S41, Red, LES, RBAP	45	22/10/2017	0.98 north east
Kingfisher *Icedo atthis*	WCA, LES	24	30/09/2017	1.49 north east
White-fronted	WCA, Red	1	28/12/1986	1.86 east

Species	Category of Importance*	Number of Records	Date of most Recent Record	Location of records relevant to the study area (km)
Goose *Anser albifrons*				
Tree Pipit *Anthus trivialis*	WCA, S41, Red	1	26/08/2016	1.59 east
Swift *Apus apus*	WCA, LES	113	05/07/2020	0.21 south west
Pochard *Aythya ferina*	WCA, Red, LES	52	11/03/2020	1.59 east
Scaup *Aythya marila*	WCA, S41, Red	1	12/02/2012	1.96 north east
Eurasian Bittern *Botaurus stellaris*	WCA S41, LES, RBAP	2	09/03/2017	1.65 east
Common Ringed Plover *Charadrius hiaticula*	WCA, Red, LES	2	05/05/2015	1.95 north east
Western Marsh Harrier *Circus aeruginosus*	WCA	1	02/10/2016	2.0 north east
Hen Harrier *Circus cyaneus*	WCA, S41, Red	1	02/10/2016	2.0 north east
Cuckoo *Cuculus canorus*	WCA, S41, Red, LES	3	18/08/2013	0.98 east
Lesser Spotted Woodpecker *Dryobates minor*	WCA, Red, LES	23	15/03/2017	1.57 south
Whooper Swan *Cygnus cygnus*	WCA	1	22/11/2015	1.95 east
House Martin *Delichon urbicum*	WCA, LES	25	29/09/2017	0.98 north east
Common Reed Bunting *Emberiza schoeniclus*	WCA S41, RBAP	11	15/04/2020	1.85 east
European Herring Gull *Larus argentatus*	WCA Red	23	11/03/2020	0.57 west
Linnet *Linaria cannabina*	WCA Red, LES, RBAP	2	14/10/2017	1.85 east
Red kite *Milvus milvus*	WCA	2	26/02/2017	1.92 north east
Grey wagtail *Motacilla cinerea*	WCA Red	29	02/09/2019	0.98 east

Species	Category of Importance*	Number of Records	Date of most Recent Record	Location of records relevant to the study area (km)
Western Osprey *Pandion haliaetus*	WCA	3	02/10/2016	1.15 west
House Sparrow *Passer domesticus*	WCA, S41 Red, LES	360	08/05/2017	0.98 east
Common Tern *Sterna hirundo*	WCA	32	01/05/2020	1.5 north west
Lapwing *Vanellus vanellus*	WCA S41 Red, LES	8	02/01/2017	0.60 south east
Tawny Owl *Strix aluco*	WCA, LES	40	15/04/2021	0.65 west
Song Thrush *Turdus philomelos*	WCA, Red, LES, RBAP	318	11/03/2020	0.29 south east
Starling *Sturnus vulgaris*	WCA, Red, LES	37	14/11/2017	0.25 west
Ring Ouzel *Turdus torquatus*	WCA S41 Red	2	23/10/2015	1.15 west
Fieldfare Turdus pilaris	WCA Red	28	14/11/2017	0.79 north east
Goshawk *Accipiter gentilis*	WCA	1	02/10/2016	Within 2km (confidential)
Peregrine *Falco peregrinus*	WCA, LES	5	02/10/2013	Within 2km (confidential)
Black Redstart *Phoenicurus ochruros*	WCA	3	18/03/1999	1.8km east
Mammals (not inc. Bats)				
West European Hedgehog *Erinaceus europaeus*	WCA S41 Red, LES	356	22/10/2020	1.74 south
Eurasian Badger *Meles meles*	PBA	18	13/10/2016	Within 2km (confidential)
Invertebrates				
Stag Beetle *Lucanus cervus*	Hab Regs S41, LES	13	03/06/2020	0.16km north
Small Heath *Coenonympha pamphilus*	S41, LES	42	31/12/2019	0.43km north west
Continental Swallowtail *Papilio machaon gorganus*	WCA, S41	1	31/12/2019	Within 2km (confidential)

Species	Category of Importance*	Number of Records	Date of most Recent Record	Location of records relevant to the study area (km)
White-letter Hairstreak *Satyrium w-album*	S41, LES	7	31/12/2019	Within 2km (confidential)
Brown Hairstreak *Thecla betulae*	S41, LES	4	31/12/2019	Within 2km (confidential)

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

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

S41 – Species of Principal Importance under The Natural Environment and Rural Communities Act 2006

LES - London Environment Strategy

RBAP – Richmond Biodiversity Action Plan

Red – Red list criteria (Bird of Conservation Concern)

PBA – Protection of Badgers Act 1992

Field Survey

Habitats

3.6. The following habitat types were identified on Site during the field survey, **Table 6** summarises the Primary Codes and labels used to categorise the habitats recorded.

Table 6: Summary of Habitat Types recorded on and directly adjacent to the Site

Ref.	Level 2 Code / Label	Level 3 Code / Label	Level 4 Code / Label (Priority Habitats marked with 'P')	Level 5 Code / Label	Secondary codes (SC)
1	u - urban	u1 – built up areas and gardens	u1b - developed land; sealed surface	u1b5 - buildings	97 – industrial/retail building
2				u1b6 - Other developed land	111 - road
3			u1c – artificial unvegetated, unsealed surface	N/A	17 – ruderal / ephemeral 80 - unmanaged
4			u1e – built linear features	N/A	68 – mortared wall 80 – unmanaged
5				N/A	69 - fence
6		N/A	N/A	N/A	48 – non-native 80 – unmanaged 1160 – introduced shrub
7		N/A	N/A	N/A	1170 - tree
8	g - grassland	g4 – modified grassland	N/A	N/A	64 – mown 66 – frequently mown

Ref.	Level 2 Code / Label	Level 3 Code / Label	Level 4 Code / Label (Priority Habitats marked with 'P')	Level 5 Code / Label	Secondary codes (SC)
					75 – active management 76 – recent management
9	h – heathland and shrub	h2- hedgerows	h2b- other hedgerows	N/A	17 – ruderals 48 – non-native 1160 – introduced shrub
10	w – woodland and forest	w1 – broadleaved mixed and yew woodland	w1g – other woodland; broadleaved	w1g6 – line of trees	76 – recent management

3.7. A summary description of the habitats is detailed below. The habitat descriptions should be read in conjunction with **Figure 3** and photographs (**Plates**) are presented in **Appendix C**.

Urban - u

1. Buildings - u1b5 (SC97)

3.8. Fifteen buildings are present within or directly adjacent to the Site (**Appendix D**). These buildings comprise industrial warehouses and storage buildings associated with redundant brewing processes, offices, security offices and a club house. These buildings were being used for filming purposes at the time of survey. An office building and a pub located immediately adjacent to the Site boundary (B14 and B15) were also included in the survey.

3.9. This habitat type is of very low distinctiveness and does not require a condition assessment.

2. Hardstanding - u1b6 (SC111)

3.10. A large area of the Site comprises hardstanding around the buildings. This habitat type is of very low distinctiveness and does not require a condition assessment.

3.11. Small areas of ephemeral / tall ruderal vegetation have colonised cracked and disturbed areas of hardstanding (**Appendix C**, Plate 2). The species recorded within these areas include bristly ox-tongue *Helminthotheca echioides*, smooth sow-thistle *Sonchus oleraceus*, cleavers, wall barley, broad-leaved willow herb *Epilobium montanum*, Michaelmas daisy *Aster amellus*, spear thistle *Cirsium vulgare*, prickly lettuce *Lactuca serriola*, cocksfoot *Dactylis glomerata*, mugwort *Artemisia vulgaris*, knotgrass *Polygonum sp*, greater plantain *Plantago major*, wood avens *Geum urbanum*, red fescue *Festuca rubra*, common ragwort *Jacobaea vulgaris*, broad leaved dock *Rumex obtusifolius*, common dandelion *Taraxcum officinale*, common hogweed *Heracleum sphondylium*, common nettle *Urtica diocia*, perennial rye-grass *Lolium perenne*, herb Robert *Geranium robertianum* and Canadian fleabane *Erigeron canadensis*.

3.12. This habitat is too small in area to be assigned a condition assessment.

3. Artificial unvegetated, unsealed surface - u1c (SC17, 80)

3.13. Bare ground, predominantly gravel, is present along the footpath (towpath) at the northern boundary of the Site adjacent to the River Thames. This habitat type is of very low distinctiveness and does not require a condition assessment.

4. Wall - u1e (SC68, 80)

3.14. Several free-standing walls are present within, and forming boundaries, of the Site (**Appendix C**, Plate 5 and 6). All walls are constructed from brick. This habitat type does not require a condition assessment.

3.15. Several climbing species were also recorded on Site, largely associated with the northern Site boundary. Species recorded include honeysuckle *Lonicera periclymenum*, ivy *Hedera helix*, and Virginia creeper *Parthenocissus quinquefolia*. The climbing plants are beginning to spread across features such as fencing due to lack of management. This habitat type does not require a condition assessment.

5. Fence - u1e (SC69)

3.16. A metal fence is present around Watney's Sports Ground playing fields. This habitat type does not require a condition assessment.

6. Ornamental Planting (SC 48, 80, 1160)

3.17. Several areas of ornamental planting are present across the Site within both raised and ground level planting beds. Formally managed ornamental planting is present at the base of B1 and adjacent to B7, with less formal areas which appear unmanaged present towards the north of the Site (**Appendix C**, Plate 3). Ornamental planting is also present at the boundary of Mortlake Green and within the area of the Site where highways works are proposed subject to S278. Species recorded include *Pyracantha sp*., spindle *Euonymus japonicas*, barberry *Berberis darwinii*, senecio sunshine *Brachyglottis sp*., holly *Ilex aquifolium*, Euonymus fortune, Mexican orange blossom *Choisya x dewitteana* 'Aztec Pearl', Cordyline *Cordyline sp*., spotted laurel *Aucus japonica*, red robin *Photinia x fraseri*, broom *Cytisus scioparius*., cotoneaster tree *Cotoneaster cornubia*, lilac *Syringa sp*., clematis *Clematis sp*., false castor oil *Fatsia japonica*, sweet bay *Laurus nobilis*, daffodil *Narcissus sp*. and laurel *Laurus sp*.

3.18. This habitat type is assessed to be of poor condition.

7. Urban Trees (SC 1170)

3.19. Urban trees are present across the Site (growing out of hardstanding and as separate from the line of trees habitats below), within the brewery component of the Site (**Appendix C**, Plate 4). These trees vary in age and comprise false acacia *Robinia pseudoacacia*, sycamore *Acer pseudoplatanus* London plane *Platanus x hispanica,* hornbeam, small-leaved lime *Tilia cordata,* wild cherry *Prunus avium,* whitebeam *Sorbus aria,* Himalayan birch *Betula utilis,* ash *Fraxinus excelsior*, elder *Sambucus nigra*, holly, Swedish whitebeam *Sorbus intermedia* and tree-of-heaven *Ailanthus altissima.* Some recent management in the form of pruning works is present at the trees.

3.20. This habitat type is assessed to be of moderate condition.

Grassland - g

8. Modified grassland - g4 (SC64, 66, 75, 76)

3.21. Amenity grassland is present at the Site within Watney's Sports Ground playing fields (**Appendix C**, Plate 1), Mortlake Green and the footpath / roadside verges at Chalkers Corner and along the boundary with the River Thames. The short length of sward (approximately 5cm) and limited species diversity recorded indicate that the amenity grassland is subject to an intensive mowing regime. The dominant species recorded was perennial rye grass *Lolium perenne* with species including common bent *Agrostis capillaris*, common daisy *Bellis perennis*, ribwort plantain *Plantago lanceolata*, red fescue *Festuca rubra*, white clover *Trifolium repens*, common catsear *Hypochaeris radicata*, yarrow *Achillea millefolium*, dove's-foot cranesbill *Geranium molle* and *Taraxacum sp* also present.

3.22. Where the edges of the amenity grassland have avoided the mowing regime, this has a longer sward and is more species rich with wall barley *Hordeum murinum* (dominant in areas), yarrow *Achillea millefolium*, red clover *Trifolium pratense*, meadow cranesbill *Geranium pratense*, common dandelion *Taraxacum officinale,* cleavers *Galium aparine*, false oat-grass *Arrhenatherum elatius*, Yorkshire fog *Holcus lanatus*, herb Robert *Geranium robertianum*, common mallow *Malva sylvestris*, wood avens *Geum urbanum*, broad-leaved dock *Rumex obtusifolius*, greater plantain *Plantago major* and common nettle *Urtica dioica* present.

3.23. This habitat type is assessed to be of poor condition.

Heathland and shrub - h

9. Hedgerows (h2b 17 48 1160)

3.24. A length (of approximately 90m) of privet *Ligustrum sp* hedge is present along the southern edge of Watney's Sports Ground playing fields. This hedge is approximately 1.5 m in height and 0.75 m wide and appears to be subject to a regular management regime.

3.25. This habitat type is assessed to be of good condition.

Woodland and forest - w

10. Line of Trees (w1g6 76)

3.26. Lines of trees are present within the Watney's Sports Ground playing fields, Chalkers Corner and lining the River Thames (**Appendix C**, Plate 8). These trees vary in age. Along the River Thames the tree species include ash *Fraxinus excelsior,* sycamore *Acer pseudoplatanus,* elder *Sambucus nigra,* goat willow *Salix caprea,* cherry *Prunus sp.,* elm *Ulmus sp. and* hawthorn *Crataegus monogyna.* Within Watney's sports Ground playing fields the tree species include wingnut *Pterocarya sp,* London Plane *Platanus x hispanica,* Indian Bean Tree *Catalpa bignonioides,* Manna Ash *Fraxinus ornus,* red horse chestnut *Aesculus x carnea,* pink hawthorn *Crataegus laevigatus 'Rosea Flore Pleno',* cockspur hawthorn *Crataegus crus-galli* and Ornamental Hawthorn *Crataegus sp.* At Chalkers Corner the tree species include red norway Maple *Acer platanoides 'Crimson King',* cherry *Prunus sp,* cider gum *Eucalyptus gunnii,* horse chestnut *Aesculus hippocastanum* and false acacia *Robina pseudoacacia.* Some recent management in the form of pruning works is present at the trees.

3.27. This habitat type is assessed to be of moderate condition.

Invasive Plant Species

3.28. Several species listed under Schedule 9 of the WCA (as amended) were returned within the data search with Virginia creeper, Himalayan balsam and false-acacia (for locations see Arboricultural Impact Assessment ref. WIE18671-102_R_6_1_2_AIA) recorded on Site at the time of during the field survey (**Appendix C**, Plate 6 and 7 and **Figure 3**). Virginia creeper appears to be spreading from adjacent properties rather than originating from the Site itself.

3.29. Furthermore, several floral species listed under the London Invasive Species Initiative, comprising butterfly bush, tree of heaven and false acacia were also recorded at the time of survey.

Adjacent Habitats

River Thames

3.30. The River Thames (a notable habitat under LES, RBAP and S41) is located adjacent to the north of the Site. The section of river that flows adjacent to the Site is tidal and the banks adjacent to the footpath are heavily modified being reinforced by stone and concrete, with parts of the footpath and Thames Bank becoming flooded at high tide. A draw dock also fronts on to the River Thames at the top of Ship Lane adjacent to the northern Site boundary.

Buildings

3.31. The Jolly Gardener's Pub (B14) and an office building (B15) are located immediately adjacent to the Site as shown on **Figure 3**.

Mortlake Green

3.32. Mortlake Green, an area of public open space, lies south of the Site (**Figure 3** and **Appendix C**, Plate 10). This green comprises amenity grassland, scattered trees, ornamental planting and hardstanding pathways. These habitats are well managed and regularly utilised by the local community.

Protected and Notable Fauna

3.33. As a result of the Field Survey and on review of the ecological data search, an assessment is made below on the potential of the Site to support:

- Bats;
- Birds; and
- Terrestrial Invertebrates.

3.34. The fauna descriptions provided below should be read in conjunction with **Figure 3** and plates presented in **Appendix C**.

Bats

3.35. Numerous bat species records were returned from the ecological data search from within 2km of the Site (**Table 5**) with the most recent records of Daubenton's, noctule, common and soprano pipistrelle in 2020.

Buildings

3.36. As part of the PRA sixteen buildings (B1-B13) are present within the Site and a further two buildings (B14 and B15) are located directly adjacent to the Site (it should be noted that building B6 is referred to on **Figure 3** multiple times so no reference exists to B16, B17 and B18). A

description of each building and its potential to support roosting bats is detailed in **Appendix D**. Each building has a reference code (B1-B15) with its location shown on **Figure 3**. However, to summarise;

Building B2, B4, B5, B6, B7, B11, B13, B14 (off Site) and B15 (off-Site) are assessed to offer negligible suitability to roosting bats;

Building B1, B9 and B12 are assessed to offer low suitability to support roosting bats; and

Building B3, B8 (previously recorded as a confirmed roost site in 2019) and B10 are assessed to offer moderate suitability to support roosting bats.

Southern Boundary wall

3.37. A description of the southern boundary wall that runs directly adjacent to Mortlake High Street (hereafter referred to as the 'southern boundary wall') (**Figure 3**) and its potential to support roosting bats as a result of the PRA is detailed in **Appendix E**. However, to summarise this section of the southern boundary wall is assessed to have moderate suitability to support roosting bats.

Northern boundary wall

3.38. A description of the wall that runs directly adjacent to the River Thames (hereafter referred to as the 'Northern boundary wall') (**Figure 3**) and its potential to support roosting bats as a result of the PRA is detailed in **Appendix F**. However, to summarise this section of the River Path all is assessed to have moderate suitability to support roosting bats.

Trees

3.39. As a result of the PRA, a total of 15 trees on and directly adjacent to the Site boundary, as identified on **Figure 3,** were assessed to have the potential to support roosting bats. A description of each tree and its potential to support roosting bats is detailed in **Appendix F**. Each tree has a reference code that is linked with the Arboricultural Impact Assessment issued by WIE in January 2022 (ref. WIE18671-102-R-6-1-2-AIA). However, to summarise;

- Tree T3, T10, T37, T73, T74, T84, T94 and T121 are assessed to offer low suitability to roosting bats; and
- Tree T43, T44, T67, T68, T71, T75, T78, T83, T157 and T321 are assessed to offer moderate suitability to support roosting bats.

3.40. No other trees during the PRA were noted to contain any PRFs suitable for supporting roosting bats.

Bat activity

3.41. The Site itself is considered to offer limited foraging and commuting opportunities for bats owing to the predominant habitat type comprising buildings and hardstanding. The trees around the periphery and within the north western corner of the Site offer some foraging and commuting opportunities for bats, and as such the Site is assessed to be of low suitability for foraging and commuting bats. The adjacent River Thames to the north, and Mortlake Green to the south of the Site are likely to provide a much greater foraging and commuting resource for the local bat population.

Birds

3.42. Numerous bird species records were returned from the ecological data search from within 2km of

the Site (refer to **Table 5**) with the most recent records of reed bunting, herring gul, common tern, swift, pochard and song thrust in 2020 and tawny owl in 2021.

3.43. Feral pigeons *Columba livia domestica* were observed upon buildings throughout the Site. In addition, ring-necked parakeet *Psittacula krameria* were also observed in several locations. This non-native invasive species is listed under Schedule 9 of the WCA and under the LISI.

3.44. Bird prevention spikes and netting were observed at numerous locations at buildings across the Site making them unsuitable for nesting birds. However, the areas of the buildings where bird prevention measures are absent and access to the interior of buildings is available still offer opportunities for nesting birds, most likely common species such as feral pigeon *Columba livia.* The building roofs also offer nesting opportunities for species of gull. A number of other exterior structures associated with the former brewing activities within the Site are present, including tanks, vessels, storage containers, forecourt structures and loading bays. These structures are also considered to offer limited nesting potential for these species. Furthermore, the trees and ornamental planting also offer potential foraging and nesting opportunities for common urban/garden species.

3.45. The data search returned three non-confidential records of black redstart within 2km of the Site, with the closest and most recent record located 1.8km (1999) east of the Site.

3.46. Black redstart is a species fully protected under Schedule 1 of the WCA and is the subject of a SAP in the LES (**Appendix A**). It is considered that the majority of the existing buildings at the Site offer limited suitable nesting habitat for black redstarts owing to their structure. In addition, bird prevention spikes and netting were observed at numerous locations at buildings across the Site making them unsuitable for nesting birds. Areas of wasteland vegetation, usually typical of brownfield sites, are the optimal foraging habitat for black redstarts. The sparse patches of ephemeral vegetation / gravel present at the Site are not considered extensive enough to provide suitable foraging habitat for black redstart. However, the River Thames which lies adjacent to the northern boundary of the Site is known to be an important habitat corridor for black redstarts in London. Given this, five black redstart survey visits were undertaken at the Site and adjacent areas in 2016. No black redstarts were recorded during these surveys. Given that the habitats at the Site and adjacent have not significantly changed since 2016, and the sub-optimal habitats present on Site, it is considered highly unlikely that black redstarts would currently be present on Site.

3.47. The data search returned five confidential records of peregrine falcon *Falco peregrinus* within 2 km of the Site. Given the confidential nature of the records the London Peregrine Partnership was contacted on 28th September 2021 to determine if they are aware of any records of breeding peregrines (or other records) in the local area (2km). The LPP responded on the same day and detailed that there are no records of breeding pairs in the local area either recent or historical. In addition, the LPP also stated that there are records of a pair roosting on Saint Matthias Church (2.5km to the south west of the Site) during the past few years, and sightings this year of at least one bird on Holy Trinity Church (2km to the south west of the Site). In addition, a nesting tray has now been installed at St Matthias, but it has not yet been made use of.

3.48. Peregrine falcon is a species fully protected under Schedule 1 of the WCA and is the subject of a Species Action Plan (SAP) in the RBAP and is listed on the LES. Peregrines breed on tall buildings (typically 20m-200 m above ground level[17]) which have suitable ledges for nesting. Although tall buildings exist on-Site, the majority of these buildings are of simple warehouse style construction and as such lack any suitable ledges for nesting peregrines. However, B8 (the Maltings) is

[17] Dixon, D & Shawyer, C. Peregrine Falcons: Provision of artificial nest sites on built structures. Advice note for conservation organisations, local authorities and developers.

approximately 18-20 m in height and a tower associated B13 is approximately 30-35m in height that provide suitable opportunities for peregrines.

3.49. Nevertheless, given the data search findings and that no peregrines were observed during the bird surveys detailed above in 2016 and during other ecological surveys on Site in the interim period (to date of this PEA field survey), it is likely that this species is absent from the Site.

Terrestrial Invertebrates

3.50. Numerous invertebrate species records were returned from the ecological data search from within 2km of the Site (**Table 5**).

3.51. The ornamental planting and trees are likely to offer opportunities for common species of invertebrates. However, owing to the extent of these habitats and species diversity recorded, it is considered unlikely that they would support any large populations or notable species assemblages.

4. Assessment

4.1. The potential IEFs that are anticipated to be affected by the proposed Development are listed in **Table 7** below. This table details the rationale for the inclusion of each potential IEF and also details the potential effect pathways and any requirement for further ecological assessments.

Table 7: Potential Important Ecological Features Anticipated to be Affected by the Development

Potential Important Ecological Feature	Category of Importance	Rationale	Potential Effect Pathway	Requirement for Further Ecological Assessment
Designated Sites (River Thames and Tidal Tributaries SMI)	Non-statutory designated site.	Non-statutory designated site.	Indirect effects could occur as a result of the Development	No Recommendations are made within **Section 5** with regard to suitable protection measures.
Bats	Hab Regs, WCA, S41, LBAP.	Presence of suitable foraging and commuting habitat. Buildings, the southern boundary Wall, the Northern boundary wall and trees assessed to have potential to support roosting bats.	Loss of foraging and commuting habitat. Destruction of any bat roosts. Killing or injury of any bats present.	Yes Further assessment in the form activity survey including use of automated detectors, evening emergence / re-entry surveys and inspections.

4.2. All other ecological features identified through the PEA have been scoped out of further assessment because:

The population or area likely to be affected by the proposed Development is of insufficient size or diversity to be of ecological importance;

There is no potential effect pathway between the proposed Development and these features has been identified; and/or

Contravention of the legislation relating to the feature is unlikely to occur.

4.3. The rationale for scoping out features present within the Site is provided in **Table 8** below.

Table 8: Ecological Features Scoped out of the Assessment

Ecological Feature	Rational
Designated Sites (excluding River Thames and Tidal Tributaries SINC)	No pathway of direct effect given distance from Site and formal EIA consultation response (see section 5.0). Indirect effects also unlikely to occur based on scale of proposed works and intervening habitats present. No significant effects anticipated from the proposed Development.
On-Site habitats (excluding adjacent River Thames as covered under Designated sites in **Table 7** above)	Habitat types are both nationally and locally common. No significant effects anticipated from the proposed Development.
Breeding birds (including peregrine falcon and	The proposed Development is highly unlikely to give rise to significant effects

Ecological Feature	Rational
black redstart)	to breeding birds, however legal implications are required. No black redstarts were found during surveys in 2016 and the Site remains sub-optimal for this species. No peregrine falcons have been recorded utilising the Site. As such, the proposed Development is highly unlikely to give rise to significant effects to black redstart and peregrine falcon.
Terrestrial Invertebrates	Any population(s) likely to be of insufficient size or diversity to be of significant ecological value. No significant effects anticipated from the proposed Development.

5. Recommendations

5.1. The PEA has identified potential IEFs anticipated to be affected by the proposed Development that could result in significant ecological effects. The requirement for further ecological assessments to fully define any IEFs present on-Site has been highlighted within **Table 7** and a detailed scope is provided below.

5.2. To minimise or avoid any significant ecological effects and to inform the emerging scheme design, recommendations for ecological mitigation, compensation and enhancement measures for those potential IEFs detailed within **Table 7**, as well as those ecological features which have been scoped out of assessment (**Table 8**) have been provided.

Designated Sites

5.3. No impacts from the proposed Development are anticipated to both Richmond Park SAC, NNR and SSSI nor Wimbledon Common SAC.

5.4. The assessment on no impacts is consistent with the formal EIA scoping response received on the 30th June 2017 as part of the 2018 Planning Applications. As part of this response, both LBRuT and NE stated that the proposed Development is unlikely to affect statutory designated sites as based on the proposed Development information provided or the proposed Development Site being outside of the geographical 'buffer' area within which developments are likely to affect designated sites.

5.5. It is noted that NE go on to state that due to the specific nature of a development proposal impacts can arise at a greater distance than is encompassed by NE's buffers, however given that the proposed Development as part of this planning application is similar in nature and scale to the previous proposals no additional assessment of effects is required.

5.6. Due to the presence on the River Thames adjacent to the northern Site boundary, and consequently the potential for it to be affected as a result of proposed Development the River Thames SMI has been assessed as an IEF. The water quality of the River Thames could be adversely affected by the Development as a result of pollution run-off or silt entering the river during the demolition, alteration, refurbishment and construction phase of the Development. This in turn could affect the wildlife associated with the river such as invertebrates and fish. Other potential indirect effects associated with the Works could include increased levels of noise, dust, vibration and light pollution. Ecological mitigation will be detailed within the Ecological Chapter of the Environmental Statement required for the planning applications. A Construction Environmental Management Plan (CEMP) would also be produced to ensure appropriate environmental controls are provided during demolition and construction phase of the proposed Development.

5.7. It is considered unlikely that there would be any direct or indirect effects on any other designated sites as a result of the Development owing to the distance and separation of those designed sites returned from the ecological data search by surrounding urban development and infrastructure.

5.8. During the operational phase of the proposed Development, the River Thames SMI could potentially be adversely impacted by increased public disturbance as a result in a change in land use (brought about by the proposed Development). However, the River Thames and the adjacent towpath to the north of the Site is already well used for recreational purposes and as such the impact is considered to be insignificant. Furthermore, the provision of green space (as recommended later in this PEA) as part of the proposed Development design would provide amenity space for the future residents, alleviating pressure on this adjacent non-statutory site.

Habitats

5.9. No habitats present within the Site are assessed to be IEFs. Nevertheless, mitigation in the form of appropriate protection measures is recommended and could be set out within a CEMP for those habitats to be retained. This should include protection measures at trees which are to be retained as part of the proposed Development in accordance with BS 5837:2012 - "Trees in relation to design, demolition and construction – Recommendations".

5.10. To conserve and enhance the ecological value of habitats at the Site, the following compensation and enhancements measures should look to be provided as part of the proposed Development in line with planning policy (**Appendix A**):

it is recommended the trees on-Site are retained, where possible, and placed under a suitable management regime, as part of the proposed Development;

the Development proposals should include green infrastructure corridors within landscape proposals to create and connect habitats of value to wildlife, including the creation of a north-south corridor between Mortlake Green and the River Thames;

the use of native species, or species of benefit to wildlife (seed and berry producing), within the Development's landscape scheme should be used to provide foraging opportunities for birds, bats, invertebrates and other fauna is recommended to enhance the Site for wildlife;

where new landscaping is to be undertaken as part of the Development proposals, horticultural practice should include the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) should be discouraged to prevent fatal effects on the food chain particularly invertebrates, birds and / or mammals. Any pesticides used should be non-residual; and

subject to feasibility, additional habitat could be created above ground level within the Development utilising roof top space. Green roofs could be provided by creating grassland on roofs by sowing wildflower species in low-nutrient soils.

Invasive Plant Species

5.11. Butterfly bush and tree of heaven are listed as LISI Category 3, the explanation for this category is as follows:

"*Species of high impact or concern which are widespread in London and require concerted, coordinated and extensive action to control / eradicate*".

5.12. As a matter of best practice, it is recommended that butterfly bush and tree of heaven are removed from the Site via a suitable eradication programme prior to the commencement of the Works associated with the Development, where feasible, and not included within the planting schedule of any future landscape proposals.

5.13. False acacia is present on-Site and ring-necked parakeets were also observed on-Site. These species are listed as LISI Category 4 which states:

"*Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required.*"

5.14. False acacia, Himalayan balsam and Virginia creeper are also listed under Schedule 9 of the WCA. Under the Act it is an offence to plant or otherwise cause the species to grow in the wild. It is therefore recommended that the false acacia is appropriately removed from Site as part of the proposed Development. This should also be undertaken for Virginia creeper, together with appropriate control of this species through regular management when it is spreading from off-Site

areas.

Protected and Notable Fauna

5.15. Protected and notable fauna on Site and within the ZoI that could be significantly affected by the proposed Development include bats, pending on the results of the recommended further assessments. No other protected and notable fauna are assessed to be IEFs at this stage of the assessment.

5.16. Mitigation in the form of protection measures should be adhered to during the construction phase of the proposed Development for any confirmed IEFs and other protected and notable fauna. These measures will ensure legal compliance and that good practice is adopted. The measures should be documented within a CEMP and include timing constraints associated with Site clearance works including the removal of habitats with the potential to support nesting birds.

Bats

5.17. The Site is assessed to be of low suitability for foraging and commuting bats. Consequently, and in line with current best practice guidelines, further survey in the form of bat activity surveys should be undertaken, to determine the utilisation of the Site by bats, and if present, by what species. In line with current best practice[18] the surveys should take the form of walked activity transects, with one survey visit being conducted per season (spring, summer and autumn). These surveys should also be supplemented by static bat detectors set out at one location per transect with data collected on five consecutive nights per season.

5.18. In accordance with current best practice guidelines[19] those buildings highlighted as being suitable for supporting roosting bats, together with the southern boundary Wall, the Northern boundary wall, and those trees of higher than low bat roosting suitability should be subject to further surveys if they will be impacted upon as a result of the proposed Development. It is recommended that the following further survey work is undertaken as follows:

Low suitability buildings (i.e.B12): a single evening emergence or dawn re-entry survey.

In accordance with best practice guidelines no additional surveys are required at low suitability trees (i.e. T3, T10, T37, T73, T74, T84, T94 and T121). However, if any of these trees require removal as part of the proposed Development, then it is recommended they are removed using soft felling techniques;

Moderate potential buildings (i.e. B1, B3, B8 (previously recorded a roost site in 2019), B9, B10 and B14 (off Site), the southern wall, and trees (i.e. T43, T44, T67, T68, T71, T75, T78, T83, T157 and T321: a single evening emergence and single pre-dawn re-entry survey (B8 should however be subject to three separate surveys as it has supported a roost site historically) status separated by a period of at least two weeks; and

The Northern boundary wall adjacent to the River Thames (given the number of PRFs and as all can be suitably accessed via a ladder) should be subject to endoscope inspections.

5.19. All of the evening emergence, pre-dawn re-entry, and endoscope inspection surveys should be carried out when bats are most active (May to August / September), to determine the presence or likely absence of roosting bats.

[18] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1
[19] Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London. ISBN-13 978-1-872745-96-1

5.20. If any buildings, walls or trees are confirmed to support roosting bats the survey effort detailed above may need to be increased to conform to current best practice guidelines. The additional surveys would assist in adequately assessing the number of bats present and the roost classification to advise the requirement for mitigation.

5.21. If any of the buildings or trees that would be directly impacted on by the proposed Development are confirmed as supporting a significant bat roost, it is recommended that a detailed mitigation strategy to support a Natural England European Protected Species (EPS) development licence is prepared, in order to avoid infringement of relevant legislation. Should a non-significant roost of low conservation status be recorded a Bat Low Impact Class Licence, which requires a non-detailed Method Statement only, could be applied for. The licence application would detail the proposed mitigation including provisions of alternative bat roosting opportunities on the Site, timing of the proposed works and the provision of ecological supervision during the building demolition / tree removal phase. Post-development monitoring of the mitigation provided may also be required as part of the licence and the survey data would need to be within 18 months of age to support the licence application. It should be noted that Natural England require a minimum of 60 working days to process a licence application (based on known current timescale).

5.22. If there is a significant period of time between authorising this PEA and the Works, these buildings and trees may deteriorate in condition and, therefore, should be subject to an update survey to determine if their potential to support roosting bats has changed.

5.23. The adjacent River Thames is likely to provide foraging and commuting habitat for bats. However, this riparian feature will not be directly impacted by the proposed Development. A sensitive lighting strategy should be designed for the proposed Development to reduce light spill onto the River Thames. Furthermore, the corridor adjacent to the River Thames should look to be enhanced for foraging and commuting bats by the provision of soft landscaping as part of the proposed Development.

5.24. The provision of the habitat enhancements as detailed above would also benefit both foraging and commuting bats in the local area.

5.25. Bat roosting opportunities at the Site could be enhanced through the provision of bat boxes / tubes and / or bricks incorporated into any proposed buildings / structures and / or mounted onto existing / newly planted trees. It is recommended that bat boxes / tubes and / or bricks are targeted at SoPI species. Appropriate bat box / tube and / or brick models include Schwegler N27 bat box brick, Schwegler 1FD bat box and Schwegler 1FR bat tube. Bat bricks (e.g. Schwegler N27), or similar, can be incorporated into the fabric of the buildings and are available in a variety of external fascia materials; providing bat roosting opportunities which are aesthetically unobtrusive. The location of the bat boxes / tubes and / or bricks would be specified by an ecologist but face vegetated habitats and be away from publicly accessible roof spaces (if included). The boxes / tubes and / or bricks should be orientated facing between south-east and south-west, and at least 4 m above ground level (to prevent vandalism) with a clear aspect.

Birds

Black redstart

5.26. A total of three records for black redstart were returned from the ecological data search. The nearest and most recent record for this species is located approximately 1.9km east of the Site in 1999.

5.27. No black redstarts were observed at the Site or adjacent during the five survey visits conducted in 2016. Given this, and that the habitats on Site remain sub-optimal for this species, it is considered highly unlikely that black redstarts would currently be present on Site. As such an update black redstart survey is not considered necessary to support the proposed Development's new planning application(s). However, as a precautionary measure, it is recommended that should Site clearance works commence within the breeding bird season a pre-demolition/clearance check is undertaken by a suitably qualified ecologist to ensure that no black redstarts have colonised the Site in the interim. If nesting black redstarts are recorded during the pre-demolition/clearance check, an appropriate method statement would be agreed in consultation with the LBRuT. This would include measures to prevent the disturbance to breeding black redstart during the breeding season, including cessation of demolition, Site clearance or construction works in areas close to breeding sites until the birds have completed breeding, and monitoring the species during the active construction period.

5.28. It should also be noted that if the Site is left undisturbed for a significant amount of time during the development works this could result in the creation of suitable foraging habitat (such as rubble piles and open ground), nest sites and song posts (e.g. lighting rigs, cranes) and could result in the species moving onto the Site. Black redstarts should therefore be identified to the workforce during the Site induction via a toolbox talk so that this species is recognised if present and subsequent disturbance avoided.

5.29. It is recommended that the Development includes enhancement measures for this species in line with planning policy, as well as LES and RBAP targets. Suitable enhancement measures for this species are outlined below:

The provision of five bird boxes suitable for black redstarts. The Schwegler 2H Nest Boxes are a suitable example. The Schwegler 2H Nest Boxes are an open fronted box suitable for a number of bird species including black redstart. These boxes should be installed on buildings not trees (unless in dense climbing plant cover i.e. ivy) and should be hung sideways with the entrance at a 90° angle to the wall, preferably placed below 2m in height in areas with restricted public access (i.e. upon rooftops), or if this is not feasible, 3m above ground level to prevent vandalism and face east to north ; and

The provision of brown roofs upon buildings to create suitable habitat for this species.

Peregrine falcon

5.30. The ledge on the southern aspect of the Maltings building (B8) has potential to provide perching and nesting opportunities for peregrine falcon, with the tower associated with B13 also providing perching opportunities. However, this species has not been observed during any of the ecological surveys undertaken at the Site to date (form when the Field Survey was undertaken as part of this PEA) and there were no records for this species returned within the ecological data search.

5.31. No other habitats at the Site are considered to be of value to peregrine falcons and therefore no further surveys are recommended. It is however recommended as a precautionary measure that a pre-demolition survey is undertaken of the Maltings building (B8) ensure that no peregrines are nesting building in advance of the Works should the Works be undertaken during the bird nesting period.

Other bird species

5.32. The habitats at the Site including buildings and trees are considered to provide nesting opportunities for low numbers of common species of breeding bird. As such, the following mitigation and enhancement measures are recommended:

Should any habitats (including buildings) of value to nesting birds require removal to facilitate the any future development this will be undertaken outside of the breeding bird season (March to August inclusive). However, if works cannot be undertaken outside the breeding bird season an ecologist will inspect any vegetation / building to be removed. An experienced ecologist will be deployed to carry out an inspection at least within 24-hours prior to the clearance. If an occupied nest is detected, a buffer zone (area dependant on species) will be created around the nest, and clearance of this area delayed until the young have fledged;

Given the Site's urban location it is recommended that a contractor is appointed to develop a strategy to ensure the buildings are free and stay free of nesting birds such as feral pigeon and gulls. The use anti-nesting devices including netting, bird scarers and just ensuring that doors and windows are kept shut could be used to discourage birds from nesting on the buildings. The breeding season for most common bird species is documented to be between March to August inclusive, however feral pigeons are known to breed all year round when provided with suitable conditions and receive legal protection (**Appendix A**) when at an active nest site.

It is recommended that the habitats of value to nesting birds are retained on the Site where possible, to retain the interest for nesting birds. Should these habitats require removal to facilitate any future development, they should be replaced by habitats of value to nesting birds; and

The use of native seed and berry producing plants species as recommended above would provide additional foraging habitat for local bird species.

5.33. In addition, opportunities to enhance the Site for birds could be incorporated into the proposed Development. Simple measures could include provision of artificial nest sites within new habitats and upon buildings. It is recommended that artificial nest sites are targeted at bird species listed on the S41, LES and RBAP (**Appendix A**). The following bird boxes, or similar, are recommended:

'Schwegler Starling Next Box 3S' – This nest box has been designed with a large, deep cavity and 45 mm entrance hole to attract starlings and can be installed on mature trees or buildings. As well as starlings, this nest box is suitable for woodpecker species. These bird boxes should be placed at least 3 m above ground level to prevent vandalism and face east to north;

'Schwegler Swift Brick No.25' – Swift bricks should be installed under the roof, in shaded areas out of direct sunlight and away from windows, ideally facing north. They should be installed at least 5 m above ground level. Swift bricks, if competently installed, do not require any maintenance; and

'Schwegler Sparrow Terrace 1SP' – Suitable for house sparrows and tree sparrows. The nest box contains three separate nesting cavities. They can be installed on buildings either affixed to the exterior wall or incorporated into the wall. These bird boxes should be placed at least 3 m above ground level to prevent vandalism and face east to north.

5.34. As detailed previously, the provision of green space would provide foraging and nesting opportunities at the Site for local bird species.

Terrestrial Invertebrates

5.35. Only common invertebrate species are considered to utilise the Site's habitats. As such, any loss of these habitats is not considered to impact any protected or notable invertebrate species.

Opportunities at the Site for invertebrates could be enhanced through new landscape planting. The incorporation of deadwood features within landscape areas (including the living roofs, artificial boxes installed on the living roofs, plus the use of native plants species, as recommended above, would provide increased opportunities for a range of invertebrates.

6. Conclusions

6.1. As a result of the PEA ecological features within the ZoI including designated sites (with the exception of the River Thames SMI); habitats; breeding birds; and terrestrial invertebrates have been scoped out of the assessment due to insufficient biodiversity conservation value or a lack of an identified pathway for potential effects to occur. However, potential IEFs within the ZoI that are anticipated to be affected by the proposed Development include the River Thames SMI and bats.

6.2. The Site is not subject to any statutory or non-statutory designations. The nearest designated site is the River Thames SMI, which lies adjacent to the northern Site boundary. The adjacent River Thames is assessed to be of value to fish, birds and aquatic invertebrates. It is recommended that a CEMP is implemented to minimise any potential effects to this SMI.

6.3. It is determined that further ecological assessments would be required and presented within a Protected Species Report, to inform the scheme design and, when finalised, support the production of an Ecology Chapter for the EIA.

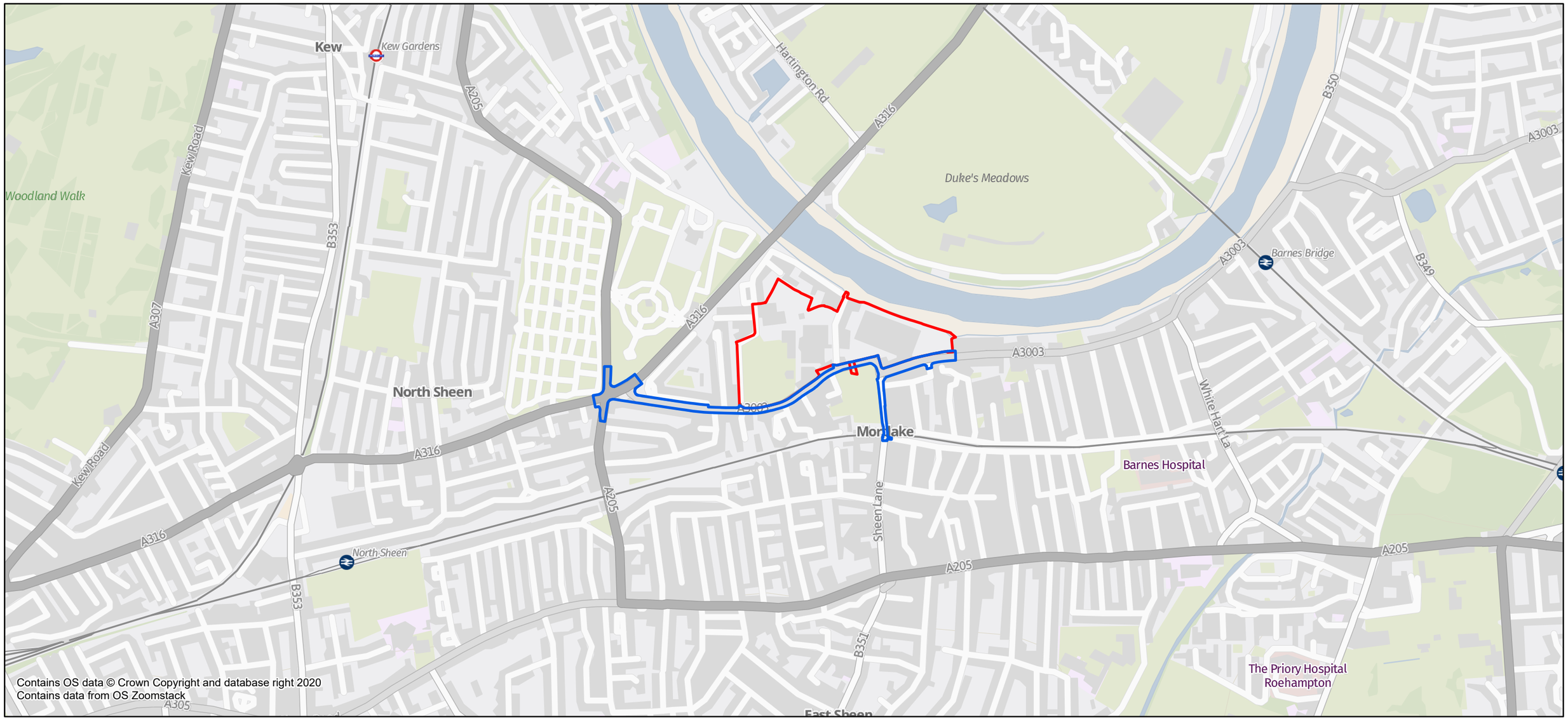
6.4. Mitigation measures that should look to be implemented during the construction phase of the proposed Development to ensure legal compliance and good practice measures are adopted have been outlined within this report.

6.5. Furthermore, ecological mitigation, compensation and enhancement measures likely to be incorporated with in the Development have also been outlined, which will be confirmed following the undertaking of the above further surveys and detailed within the respective reporting and/or the Ecology Chapter as appropriate.

6.6. It should be noted that this PEA is relevant to the legislation detailed in Section 2 and **Appendix A** at the time of writing. If there are any changes to legislation prior to the Development being completed, the advice within this PEA may require amending / updating in line with any legislative updates.

6.7. If there is a significant period of time between this PEA and the Development commencing, the ecological value of the Site may change, and the Site should therefore be subject to an update survey.

Figures



S278 Works Boundary

Planning Application Boundary

N

0 125 250 500 Meters

Project Details	WIE18671-103: Stag Brewery
Figure Title	Figure 1: Site Location Plan
Figure Ref	WIE18671-103-GIS-EC-1A
Date	January 2022
File Location	\\s-lncs\wiel\projects\wie18671\100\gis\ec

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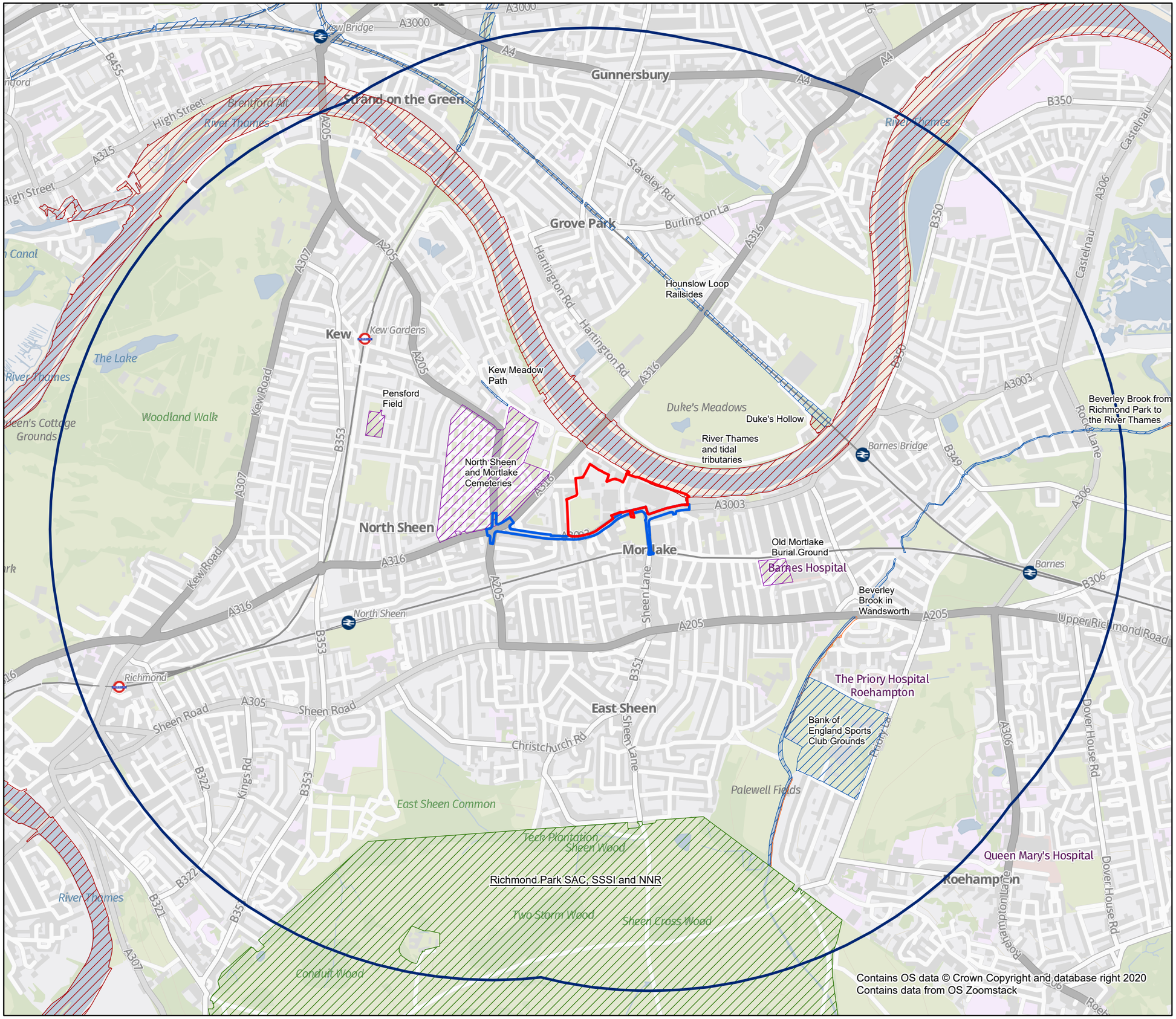

- Planning Application Boundary
- S278 Works Boundary
- 2km Buffer
- Sites of Borough Importance (Grade I)
- Sites of Borough Importance (Grade II)
- Sites of Local Importance
- Sites of Metropolitan Importance
- Statutory Designated Site of European/ National Importance

N

0 125 250 500 750 Meters

Project Details	WIE18671-103: Stag Brewery
Figure Title	Figure 2: Ecological Data Search Results
Figure Ref	WIE18671-103-GIS-EC-2A
Date	January 2022
File Location	\\s-lncs\wiel\projects\wie18671\100\gis\ec

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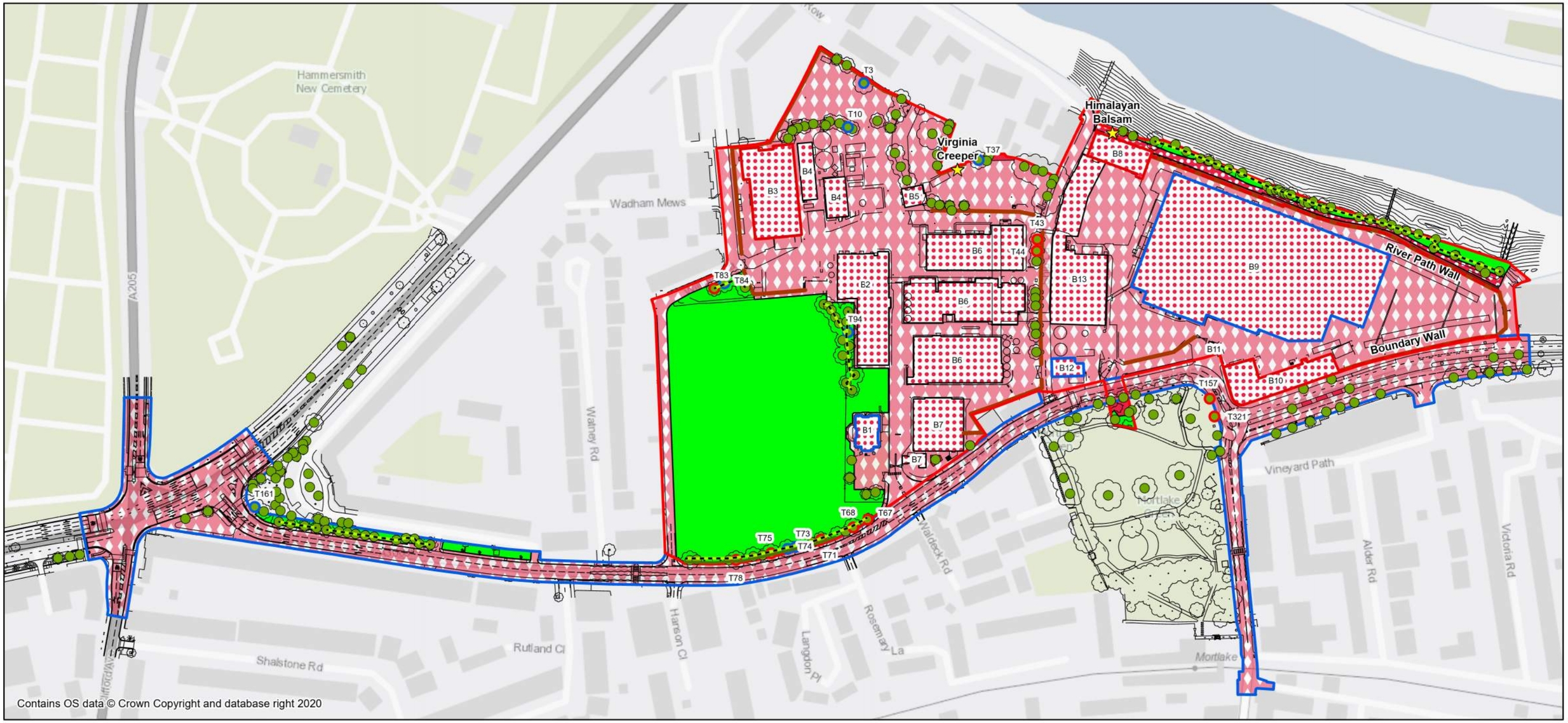

- Planning Application Boundary
- S278 Works Boundary
- Modified Grassland - g4 - 64, 66, 75, 76
- Ornamental Planting - u - 48, 80, 1160
- Artificial Unvegatated Unsealed Surface - u1c - 17, 80
- Buildings - u1b5 - 97
- Hardstanding - u1b6 - 111
- Wall - u1e - 68, 80
- Hedgerow - h2b - 17, 48, 1160
- Line of Trees - w1g6, 76
- Urban Tree - u - 1170
- Trees with Low Bat Roost Potential
- Trees with Moderate Bat Roost Potential
- Buildings with Low Bat Potential
- Buildings with Moderate Bat Potential
- Features with Moderate Bat Potential
- Invasive Species

N

0 25 50 100 Meters

Project Details	WIE18671-103: Stag Brewery
Figure Title	Figure 3: Habitat Features (UK Habs)
Figure Ref	WIE18671-103-GIS-EC-3A
Date	January 2022
File Location	\\s-lncs\wiel\projects\wie18671\100\gis\ec

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Planning Application Boundary

Potential Roosting Feature

1 2 3 8 4 9 10a 10b 11 12 13 5 6 14 7

N

Project Details	WIE18671-103: Stag Brewery
Figure Title	Figure 4: Northern Boundary Wall – Potential Roosting Features Locations
Figure Ref	WIE18671-103_GR_EC_4A
Date	January 2022
File Location	\\s-lncs\wiel\projects\wie18671\103\graphics\ec\issued figures

APPENDICES

A. Planning Policy and Summarised Flora and Fauna Legislation

National Planning Policy

National Planning Policy Framework, 2021

The National Planning Policy Framework (NPPF) was published in 2012 and last updated on 20th July 2021[20]. Section 15 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', replaces Section 11 of the previous NPPF 2012 revision and NPPF 2018[21]. No significant changes to Section 15 are noted between the 2019[22] and 2021 update. The Government Circular 06/2005[23] - Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System, remains valid and is still referenced within the NPPF.

Of particular significance with respect to biodiversity in the NPPF revision, is the amendment to para 175(d) of the NPPF 2019 (now para 180(d) of the NPPF 2021), which now requires opportunities to incorporate biodiversity improvements in and around development, rather than simply making it optional. This demonstrates further steps taken by the government towards achieving the 25 Year Environment Plan (2018). Otherwise there have been no further changes to the wording of "Conserving and enhancing the natural environment" Chapter of the NPPF.

The NPPF encourages the planning system to contribute to and enhance the natural and local environment. This should be achieved by:

- *"Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- *recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- *maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- *minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- *preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- *Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate".*

The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, should apply the following principles:

[20] Ministry of Housing, Communities and Local Government. (2021). *National Planning Policy Framework*.
[21] Ministry of Housing, Communities and Local Government. (2018). *National Planning Policy Framework*.
[22] Ministry of Housing, Communities and Local Government. (2019). *National Planning Policy Framework*
[23] Department of Communities and Local Government. (2005). *Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*.

- *"If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."*

National Planning Practice Guidance, 2021

The Government's National Planning Practice Guidance 2016[24], updated in 2019[25] (NPPG) is intended to provide guidance to local planning authorities and developers on the implementation of the planning policies set out within the NPPF. The guidance of most relevance to ecology and biodiversity is the Natural Environment Chapter, which explains key issues in implementing policy to protect biodiversity, including local requirements.

Regional Planning Policy

The London Plan: The Spatial Development Strategy for Greater London, 2021

The London Plan 2021 sets out the overall strategic plan, setting out a framework for development over the next 20 to 25 years and includes several policies relating to ecology. Key to the London Plan is Policy G6 'Biodiversity and Access to Nature' which sets out the Mayor's policy in relation to biodiversity and access to nature. This states:

- *"Sites of Importance for Nature Conservation (SINCs) should be protected.*
- *Boroughs, in Developing Plans, should::*

  a) *use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks;*

  b) *identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them;*

  c) *support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans;*

  d) *seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context; and*

[24] Department for Communities and Local Government. (2016). *National Planning Practice Guidance*. DCLG, London.
[25] Department for Communities and Local Government. (2019). *National Planning Practice Guidance*. DCLG, London.

e) *ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.*

- *Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:*
- *avoid damaging the significant ecological features of the site;*

f) *minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site; and*

g) *deliver off-site compensation of better biodiversity value.*

- *Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.*
- *Proposals which reduce deficiencies in access to nature should be considered positively.*

Mayor of London: Environment Strategy, 2018

The London Environment Strategy, 2018[26] compliments the London Plan. It sets out how London's biodiversity can be protected and enhanced and contains a list of Priority Habitats and Species within the city. Priority species (SAPs) and habitats (HAPs) related to the Site are listed below:

- *Birds, house sparrow, and bats (SAPs)*
- *Rivers and Streams (HAPs).*

The relevant policy within the strategy is Policy 5.2.1 'Protect a core network of nature conservation sites and ensure a net gain in biodiversity'.

Local Planning Policy

London Borough of Richmond upon Thames: Adopted Local Plan 2020

The following strategic visions, objectives and policies within the Local Plan are of relevance to biodiversity:

Strategic vision 'Natural Environment, Open Spaces and the Borough's Rivers' states:

"The outstanding natural environment and green infrastructure network, including the borough's parks and open spaces, biodiversity and habitats as well as the unique environment of the borough's rivers and their corridors will have been protected and enhanced where possible. Residents will continue to highly value and cherish the borough's exceptional environmental quality"

Strategic objective 'Protecting Local Character' states:

"…..3) Protect and improve the borough's parks and open spaces to provide a high quality environment for local communities and provide a balance between areas for quiet enjoyment and wildlife and areas to be used for sports, games and recreation;

4) Protect and enhance the borough's network of green infrastructure that performs a wide range of functions for residents, visitors, biodiversity and the economy;

[26] Mayor of London (2018) *London Environment Strategy*

5) Protect and enhance the borough's biodiversity, including trees and landscape, both within open spaces but also within the built environment and along wildlife corridors; and

6) Protect and improve the unique environment of the borough's rivers, especially the River Thames and its tributaries as wildlife corridors, as opportunities for recreation and river transport where possible, increasing access to and alongside the rivers where appropriate, and gain wider local community benefits when sites are redeveloped."

Policy LP 12 'Green Infrastructure' states:

"Green infrastructure is a network of multi-functional green spaces and natural elements, which provides multiple benefits for people, nature and the economy.

A) To ensure all development proposals protect, and where opportunities arise enhance, green infrastructure, the following will be taken into account when assessing development proposals:

- *the need to protect the integrity of the green spaces and assets that are part of the wider green infrastructure network; improvements and enhancements to the green infrastructure network are supported;*
- *its contribution to the wider green infrastructure network by delivering landscape enhancement, restoration or re-creation;*
- *incorporating green infrastructure features, which make a positive contribution to the wider green infrastructure network*

*B) The hierarchy of open spaces, as set out in the table below (*refer to original document*), will be protected and used in accordance with the functions shown."*

Policy LP 13 'Green Belt, Metropolitan Open Land and Local Green Space' states

Local Green Space

D. Local Green Space, which has been demonstrated to be special to a local community and which holds a particular local significance, will be protected from inappropriate development that could cause harm to its qualities.

Policy LP 15 'Biodiversity' states:

"A) The Council will protect and enhance the borough's biodiversity, in particular, but not exclusively, the sites designated for their biodiversity and nature conservation value, including the connectivity between habitats. Weighted priority interms of their importance will be afforded to protected species and priority species and habitats including National Nature Reserves, Sites of Special Scientific Interest (SSSI) and Other Sites of Nature Importance as set out in the Biodiversity Strategy for England, and the London and Richmond upon Thames Biodiversity Action Plans. This will be achieved by:

1) *protecting biodiversity in, and adjacent to, the borough's designated sites for biodiversity and nature conservation importance (including buffer zones), as well as other existing habitats and features of biodiversity value;*
2) *supporting enhancements to biodiversity;*
3) *incorporating and creating new habitats or biodiversity features, including trees, into development sites and into the design of buildings themselves where appropriate; major developments are required to deliver net gain for biodiversity, through incorporation of ecological enhancements, wherever possible;*
4) *ensuring new biodiversity features or habitats connect to the wider ecological and green*

infrastructure networks and complement surrounding habitats;

5) *enhancing wildlife corridors for the movement of species, including river corridors, where opportunities arise; and*

6) *maximising the provision of soft landscaping, including trees, shrubs and other vegetation that support the borough-wide Biodiversity Action Plan.*

B) Where development would impact on species or a habitat, especially where identified in the relevant Biodiversity Action Plan at London or local level, or the Biodiversity Strategy for England, the potential harm should:

1) *firstly be avoided (the applicant has to demonstrate that there is no alternative site with less harmful impacts);*

2) *secondly be adequately mitigated; or*

3) *as a last resort, appropriately compensated for."*

LP 16 'Trees, Woodlands and Landscape' states:

"A) The Council will require the protection of existing trees and the provision of new trees, shrubs and other vegetation of landscape significance that complement existing, or create new, high quality green areas, which deliver amenity and biodiversity benefits.

B) To ensure development protects, respects, contributes to and enhances trees and landscapes, the Council, when assessing development proposals, will:

Trees and Woodlands:

1) *resist the loss of trees, including aged or veteran trees, unless the tree is dead, dying or dangerous; or the tree is causing significant damage to adjacent structures; or the tree has little or no amenity value; or felling is for reasons of good arboricultural practice; resist development that would result in the loss or deterioration of irreplaceable habitat such as ancient woodland;*

2) *resist development which results in the damage or loss of trees that are considered to be of townscape or amenity value; the Council will require that site design or layout ensures a harmonious relationship between trees and their surroundings and will resist development which will be likely to result in pressure to significantly prune or remove trees;*

3) *require, where practicable, an appropriate replacement for any tree that is felled; a financial contribution to the provision for an off-site tree in line with the monetary value of the existing tree to be felled will be required in line with the 'Capital Asset Value for Amenity Trees' (CAVAT);*

4) *require new trees to be of a suitable species for the location in terms of height and root spread, taking account of space required for trees to mature; the use of native species is encouraged where appropriate;*

5) *require that trees are adequately protected throughout the course of development, in accordance with British Standard 5837 (Trees in relation to design, demolition and construction – Recommendations).*

The Council may serve Tree Preservation Orders or attach planning conditions to protect trees considered to be of value to the townscape and amenity and which are threatened by development.

Landscape:

1) *require the retention of important existing landscape features where practicable;*

2) *require landscape design and materials to be of high quality and compatible with the surrounding landscape and character; and*

3) *encourage planting, including new trees, shrubs and other significant vegetation where appropriate."*

Policy LP 17 'Green Roofs and Walls' states:

"Green roofs and / or brown roofs should be incorporated into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof.

The onus is on an applicant to provide evidence and justification if a green roof cannot be incorporated. The Council will expect a green wall to be incorporated, where appropriate, if it has been demonstrated that a green / brown roof is not feasible.

The use of green / brown roofs and green walls is encouraged and supported in smaller developments, renovations, conversions and extensions."

Policy LP 18 'River Corridors' states:

"A) The natural, historic and built environment of the River Thames corridor and the various water courses in the borough… will be protected. Development adjacent to the river corridors will be expected to contribute to improvements and enhancements to the river environment.

B) Development proposals within the Thames Policy Area should respect and take account of the special character of the reach as set out in the Thames Landscape Strategy and Thames Strategy as well as the Council's Conservation Area Statements, and where available Conservation Area Studies, and / or Management Plans."

London Borough of Richmond upon Thames: Supplementary Planning Documents and Guidance

A series of Supplementary Planning Guidance (SPG) and Supplementary Planning Documents (SPDs) has been produced by LBRuT to provide greater detail on existing local planning policies to support decisions on planning applications. LBRuT no longer produces SPGs as they have been replaced with SPDs since 2004. However, they remain material considerations in planning decisions. With regards to biodiversity, a SPG titled 'Nature Conservation and Development'[27] has been published by LBRuT. This SPG states:

i. *"It is important that nature conservation should be integrated at the planning stage with all new development. Schemes should be designed to retain existing features and habitats of wildlife value on site, and to create new habitats where appropriate."*

Currently, the only parts of the UDP that remain saved and have not been superseded are those Proposal sites that were originally saved. The eastern part of the Site is allocated on the Proposals Map as site S4 (Budweiser Stag Brewery)[28].

[27] London Borough of Richmond upon Thames (no-date); 'Design Guidelines for Nature Conservation & Development'.
[28] London Borough of Richmond upon Thames (2005); 'Unitary Development Plan. Chapter 12 – Local Strategies and Plan Proposals'.

The LBRuT adopted a planning brief for the Site in July 2011 with SPD[29] status. This document sets out opportunities and constraints regarding the redevelopment of the Site. With regard to biodiversity, this SPD states:

"Opportunities should be taken to enhance biodiversity throughout the site and particularly along the River."

Site Allocations

LBRuT have also produced a suite of 14 Village Plan SPDs, one for each Village Area in the Borough. Each Village Plan SPD provides a vision for the area, identifying the local character and setting out key policies and design principles that will apply to both new development and changes to existing buildings. These are used as material considerations in determining planning applications in each area.

The Site is located within the 'Mortlake Village Plan'[30]. It sets out that the vision for Mortlake is to create a new heart to the village by the redevelopment of the Stag Brewery Site creating a recreational and living quarter and a vibrant link between the village and the riverside.

Biodiversity Action Plans

UK Post-2010 Biodiversity Framework

The Environment Departments of all four governments in the UK work together through the Four Countries Biodiversity Group. Together they have agreed, and Ministers have signed, a framework of priorities for UK-level work for the Convention on Biological Diversity. Published on 17 July 2012, the 'UK Post-2010 Biodiversity Framework'[31] covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)[32]. However, many of the tools developed under UK BAP remain of use, for example, background information about the lists of priority habitats and species. The lists of priority species and habitats agreed under UK BAP still form the basis of much biodiversity work in the countries.

Although the UK Post-2010 Biodiversity Framework does not confer any statutory legal protection, in practice many of the species listed already receive statutory legal protection under UK and / or European legislation. In addition, the majority of Priority national (English) BAP habitats and species are now those listed as Habitats of Principal Importance (HoPI) and Species of Principal Importance (SoPI) in England listed under Section 41 (S41) of the NERC Act 2006. For the purpose of this report, habitats and species listed under S41 of the NERC Act are referred to as having superseded the UK BAP. All public bodies have a legal obligation or 'biodiversity duty' under Section 40 of the NERC Act 2006 to conserve biodiversity by having particular regard to those species and habitats listed under S41.

Based on the results of the PEA the following HoPIs and SoPIs listed under S41 are considered to be of potential value on and/or immediately adjacent to the Site:

Rivers and Streams;

Noctule bat (SoPI);

[29] London Borough of Richmond upon Thames (2011); 'Stag Brewery, Mortlake, SW14 Planning Brief. Supplementary Planning Guidance'.

[30] London Borough of Richmond upon Thames (2015); 'Mortlake Village Planning Guidance. Supplementary Planning Guidance'.

[31] JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group). (2012). *UK Post-2010 Biodiversity Framework*.

[32] HMSO. (1994) *Biodiversity The UK Action Plan*.

Soprano pipistrelle bat *Pipistrellus pygmaeus* (SoPI);

Starling *Sturnus vulgaris* (SoPI);

House sparrow *Passer domesticus* (SoPI).

Richmond Biodiversity Action Plan

The Biodiversity Action Plan for the London Borough of Richmond upon Thames (LBRuT)[33] sets out the framework for the protection, conservation and enhancement of wildlife within the borough. Through its implementation, the plan protects and manages habitats and species of national, regional or local significance, or those that are in the Red Data Books and on the Red Lists. Based on the results of the PEA the following Habitat and Species Action Plans are considered to be of relevance to the Site:

- Tidal Thames;
- House sparrow;
- Song thrush;
- Swift;
- Stag beetle.

Guidance

Biodiversity 2020: A Strategy for England's Wildlife and Ecosystem Services

In October 2010, over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity. This agreement recognised just how important it is to look after the natural world. It established a new global vision for biodiversity, including a set of strategic goals and targets to drive action. England's response to this agreement was the publication of '*Biodiversity 2020: A strategy for England's wildlife and ecosystem services*'[34]. The mission for this strategy is:

"to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people."

BS 42020: 2013 Biodiversity: Code of Practice for Planning and Development

The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets[35], is passed down to local authorities to implement, mainly through planning policy. To assist organizations affected by these commitments, BSI has published BS 42020 which offers a coherent methodology for biodiversity management.

This British Standard sets out to assist those concerned with ecological issues as they arise through the planning process in matters relating to permitted development and activities involved in the management of land outside the scope of land use planning, which could have site-specific ecological implications.

[33] Richmond Biodiversity Partnership (2019): 'London Borough of Richmond Upon Thames. Biodiversity Action Plan)

[34] Defra. (2011) *Biodiversity 2020: A strategy for England's wildlife and ecosystem services.*

[35] https://www.cbd.int/sp/targets/

The standard has been produced with input from a number of organisations including the Chartered Institute of Ecology and Environmental Management (CIEEM) and the Association of Local Government Ecologists (ALGE) and provides:

Guidance on how to produce clear and concise ecological information to accompany planning applications;

recommendations on professional ethics, conduct, competence and judgement to give confidence that proposals for biodiversity conservation, and consequent decisions/actions taken, are sound and appropriate; and

direction on effective decision-making in biodiversity management a framework to demonstrate how biodiversity has been managed during the development process to minimize impact.

Legislation

Specific habitats and species receive legal protection in England under various pieces of legislation, including:

- The Conservation of Habitats and Species Regulations 2017 (as amended)[36];
- The Wildlife and Countryside Act (WCA) 1981 (as amended)[37];
- The Countryside and Rights of Way (CRoW) Act 2000[38];
- Environment Act 2021
- The Natural Environment and Rural Communities Act 2006[39];
- The Hedgerow Regulations 1997[40];
- The Protection of Badgers Act 1992[41]; and
- Wild Mammals (Protection) Act 1996[42]

Further details of legislation in respect of legally protected and notable flora and fauna of relevance to the Site are provided below.

Bats

In summary, all UK bat species are protected by the Conservation of Habitats and Species Regulations 2017 (as amended) and by the WCA. Taken together it is an offence to deliberately, intentionally or recklessly:

Kill, injure or capture a bat;

Disturb bats in such a way as to be likely significant to affect

(i) the ability of any significant group of bats to survive, breed, or rear / nurture their young; or

(ii) the local distribution of that species;

Damage or destroy any breeding or resting place used by bats; or

[36] HMSO (2017) The Conservation of Habitats and Species Regulations 2017 (as amended).

[37] HMSO (1981) 'Wildlife and Countryside Act 1981 (as amended)'

[38] HMSO (2000) 'The Countryside and Rights of Way (CRoW) Act'

[39] ODPM (2006) 'Natural Environment and Rural Communities Act (2006)'

[40] ODPM (1997) 'The Hedgerow Regulations'

[41] ODPM (1992) 'The Protection of Badgers Act'

[42] HMSO. (1996). *Wild Mammals (Protection) Act*.

Obstruct access to any place used by bats for shelter or protection and disturbing bats while occupying such as place.

Birds

The level of protection afforded to birds under the law varies from species to species. A few game and pest species may lawfully be hunted and killed, usually under licence, whilst the rarest species are listed on Schedule 1 of the WCA 1981 and are protected by special penalties for offences.

All of the native bird species of Britain are additionally covered by the European Union (EU) Directive on the Conservation of Wild Birds 2009[43] ('The Birds Directive'). The Birds Directive applies to all wild birds, their eggs, nests and habitats, and provides for the protection, management and control of all species of birds naturally occurring within each member state of the European Union. It requires the UK to take measures to ensure the preservation of sufficient diversity of habitats to maintain populations of all wild birds at ecologically and scientifically sustainable levels. The requirements of the Birds Directive are implemented in the UK primarily through the WCA 1981 (as amended) and Conservation of Habitats and Species Regulations 2017 (as amended).

Statutory protection is given to all nesting birds in the UK under the WCA 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird, take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for species listed on Schedule 1 of the WCA 1981 (as amended), it is an offence to intentionally or recklessly disturb birds while they are nest building, or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.

In addition to statutory protection, the bird species of Britain are also subject to various conservation designations intended to indicate their rarity, population status and conservation priority. These do not have statutory force but may be instrumental in determining local, regional and national planning and development policy. The main categories of designation comprise the British Trust for Ornithology (BTO) 'Species Alert' lists, the Royal Society for the Protection of Birds (RSPB) 'Birds of Conservation Concern' lists and species listed under Section 41 of the NERC Act 2006 and local Biodiversity Action Plans (BAPs).

The BTO Conservation Alert System lists of 'Birds of Conservation Concern' include a 'Red List' for birds of high conservation concern and an 'Amber List' for birds of medium conservation concern. Red List species are those that are globally threatened and Amber List species are those with an unfavourable conservation status in Europe, according to the International Union for Conservation of Nature (IUCN) criteria[44].

[43] Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds

[44] IUCN (2000): 'The revised Categories and Criteria (IUCN Red List Categories and Criteria version 3.1)'.

B. Ecologist CV

Lee Mantle

Job Title: **Ecologist**

Profile:

Lee is an ecologist with a wide range of experience on sites of varying sizes and involving a wide range of issues. Lee has over 15 years continuous consultancy experience in the field of ecology and specialises in protected species issues that often require complex mitigation solutions.

Lee is experienced in 'Extended' Phase 1 habitat surveys and protected/notable species surveys. He has experience in the production of baseline survey reports including Preliminary Ecological Appraisals (PEAs), Ecological Impact Assessments (EcIAs) and Ecology Chapters in support of Environmental Impact Assessments (EIA) for a range of development related works including residential, highways, commercial and mixed-use development.

Qualifications and Affiliations: BSc (Hons) Environnemental Science, MCIEEM

Key Skills:

- Flora and fauna surveys
- Ecological Due Diligence Reports
- PEA reports
- EcIA
- Ecology Chapters in support of EIAs
- Habitat Regulations Assessments (HRA)
- Mitigation strategies and method statements for flora and fauna
- Ecological BREEAM assessments
- Ecological CEEQUAL assessments
- Production of Landscape and Ecological Management Plans (LEMP)
- Natural England (NE) license holder for bats (Class 2) and great crested newt (Class 2)
- Production of NE development licenses (named ecologist for bats and great crested newts)
- Ecological Health and Safety

Project Experience:

Project / Location	Description
Highways Agency	Detailed site assessment of the Area 2 soft estate (including the M5 and A303) and report production identifying any potential ecological issues arising from highways works
Leybourne Grange	Ecological management and coordination of housing development (over 300 houses) in Kent. Including the soft strip of 32 buildings containing roosting bats and erection of Rope Bridge as common dormouse mitigation. Both under the appropriately approved Natural England development licences
Westbury Bypass	Project on behalf on Wiltshire Council. Ecological input including management of baseline surveys, pre-construction monitoring and detailed mitigation design for bats prior to public inquiry. This scheme was noted to be the first project of its kind to include all four British Annex II bat species.

Project Experience:

Project / Location	Description
Sites in London	Ecological input into proposed development sites (including Cringle Dock part of the Battersea Power Station development, Elephant and Castle, Winstanley Estate, High Road West, Tesco Barking, Crossharbour, Lesnes Estate, Walthamstow and Camden), in London for various clients (including DP9, Land Securities, Eco World Quayside Limited, Lendlease, Taylor Wimpey, Peabody, Trium Environmental, CBRE, RER London Ltd, Stanley Sidings Ltd). Production and undertaking of Preliminary Ecological Appraisals, flora and fauna surveys, EcIA, ecological chapters in support of EIA, Habitat Regulations Assessments (HRA) Ecological BREEAM Assessments and Landscape and Ecological Management Plans (LEMP).
Holmer, Hereford	Ecological design input into residential scheme (approximately 400 houses) design and associated protected species surveys to support various planning applications. Post planning permission preparation of a Barn Owl mitigation strategy and Natural England GCN license application.
Rudloe Manor	Management and co-ordination of ecological survey for the restoration and redevelopment of the former Rudloe Manor, North Wiltshire. Emphasis was on the assessment of potential impacts on reptiles, GCN, Badgers and bats (including Greater and Lesser Horseshoe bats on the nearby Bath and Bradford on Avon Bats SAC). Baseline reports to support a planning application and detailed mitigation strategies were produced.
Showell Farm	Ecological assessment to inform a strategic study associated with a proposed development at Chippenham to inform the Local Development Framework for over 1000 houses. Lead ecologist, managed and undertook various ecological surveys for Bats, GCN, Otter and Water Voles, breeding birds, Common Dormice etc for input into possible development masterplan as part of a potential future planning application.
Various-Barn Conversions	Detailed bat survey work and mitigation design for private barn conversions/rebuilds and building demolition
Sebastopol, Pontypool	Undertaking of data review of over 10 years of ecological survey information to produce an Ecological Impact Assessment chapter for a strategic urban development expansion.
Sahara Landfill Site	Great Crested Newt Natural England development licence application with associated translocation and monitoring work.
Hew Hythe	Ecological input including protected species surveys for reptiles, bats and Water Voles all leading to mitigation work and selected translocations.
Ifield Mill	Project on behalf of Crawley Borough Council. Lead ecologist on a project to inform the possible decommissioning or repair of reservoir dams, as well as ecological enhancements of this site of nature conservation interest. Project Management and ecological input through Phase 1 survey, protected/notable flora and fauna survey (bats, reptiles, bird, GCN, otter, badger, white-clawed crayfish, invertebrates, woodland NVC) and study option scoping appraisals.

C. Photographs

Plate 1 - Watney's Sports Ground playing fields located to the south-west of the Site.

Plate 2 – Example of ephemeral and tall ruderal vegetation within the Site.

Plate 3 – Area of unmanaged ornamental planting located within the north of the Site.

Plate 4 – Example of urban trees within the north-west of the Site.

Plate 5 – Part of Boundary all adjacent to Mortlake High Street (roadside)

Plate 6 – Example of Virginia creeper overgrowing wall from neighbouring property within the north of the Site.

Plate 7 – Himalayan balsam growing on Site adjacent to the River Thames.

Plate 8 – The River Thames SMI lies adjacent to the northern boundary of the Site.

Plate 9 – South bank of the River Thames adjacent to the Site

Plate 10 – Mortlake Green lies adjacent to the southern boundary of the Site.

D. Potential Roost Assessment – Buildings

Building Description	Building Photographs	Bat Roost Potential
<u>B1 – Club House at the Sports Club</u> The Club House comprises a two-storey concrete framed building with redbrick walls and a flat roof. Overall, the building is in good condition. Rows of weep holes approximately 5cm in height and 1-1.5cm wide are present in the brick work at approximately 1m and 3m above ground level and provide opportunities for individual and opportunistic roosting bats.	 	Low.

Building Description	Building Photographs	Bat Roost Potential
<u>B2, B4, B5, B6 and B7 – Industrial Units</u> There are several industrial units across the Site including the Process Building (B2), Defunct Production Buildings including effluent treatment (B4), Powder Store (B5), <u>B6</u> - Finishing Cellar / Chip Cellar / Brew House and Offices (P.O.B) / and the west gatehouse (B7). These buildings are all of similar construction, with most buildings comprising brick walls at the ground level and corrugated metal cladding above with flat roofs. Other structures include units with shallow pitched corrugated asbestos roofs, tanks and portacabins. All of these buildings are simple in their construction and offer no opportunities for roosting bats. At B6 a shutter area formerly exposed has now been tightly boarded up.	 B2  B4  B5  B6  B7	Negligible.

Building Description	Building Photographs		Bat Roost Potential
B3 - Stables Court is a three-storey building of redbrick construction with a flat roof. Windows on the ground have been boarded, a number of which have become warped providing potential access points for bats. In addition, rows of weep holes approximately 5cm long and 1-1.5cm wide are present in the brick work at approximately 2m, 4m and 6m above ground level and provide opportunities for individual roosting bats.			Moderate.

Building Description	Building Photographs	Bat Roost Potential
<u>B8 – Maltings</u> The majority of this building comprises eight storeys, whilst the eastern section comprises nine storeys. It has brick walls and a pitched roof covered in slate tiles with lead flashing along the ridge line. All of the windows have been boarded up on the exterior and some gaps (not visible from ground level) are likely to be present around the edges. Several other smaller crevices were observed within the brickwork in various locations at the building. The pitched roof is in good condition with no obvious features for roosting bats observed during the external inspection. Personal communication with the Site manager (back in 2016-2017) confirmed that this building has no floors inside and is therefore open to the pitch internally.	  	Moderate (previously recorded a roost site in 2019).

Building Description	Building Photographs	Bat Roost Potential
<u>B9 – Packaging Building</u> The majority of the Packaging Building comprises a warehouse style building which has brick walls to 1 m high then corrugated plastic cladding above. The roof consists of hipped and pitched sections constructed from corrugated plastic sheeting with skylights present in some areas. A section on the southern aspect of the building comprises two storeys and is constructed from brick walls with a flat roof. Overall, the building is in good condition. In addition, rows of weep holes approximately 5cm long and 1-1.5cm wide are present in the brick work at approximately 1m, 3m, 4m, 6m and 7m above ground level and provide opportunities for individual and opportunistic roosting bats.	 	Low.

Building Description	Building Photographs	Bat Roost Potential
<u>B10 – L Block</u> L Block comprises the Former Bottling Building in the eastern section and a Former Hotel in the western section. The Former Bottling Building is three storeys and has a mixture of brick and concrete walls. The roof is mostly pitched with dormer windows protruding. On the eastern elevation of the Former Bottling Building a vent is present with gaps present between the slats, providing access into the roof void. In addition, and on the same elevation decorative horizontal crevices 1-1.5cm wide and 15cm long are present in the brickwork beneath the vent. On the northern aspect of the building soffit boarding is present on an area of sloping roof. The soffit board is approximately 1.5m long and has a gap underneath 5cm wide. Bricks are also missing in the northern aspect wall. On the southern aspect of the building adjacent to Lower Richmond Road/Mortlake High Street slipped and missing ridge tiles on the roof are present.	   	Moderate.

Building Description	Building Photographs	Bat Roost Potential
<u>B11 – East Gatehouse</u> A single storey brick-built building. The roof comprises a mixture of flat and shallow pitched sections covered in roofing felt. There is a plastic soffit box around the top of the external perimeter wall. Overall, the building is in good condition and no features of potential value to roosting bats were observed.		Negligible.
<u>B12 and B13 – Power House and Production (CO2 Block)</u> The CO2 Block (B12) and Power House building (B13) are similar in construction with brick walls at the base and corrugated metal cladding above with flat roofs. On the eastern aspect of B12 only (B13 shutter area now tightly boarded up) it appears that a former shutter has been removed resulting in the exposure of the cavity wall around the perimeter of where the removal works have been undertaken. The exposed cavity wall could lead to a potential roosting space for bats.	 B12  B13	B12 – Low. B13 – Negligible.

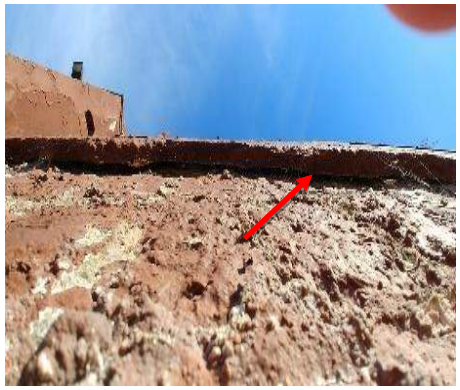
Building Description	Building Photographs	Bat Roost Potential
<u>B14 – The Jolly Gardener's Pub</u> This building is located outside the Site boundary but lies adjacent to the Site's southern boundary. The main section (eastern aspect) of this pub comprises three storeys, whilst the western aspect comprises one storey. It is constructed from brick with a hipped clay tiled roof at the eastern aspect and a flat roof at the western aspect. Dormer windows and chimney stacks protrude from the hipped roof. Numerous missing and slipped tiles were noted on the hipped roof which could provide potential opportunities for roosting bats.		Moderate.
<u>B15</u> This building is located outside the Site boundary but lies adjacent to the Site's southern boundary. It is a building of modern construction. The walls are constructed from metal and it has a metal flat roof. No features of potential value to roosting bats were observed.		Negligible.

E. Potential Roost Assessment – Southern boundary Wall

Description	Photographs	Bat Roost Potential
Wall (**Figure 1**) A section of wall runs adjacent to Mortlake High Street. On the Roadside the wall is in good condition and lacks voids and crevices. On the Site side of the wall gaps are present between the vertical and horizontal pillars and wall 3-6cm wide and along its length (up to a 2m section). Missing bricks are present at the wall 6cm wide and 8cm long and at height it is not possible to determine how far they intrude into the wall. Steel supporting girders are present with gaps present at the top of the wall 3-6cm wide and along its length (up to a 1.5m section). Gaps in brick work between the wall and a buttress within the south-eastern corner of the Site. The gap is approximately 1.5cm wide at its widest and 20-25cm in height. No enclosed cavity is present with the gap running through to the other side of the buttress.	   	Moderate.

F. Potential Roost Assessment – Northern boundary wall

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 1 (River Side) Feature present on the river side of the wall. The front of 'Budweiser' sign comprises sheet metal wording attached to what appears to be wooden boarding. The rear of the sign comprises a steel frame and corrugated steel sheeting. Whilst the sign is assessed to be a solid structure with no cavities, gaps are present between the wooden boarding and 'Budweiser' lettering. The gaps are 4 to 5cm at their widest and open to the elements from above, below and the sides. During the inspection no signs of roosting bats were recorded.		Moderate.
PRF 2 (Site Side) Feature present on the Site side of the wall. This section of the wall has areas of paint which are peeling, that may offer temporary sheltering opportunities for bats. During the inspection no signs of roosting bats were recorded.		

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 3 (Site Side) Feature present on the Site side of the wall. An open gap is present between steel support and the wall with 14 of these features present in close succession. The majority of the supports are flush with the wall or with a wide gap present, however several have a 1-3cm gap present along the length of the support. During the inspection no signs of roosting bats were recorded.		
PRF 4 (Site Side) Feature present on the Site side of the wall with 4 of these features present in close succession. The features are fully bricked up on the river side, with various heights of bricking up on the Site side, creating a cavities between approximately 40-80cm high. During the inspection no signs of roosting bats were recorded.	 	
PRF 5 (Site Side) Feature present on the Site side of the wall. An area of render has broken away from the wall and has created a linear gap between the render and the wall. The gap is 1cm wide at its greatest extent and protrudes up between 2 to 6cm. It is arguable if the cavity present is wide enough to provide an entrance point for bats, however spider webs are present both in the cavity and at the entrance. During the inspection no signs of roosting bats were recorded.		

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 6 (Site Side) Feature present on the Site side of the wall. Linear gaps are present in the wall where mortar is missing, in the vicinity of PRF 5. The gaps are 1 to 1.5cm tall, 4cm at their widest and protrude into the wall 3-5cm. The gaps contain debris from the mortar and spider webs are present. During the inspection no signs of roosting bats were recorded.		
PRF 7 (Site Side) Feature present on the Site side of the wall. An open gap is present around the window frame with 3 of these features present in close succession. The gap is 3 to 4cm wide and 5cm deep. Spider webs are present. During the inspection no signs of roosting bats were recorded.		

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 8 (River Side) Feature present on the riverside of the wall. A crack is present in the wall running up the brickwork from 1m to 2m above ground level. The crack is assessed to be superficial and is 2cm at its widest.		
PRF 9 (River Side) Large opening made by vandalism. Gap is considered too large and exposed to support roosting bats.		

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 10a and 10b (River Side) Both features are present on the river side of the wall and again are river side features of PRF 4. The features are the same except that 10a comprises a horizontal access point in the bottom left hand corner and 10b comprises 2 no. vertical access points down the left-hand side. The features are present at between 0.5 and 1m above ground level. Where previous bricking up works were undertaken the resulting cavity has been filled with debris. Where external mortar has been lost, internal debris which filled the cavity has also been lost, creating small cavities behind. The access points are 2 to 3cm high and 2 to 7cm long, with the internally cavities protruding between 5 and 10cm back and 5 to 7cm across. Old spider webs are present within the cavities and during the inspection no signs of roosting bats were recorded.	 	

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 11 (River Side) Feature present on the riverside of the wall. A gap is present between the top of a 'new' wall (constructed from darker brick work as part of previous bricking up work) and a concrete lintel above. The gap is 5cm wide.		
PRF 12 (River Side) Feature present on the riverside of the wall. A large crack is present at the stone lintel at the top of the wall (above ladder). The crack has split the stonework in two and has expanded in width to 5-6cm at its widest. The cavity is therefore open to the elements and to exposed to be of value to roosting bats.		

Description (for location of PRF refer to Figure 4)	Photographs	Bat Roosting Suitability
PRF 13 (River Side) Feature present on the river side of the wall and is a river side feature of PRF 4. The feature is present at 1.5m above ground level and is assessed to have formed due to bricking up work. The access point (created as a result of missing mortar) is 3 to 4cm high and 7 to 8cm wide and leads into a confined internal cavity. The cavity runs 1m along the top of the brick work and is 10cm wide but also drops down by 5cm on the site side of the wall. The cavity contains debris from the brick work including mortar and spider webs are present. During the inspection no signs of roosting bats were recorded, however a mouse was observed inside.		
PRF 14 (River Side) Feature present on the riverside of the wall. A crack is present above the bricked-up window. The crack is 1.5cm at is widest with spider webs and woodlice present. During the inspection no signs of roosting bats were recorded.		

G. Potential Roost Assessment – Trees

Description	Tree Photographs	Bat Roosting Suitability
T3 London plane growing out of hardstanding habitat to the north of the Site. Areas of peeled bark on southern aspect at 5m above ground level.		Low.
T10 London plane growing out of hardstanding habitat to the north of the Site. Snag end is present approximately 3m above ground level on the western aspect 3cm wide and 3 cm long.		Low.

Description	Tree Photographs	Bat Roosting Suitability
T37 Sycamore growing out of area of unmanaged ornamental planting with hardstanding underneath. Multi-stem tree with snag end approximately 4m above ground level on the southern aspect 3cm wide and 3 cm long.		Low.
T43 and T44 Both stands are Tree of heaven and are growing out of tall ruderal vegetation with hardstanding underneath. A woodpecker hole is present approximately 5cm wide and 5cm long on the northern aspect, 9m above ground level. Snag end/rot hole is also present on the northern aspect 9cm wide and 9cm long, 6m above ground level.		Moderate.

Description	Tree Photographs	Bat Roosting Suitability
T67 Red horse chestnut *Aesculus x carnea* growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Fissures or stress fractures 2-3cm wide and 20cm long are present on a limb, west facing aspect approximately 5m above ground level.	 	Moderate.
T68 Red horse chestnut growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Snag ends/rot holes are present on the south facing aspect approximately 5m above ground level 6cm wide and 8cm long.		Moderate.

Description	Tree Photographs	Bat Roosting Suitability
T71 Red horse chestnut growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Snag ends/rot holes on north facing aspect approximately 3-5m above ground level and on average 3-4cm wide and 6-8cm long.		Moderate.
T73 and T74 Pink hawthorn *Crataegus laevigatus* growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Both trees have light ivy covering.		Low.

Description	Tree Photographs	Bat Roosting Suitability
T75 Red horse chestnut growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Fissures or stress fractures 2-3cm wide and 20cm+ long are present on limbs, west facing aspect approximately 5-8m above ground level.	 	Moderate.
T78 Red horse chestnut growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Snag ends/rot holes present on northern aspect at 5-7m above ground level, on average 3cm wide and 3 cm long.	 	Moderate.

Description	Tree Photographs	Bat Roosting Suitability
T83 Wingnut *Pterocarya sp* growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Old woodpecker hole approximately 5cm wide and 5cm long in present on the northern aspect of the tree, 2.5m above ground level. In addition, a split limb on the northern aspect, growing on the western side of the tree is present. The split is approximately 5-7cm wide and 30cm long.	 	Moderate.
T84 London plane growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Snag ends are present approximately 5cm wide and 5cm long on north facing aspect 2m above ground level.		Low.

Description	Tree Photographs	Bat Roosting Suitability
T94 London plane growing in area of managed amenity grassland as part of Watney's Sports Ground playing field. Fissure is present approximately 5cm wide and 30cm long on north facing aspect 304m above ground level.		Low.
T121 Cherry *Prunus sp* that has been subject to recent limb removal works. Fissures are present on south facing aspect approximately 2-3cm wide and 10cm long. No access was possible inside the Chalkers Corner component of the Site.		Low.

Description	Tree Photographs	Bat Roosting Suitability
Tree 157 and T321 Two London plane trees Located within area of mown grass on edge of Mortlake Green to the south of the Site. Snag ends/rot holes are present approximately 6cm wide and 6cm long on the western aspect 4m above ground level and flaked bark 8m above ground level on the eastern aspect.	 	Moderate.

UK and Ireland Office Locations