APPENDIX 13.2
PROTECTED SPECIES REPORT

The Former Stag Brewery, Mortlake

Protected Species Report

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Waterman Infrastructure & Environment Limited
Merchants House, Wapping Road, Bristol, BS1 4RW.
www.watermangroup.com

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This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2008, BS EN ISO 14001: 2004 and BS OHSAS 18001:2007)

Issue	Date	Prepared by	Checked by	Approved by
Third Issue	February 2018	Hayley Bishop Principal Ecologist	Lee Mantle Associate Director	Lee Mantle Associate Director

Comments

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1. Introduction

1.1. This Protected Species Report (PSR) has been prepared by Waterman Infrastructure & Environment Ltd (Waterman IE) on behalf of Reselton Properties Limited ('the Applicant') in support of three linked planning 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 former Stag Brewery Site 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 brewing structures, large areas of hardstanding and playing fields.

1.3. The redevelopment 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.

1.4. The three planning applications are as follows:

- 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 1' throughout).
- Application B – detailed planning application for the school (on land to the west of Ship Lane).
- Application C – detailed planning application for highways and landscape works at Chalkers Corner.

1.5. Full details and scope of all three planning applications are described in the submitted Planning Statement, prepared by Gerald Eve LLP.

1.6. This report sets out the findings of the bat surveys and black redstart surveys undertaken at the Site, together with any recommendations for any mitigation and enhancement measures.

Previous Survey Assessments / Consultation

1.7. A Preliminary Ecological Appraisal (PEA) comprising an ecological desk study, an 'Extended' Phase 1 Habitat Survey, a search for common invasive floral species and preliminary bat roost inspection at buildings (external) and trees (ground based) was undertaken by Waterman IE.

1.8. The 'Extended' Phase 1 Habitat Survey found the Site to comprise a large former brewery complex (the Stag Brewery Component of the Site) and a road junction known as Chalker's Corner (the Chalker's Corner Component of the Site). The brewery complex is dominated by buildings and hardstanding. Other habitats present at the Site include a small section of Mortlake Green, Watney's Sports Ground playing fields, amenity grassland, trees, ornamental planting, a hedge, scattered trees and ephemeral vegetation (**Figure 1**).

1.9. The external preliminary roost inspection of buildings at the Site assessed the following buildings as having **low** potential to support roosting bats:

- The Maltings (B8);

- L Block – former bottling building and former hotel (B10);
- CO2 Block (B12); and
- Power House (B13).

1.10. In addition, the Jolly Gardener's Pub (B14), which is located adjacent to the Site, was assessed to have **moderate** bat roosting potential. All other buildings on-Site and adjacent were assessed as having **negligible** potential to support roosting bats.

1.11. Five trees (all red horse chestnut *Aesculus x carnea*) on-Site, all along the southern boundary of Watney's Sports Ground playing fields in the Stag Brewery component of the Site, were assessed to have **moderate** potential to support roosting bats. A further two trees along the Stag Brewery component of the Site boundary at Mortlake Green were also assessed to have **moderate** potential. All other trees on-Site were assessed as having **low** or **negligible** potential to support roosting bats.

1.12. The 'Extended' Phase 1 Habitat Survey also identified habitats at the Site, such as buildings and the adjacent River Thames, which could support black redstarts *Phoenicurus ochruros*.

1.13. An Environmental Impact Assessment (EIA) Scoping Report[1] was issued to LBRuT in March 2017. This included an ecology and biodiversity section under the 'Key issues to be addressed by the EIA' section. A formal Scoping Opinion was received from LBRuT on 30th June 2016[2]. With regards to ecology, LBRuT requested the scope of bat surveys to be increased to cover commuting bats at the whole Site. Subsequent consultation (**Appendix A**) with Tasha Hunter (Ecology and Planning Officer serving Richmond and Wandsworth Councils) was undertaken to agree the scope of bat activity surveys. The results of the bat activity surveys are presented in this report and were concentrated at the northern boundary of the Stag Brewery component of the Site adjacent to the River Thames.

Aims and Objectives of this Assessment

1.14. Owing to the results of the PEA, an internal preliminary roost inspection (where access allowed) and evening emergence / dawn re-entry surveys at buildings (B8, B10, B12, B13 and B14) and trees of moderate potential were undertaken to reasonably determine the presence / likely absence of roosting bats in line with current best practice survey guidelines[3] and in agreement with LBRuT. In addition, bat activity and automated detector surveys were undertaken along the northern boundary of the Stag Brewery component of the Site which lies adjacent to the River Thames. Such surveys were also undertaken in accordance with consultation with LBRuT.

1.15. A black redstart survey was also undertaken to determine the presence / absence of black redstarts on and adjacent to the Site.

1.16. The findings of these surveys are presented in this report, together with recommendations for any mitigation and enhancement measures.

[1] Waterman IE (2017); 'Stag Brewery, Mortlake: Environmental Impact Assessment Scoping Report' (Ref: WIE10667-101-1-3-4-RB).

[2] London Borough of Richmond Upon Thames (2017); 'Stag Brewery, Mortlake and Chalkers Corner, Richmond: Formal scoping opinion'.

[3] 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

2. Relevant Planning Policy and Legislation

Legislation

Bats

2.1. All UK bat species are protected by The Conservation of Habitats and Species Regulations 2010 (as amended)[1] and by the Wildlife and Countryside Act (WCA)1981 (as amended)[4]. Taken together, it is an offence to:

- deliberately kill, injure or capture a bat;
- deliberately disturb bats in such a way as to be likely to significantly 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
- intentionally or recklessly obstruct access to any place used by bats for shelter or protection.

Birds

2.2. The level of protection afforded under the law varies from species to species. Identified game and pest species may lawfully be hunted and killed, usually under licence, whilst the most threatened or rarest breeding species are listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended)[5] and are protected by special penalties for offences.

2.3. Black redstarts are afforded National protection under Schedule 1 of the WCA 1981 (as amended). It is an offence to intentionally take, injure or kill a black redstart or to take damage or destroy its nest, eggs or young. It is also an offence to intentionally or recklessly disturb the birds close to their nest during the breeding season.

2.4. All of the native bird species of Britain are additionally covered by the European Union (EU) Directive on the Conservation of Wild Birds 2009 ('The Birds Directive'[6]). The EU Birds Directive (79/409/EEC[7]) resulted in the designation of Special Protection Areas (SPAs) for rare or vulnerable bird species listed on Annex 1 (The species listed in Annex I of the Birds Directive are, according to the Directive, those in danger of extinction, rare, vulnerable to specific changes in their habitat or requiring particular attention for reasons of the specific nature of their habitat) of the Directive and for regularly occurring migratory species. 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 2010 (as amended).

2.5. 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

4 HMSO (2010); 'The Conservation of Habitats and Species Regulations' (as amended).
5 HMSO (1981); Wildlife and Countryside Act 1981 (as amended).
6 European Commission (2009); 'Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds'.
European Commission (1979); 'Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds'.

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[8], the Royal Society for the Protection of Birds (RSPB) 'Birds of Conservation Concern[7]' lists and species listed in the UK and local Biodiversity Action Plans (BAPs).

2.6. The BTO Conservation Alert System lists of 'Birds of Conservation Concern' including a 'Red List' for birds of high conservation concern. Red List species are those that are globally threatened according to the International Union for Conservation of Nature (IUCN) criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery, including:

- globally threatened according to the IUCN;
- historical population decline in UK during 1800-1995;
- rapid (>50%) decline in UK breeding population over the last 25 years; and
- rapid (>50%) contraction of UK breeding range over the last 25 years.

2.7. The BTO Conservation Alert System lists 'Birds of Conservation Concern' including an 'Amber List' for birds of medium conservation concern. 'Amber List' species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations, including:

- historical population decline during 1800-1995, but recovering: population size has more than doubled over last 25 years;
- moderate (25-49%) decline in UK breeding population over the last 25 years;
- moderate (25-49%) contraction of UK breeding range over the last 25 years;
- >50% of UK breeding population in 10 or fewer sites;
- >20% of European breeding population in UK;
- species with unfavourable conservation status in Europe; and
- it is important to note that certain 'Red list' species also qualify for 'Amber List' criteria.

2.8. An updated list of 'Red' and 'Amber List' species was published in December 2015[9].

2.9. 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 Act, 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.

8 Baillie, S.R., Marchant, J.H., Leech, D.I., Renwick, A.R., Eglington, S.M., Joys, A.C., Noble, D.G., Barimore, C., Conway, G.J., Downie, I.S., Risely, K. & Robinson, R.A. (2012); 'BirdTrends 2011'. BTO Research Report No. 609. BTO, Thetford. http://www.bto.org/birdtrends.

9 Eaton et al (2015); 'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man'. Available [online] at: britishbirds.co.uk/wp-content/uploads/2014/07/BoCC4.pdf

National Planning Policy

National Planning Policy Framework, 2012

2.10. The National Planning Policy Framework[10] (NPPF) was published in March 2012. Section 11 (outlined below) of the NPPF, 'Conserving and Enhancing the Natural Environment', effectively replaces former Planning Policy Statement 9: Biodiversity and Geological Conservation. However, Government Circular 06/2005[11] - 'Biodiversity and Geological Conservation: Statutory Obligations and Their Impact within the Planning System', remains valid and is referenced within the NPPF.

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

- *"Recognising the wider benefits of ecosystem services; and*
- *Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the government's commitment to halt the overall decline in biodiversity, including by establishing ecological networks that are more resilient to current and future pressures."*

2.12. The NPPF also stipulates that Local Planning Authorities (LPAs), when determining planning applications, should seek to conserve and enhance biodiversity, by applying the following principles:

- *"Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted; and*
- *Opportunities to incorporate biodiversity in and around developments should be encouraged".*

National Planning Practice Guidance, 2014

2.13. The Government's National Planning Practice Guidance[12] (NPPG) is intended to provide guidance to LPAs 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 London (consolidated with alterations since 2011), 2016

2.14. The London Plan: The Spatial Development Strategy for London[13] (London Plan) sets out the overall strategic plan, setting out a framework for development over the next 20 to 25 years and includes a number of policies relating to ecology. Key to the London Plan is Policy 7.19 'Biodiversity and Access to Nature' which sets out the Mayor's policy in relation to biodiversity and access to nature. In outline, it includes the following:

10 Department of Communities and Local Government (2012); 'National Planning Policy Framework'.
11 Department of Communities and Local Government (2005); 'Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and their Impact within the Planning System'.
12 Department for Communities and Local Government (2014); 'National Planning Practice Guidance'. DCLG, London.
13 Mayor of London (2016); 'The London Plan, The Spatial Development Strategy for London Consolidated with Alterations Since 2011. March 2016'. Available from http://www.london.gov.uk/priorities/planning/londonplan

"A) The Mayor will work with all relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayor's Biodiversity Strategy. This means planning for nature from the beginning of the development process and taking opportunities for positive gains for nature through the layout, design and materials of development proposals and appropriate biodiversity action plans; …

C) Development proposals should:

- *Wherever possible, make a positive contribution to the protection, enhancement, creation and management of biodiversity;*
- *Prioritise assisting in achieving targets in biodiversity action plans (BAPs) set out in Table 7.3 (refer to original document) and/or improving access to nature in areas deficient in accessible wildlife sites*
- *Not adversely affect … on the population or conservation status of a protected species or a priority species or habitat identified in a UK, London or appropriate regional BAP or borough BAP".*

D) On Sites of Importance for Nature Conservation development proposals should:

- *b) give strong protection to sites of metropolitan importance for nature conservation (SMIs). These are sites jointly identified by the Mayor and boroughs as having strategic nature conservation importance*
- *c) give sites of borough and local importance for nature conservation the level of protection commensurate with their importance*

The Mayor's Biodiversity Strategy: Connecting with London's Nature, 2002

2.15. The Mayor's Biodiversity Strategy[14] complements the adopted London Plan. It sets out how London's biodiversity can be protected. Relevant policies within the Biodiversity Strategy include:

- *Policy 1: "The Mayor will work with partners to protect, manage and enhance London's biodiversity";*
- *Policy 3: "The Mayor will encourage and promote the management, enhancement and creation of green space for biodiversity, and promote public access and appreciation of nature";*
- *Policy 5: "The Mayor will seek to ensure that opportunities are taken to green the built environment within development proposals and to use open spaces in ecologically sensitive ways. This is particularly important in areas deficient in open spaces and in areas of regeneration"; and*
- *Policy 13: "The Mayor is committed to increasing the funding for biodiversity projects in London, and wishes to ensure that major new development projects include provision for biodiversity".*

14 Mayor of London (2002); 'The Mayor's Biodiversity Strategy: Connecting with London's Nature'.

Mayor of London's Supplementary Planning Guides: Sustainable Design and Construction, 2014

2.16. The Mayor republished the Supplementary Planning Guidance (SPG) for Sustainable Design and Construction in April 2014[15]. The SPG refers to nature conservation and biodiversity and suggests that in order to conserve and enhance the natural environment and biodiversity, there should be no net loss in the quality and quantity of biodiversity across a site. The SPG also states that developments should be designed so the biodiversity is enhanced and connectivity between patches of urban habitat is increased. The design of a development should reduce indirect adverse impacts of the development on species, habitats and landscapes.

Local Planning Policy

London Borough of Richmond upon Thames: New Local Plan

2.17. LBRuT are currently preparing a new Local Plan for the borough, which will replace existing policies within the Core Strategy and Development Management Plan (see below). The Plan will set out policies and guidance for the development of the borough over the next 15 years. On 19th May 2017, LBRuT submitted the final draft of the Local Plan[16], along with other publication and submission documents, evidence and supporting documents to the Secretary of State for Communities and Local Government for independent Examination. The following strategic visions, objectives and policies within the final draft of the Local Plan are of relevance to biodiversity:

2.18. 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"

2.19. 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;

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

15 Greater London Authority (April 2014); 'Sustainable Design and Construction Supplementary Planning Guidance', London.

16 London Borough of Richmond Upon Thames (2017); 'Local Plan: Public version for consultation, 4 January – 15 February 2017'.

where possible, increasing access to and alongside the rivers where appropriate, and gain wider local community benefits when sites are redeveloped."

2.20. 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;*
- *its contribution to the wider green infrastructure network by delivering landscape enhancement, restoration or re-creation*

*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."*

2.21. 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."*

2.22. Policy 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."*

2.23. 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."

2.24. 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: Core Strategy, 2009

2.25. The LBRuT Core Strategy[17] was adopted on 21st April 2009 and it forms one of the documents that make up the Local Development Framework. The Core Strategy contains strategic policies to guide the future development of the Borough over the next 15 years.

2.26. LBRuT's adopted Core Strategy identifies the spatial vision for the Borough. With regards to biodiversity, the following Spatial Strategy Summary is stated within the Core Strategy:

"Open spaces, biodiversity and the historic environment will be protected and enhanced."

2.27. Spatial Policy CP4 'Biodiversity' states:

"The Borough's biodiversity including the SSSIs and Other Sites of Nature Importance will be safeguarded and enhanced. Biodiversity enhancements will be encouraged particularly in areas of deficiency (parts of Whitton, Hampton, Teddington, Twickenham and South Kew), in areas of new development and along wildlife corridors and green chains such as the River Thames and River Crane corridors'.; and

"Weighted priority in terms of their importance will be afforded to protected species and priority species and habitats in the UK, Regional and Richmond upon Thames Biodiversity Action Plans".

2.28. Spatial Policy CP11 'River Thames Corridor' states:

"The natural and built environment and the unique historic landscape of the River Thames corridor within the Borough will be protected and enhanced."

London Borough of Richmond upon Thames: Development Management Plan, 2011

2.29. The Development Management Plan[18] was adopted on 1st November 2011. It builds on the Core Strategy and includes more detailed policies for managing development. Several policies relate to biodiversity and these are outlined below:

[17] London Borough of Richmond upon Thames (2009); 'Local Development Framework Core Strategy'.
[18] London Borough of Richmond upon Thames (2009); 'Local Development Framework Development Management Plan'.

2.30. Policy DM OS 5 'Biodiversity and New Development' states:

"All new development will be expected to preserve and where possible enhance existing habitats including river corridors and biodiversity features, including trees;

All developments will be required to enhance existing and incorporate new biodiversity features and habitats into the design of buildings themselves as well as in appropriate design and landscaping schemes of new developments with the aim to attract wildlife and promote biodiversity, where possible;

When designing new habitats and biodiversity features, consideration should be given to the use of native species as well as the adaptability to the likely effects of climate change; and

New habitats and biodiversity features should make a positive contribution to and should be integrated and linked to the wider green and blue infrastructure network, including de-culverting rivers, where possible."

2.31. Policy DM DC 4 'Trees and Landscape' states:

"The boroughs trees and landscape will be protected and enhanced by:

- *planting and encouraging others to plant trees, clumps and thickets particularly in areas of deficiency as shown on the Proposals Map and of a type and species as set out in the Borough's Tree Strategy;*
- *continuing to maintain trees in streets and public open spaces and of selectively clearing and replanting trees; and*
- *requiring landscape proposals in submissions for new development, which retain existing trees and other important landscape features where practicable and include new trees and other planting. Where trees are removed, appropriate replacement planting will normally be required. There will be a presumption against schemes that result in a significant loss of trees, unless replacements are proposed and there is good reason such as the health of the trees, public amenity, street scene or restoration of an historic garden. Landscaping schemes should take account of the Borough's Tree Strategy."*

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

2.32. 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'[19] has been published by LBRuT. This SPG states:

"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."

[19] London Borough of Richmond upon Thames (no-date); 'Design Guidelines for Nature Conservation & Development'.

2.33. 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 Stag Brewery component of the Site is allocated on the Proposals Map as site S4 (Budweiser Stag Brewery)[20].

2.34. The LBRuT adopted a planning brief for the Site in July 2011 with SPD[21] 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

2.35. 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'[22]. 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

2.36. 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'[23] covers the period from 2011 to 2020. This now supersedes the UK Biodiversity Action Plan (UK BAP)[24]. 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.

2.37. 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 PSR, 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.

20 London Borough of Richmond upon Thames (2005); 'Unitary Development Plan. Chapter 12 – Local Strategies and Plan Proposals'.
21 London Borough of Richmond upon Thames (2011); 'Stag Brewery, Mortlake, SW14 Planning Brief. Supplementary Planning Guidance'.
22 London Borough of Richmond upon Thames (2015); 'Mortlake Village Planning Guidance. Supplementary Planning Guidance'.
23 JNCC and DEFRA (on behalf of the Four Countries' Biodiversity Group) (2012); 'UK Post-2010 Biodiversity Framework'.
24 HMSO (1994); 'Biodiversity The UK Action Plan'.

Local Biodiversity Action Plans

2.38. At a local level, the Site is covered by the London Biodiversity Action Plan[25] (LBAP) and the LBRuT Biodiversity Action Plan[26] (RBAP). These documents set out the framework for the protection, conservation and enhancement of wildlife within London and LBRuT.

2.39. In relation to this report, the following SoPI listed under S41 of the NERC Act, together with London BAP and RBAP priority species (SAPs) are considered to be relevant:

- Bats (RBAP & LBAP) (soprano pipistrelle *Pipistrellus pygmaeus* and noctule *Nyctalus noctula* bat - SoPI);
- Black redstart (LBAP);
- Herring gull *Larus argentatus argenteus* (SoPI);
- Dunnock *Prunella modularis* (SoPI);
- Starling *Sturnus vulgaris* (SoPI); and
- Song thrush *Turdus philomelos* (RBAP and SoPI).

Guidance

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

2.40. 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. 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*'[27]. 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

2.41. The UK commitment to halt overall loss of biodiversity by 2020 in line with the European Biodiversity Strategy and UN Aichi targets[28], is passed down to LPAs 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.

2.42. 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.

25 The London Biodiversity Partnership (2004); 'London Biodiversity Action Plan'.
26 London Borough of Richmond upon Thames (2013); 'Biodiversity Action Plan'.
27 Defra (2011); 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services'.
28 https://www.cbd.int/sp/targets/

2.43. 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 minimise impact.

3. Methodology

Internal Preliminary Roost Inspections of Buildings

3.1. As summarised previously, the external preliminary roost inspection of buildings undertaken as part of the PEA identified buildings B8, B10, B12 and B13 within the Stag Brewery component of the Site as having **low** potential to support roosting bats and building B14 adjacent to the Stag Brewery component of the Site as having **moderate potential**. All other buildings and all trees were assessed as having **negligible** potential to support roosting bats.

3.2. As part of this assessment, on the 13th June 2016 an internal preliminary roost inspection for bats was undertaken at building B10 (refer to **Figure 2**). No internal preliminary roost inspections were undertaken at B8, B12, B13 and B14 (refer to limitations section below). The survey was led by an experienced ecologist who holds a Natural England Bat Licence (Class 2).

3.3. The survey consisted a visual inspection of the accessible loft spaces for evidence of bat use such as bat droppings, prey residues (such as fly or moth wings), urine stains, and bats themselves.

Bat Evening Emergence and Dawn Re-entry Surveys

3.4. To confirm the presence or absence of roosting bats within the buildings (B8, B10, B12, B13 and B14) and trees of moderate bat potential, evening emergence / dawn re-entry surveys were undertaken based on current best practice guidelines.

3.5. At the time of undertaking the evening emergence / dawn re-entry surveys, the scope of tree loss as a result of the Development was not fully known. It was however considered that the trees in the south of Watney's Sports Ground playing fields could be subject to removal as a result of the Development. As such, evening emergence / dawn re-entry surveys were undertaken at these five moderate potential trees. Subsequently it was decided by the Applicant to retain these trees within the Development. No surveys of the two moderate potential trees at Mortlake Green were undertaken because these they will be retained as part of the Development.

3.6. A sufficient number of surveyors were used during each survey to ensure all of the potential bat access features at the buildings and trees were covered. The surveys were led by an ecologist who holds a Natural England Class 2 Bat Survey Licence. The positions of the surveyors during the evening emergence / dawn re-entry surveys are presented on **Figures 3**, **4**, **5** and **6**.

3.7. The surveys were undertaken using time expansion (Pettersson D240X) bat detectors recorded to solid state MP3 recorders. This survey equipment is considered suitable for detecting all resident species of UK bats.

3.8. The surveys were undertaken in appropriate weather conditions and within the recognised bat active season (May to August). **Table 1** below provides a summary of the evening emergence / dawn re-entry surveys undertaken.

Table 1: Summary of Evening Emergence and Dawn Re-entry Bat Surveys

Survey	Date	Dusk/Dawn Time	Time start/ end (GMT+1)	Start Weather conditions	Temp at start	Temp at end
Evening Emergence (B10 and B12).	06.07.16	21:19	21:04-22:49	Beaufort Scale (BF) 1, cloud cover 100%.	20ºC	18ºC
Dawn Re-entry (B14 and trees).	07.07.16	04:54	03:24-05:09	BF1, cloud cover 80%.	14ºC	14ºC

Survey	Date	Dusk/Dawn Time	Time start/ end (GMT+1)	Start Weather conditions	Temp at start	Temp at end
Evening Emergence (B14 and trees).	19.07.16	21:07	20:52-22:37	BF2, cloud cover 0%.	29ºC	28ºC
Dawn Re-entry (B8 and B13).	20.07.16	05:09	03:39-05:24	BF1, cloud cover 20%.	25ºC	24ºC

Bat Activity Surveys

3.9. The Site is assessed as comprising low habitat suitability for bats given its urban nature. To determine the use of the habitats along the northern boundary of the Stag Brewery component of the Site adjacent to the River Thames, three bat activity surveys were undertaken in accordance with the scope agreed with LBRuT (**Appendix A**).

3.10. The evening activity surveys commenced from sunset to two hours thereafter and the dawn activity survey was undertaken in reverse. A pair of surveyors followed a pre-determined transect route along the north boundary of the Site which lies adjacent to the River Thames (**Figures 7**, **8** and **9**).

3.11. All surveys were undertaken in appropriate weather conditions and within the recognised optimal bat active season for activity surveys at a Site of this nature. **Table 2** below provides a summary of the timings and weather conditions of the bat surveys undertaken. Any bats observed were recorded. Information included:

- time;
- emergence or re-entry points;
- direction of flight;
- use of landscape;
- flight characteristics;
- size;
- height; and
- behaviour.

Table 2: Summary of Bat Activity Surveys

Date	Dusk/Dawn Time	Time start/ end (GMT+1)	Start Weather conditions	Temp at start	Temp at end
13.07.17	21:13	21:00-23:13	Beaufort Scale (BF) 1, cloud cover 85%.	18ºC	17ºC
08.08.17	05:35	03:35-05:35	BF0, cloud cover 85%.	17ºC	19ºC
04.07.17	19:42	19:40-21:47	BF4, cloud cover 45%.	17ºC	16ºC

Automated Bat Detector Surveys

3.12. To supplement the bat activity data, an automated bat detector (Model Number: SM2BAT+) was placed on a wall at the northern boundary of the Stag Brewery component of the Site (with the microphone facing the River Thames, refer to **Figures 7, 8** and **9**) for five consecutive nights on

three separate occasions, in accordance with the scope agreed with LBRuT (**Appendix A**). The automated detectors were set to record all night and were programmed to record from 30 minutes prior to sunset until 30 minutes post sunrise.

3.13. The dates and weather conditions for the automated detector recording sessions are shown in **Table 3**.

Table 3: Date and weather conditions for automatic bat detector survey

Recording Period	Weather description[29]
13/07/2017 – 15/07/2107	Overall: Optimal conditions. Over survey period, low temperature at dusk 14ºC; high wind speeds 9mph and rainfall 0mm.
08/08/2017 & 10/08/2017 - 13/08/2017	Overall: Optimal conditions. Over survey period, low temperature at dusk 13ºC; high wind speeds 11mph and rainfall 0mm.
04/09/2017 – 08/09/2017	Overall: Optimal conditions. Over survey period, low temperature at dusk 12ºC; high wind speeds 12mph and rainfall 0mm.

Bat Data Analysis

3.14. All bat survey work was undertaken using time expansion (Pettersson D240X and SM2BAT+) bat detectors with data recorded onto solid state MP3 recorders (where applicable). This survey equipment is considered suitable for detecting all resident species of UK bats. Recorded bat calls were later analysed using appropriate sound analysis reference publications[30] where appropriate using BatSound 4.1.2b and Analook.

Black Redstarts

3.15. A series of five black redstart surveys, occurring approximately every fortnight, were carried out between 13th May and 29th June 2016 to ascertain the status of this species at the Site and at adjacent habitats (an approximate 25 m buffer around the Site was surveyed) (refer to **Table 4**). The methodology broadly followed the industry standard for this species as outlined in 'Bird Monitoring Methods'[31]. Each survey commenced between dawn and sunrise as this is the period when black redstarts are the most vocal and therefore most likely to locate.

3.16. In addition, observations and counts of other bird species recorded on each visit were noted, identifying whether they were present on-Site, adjacent to the Site or over-flying the Site. This additional information was used to assess the ornithological value of the Site.

3.17. The black redstart survey was undertaken by a professional ornithologist with over 20 years of experience in conducting bird surveys.

29 Historical weather conditions from http://www.wunderground.com/
30 Russ. J. (2012); 'British Bat Calls: A Guide to Species Identification'. Pelagic Publishing.
31 Gilbert, G. (2011); 'Bird Monitoring Methods – A manual of techniques for key species'. RSPB.

Table 4 : Summary of Black Redstart Surveys

Survey	Date	Dawn Time	Time start/ end (GMT+1)	Start Weather conditions	Temp at start	Temp at end
1	13.05.16	05:11	04:10-06:45	BF3, cloud cover 100%, good visibility.	11ºC	11ºC
2	26.05.16	04:54	04:02-06:35	BF0, cloud cover 50%, excellent visibility.	9ºC	11ºC
3	06.06.16	04:45	03:50-06:19	BF1, cloud cover 0%, excellent visibility.	13ºC	14ºC
4	17.06.16	04:43	03:45-06:12	BF2, cloud cover 75%, good visibility.	13ºC	13ºC
5	29.06.16	04:47	03:45-06:22	BF2, cloud cover 80%, good visibility.	11ºC	14ºC

Evaluation

3.18. The evaluation of species within this report is based on published guidance[32]. The value of specific ecological features is assigned using a geographic frame of reference, i.e. international and European value being the most important, followed by national, regional, metropolitan / county / vice-county, district, borough and local value. For purposes of this report, features which are assessed to have below a district, borough or local value, have been assigned a geographical frame of reference of either Site value or where the feature has low or limited ecological value a negligible ecological value has been assigned.

3.19. Value judgements are based on various characteristics that can be used to identify ecological resources or features likely to be important in terms of biodiversity. These include site designations (such as SSSIs), or for undesignated features, the size, conservation status (locally, nationally or internationally), and the quality of the ecological resource. In terms of the latter, 'quality' can refer to habitats (for instance if they are particularly diverse, or a good example of a specific habitat type), other features (such as wildlife corridors or mosaics of habitats) or species populations or assemblages.

3.20. Value judgements are also based on the Ecologist's academic and professional qualifications, in addition to past experience of undertaking similar assessments.

Limitations

3.21. The interior of the Maltings (B8) was not subject to an internal preliminary roost inspection owing to the presence of asbestos containing materials posing a risk to the health of surveyors. Furthermore, internal preliminary roost inspections were not undertaken at buildings B12, B13 and B14 due to the absence of loft spaces. One loft space in building B10 (**Figure 2**) was accessible via two loft hatches. However, owing to the poor condition of the internal loft void, it was inspected from the hatches only via a ladder to ensure the safety of the surveyor. It is understood (via discussion with the Site security guard) that access to three other loft spaces within B10 have been blocked off and therefore these were not subject to an internal preliminary roost inspection. Despite the limited internal access, it is considered that the external preliminary roost inspection, together

32 CIEEM (2016); 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal', Second Edition. Chartered Institute of Ecology and Environmental Management, Winchester.

with the undertaking of the dawn re-entry survey is sufficient survey effort to inform this assessment.

3.22. Whilst static automated detectors allow a large amount of ultrasound data to be collected on bat activity at a site, it does not allow an accurate indication of the number of bats which may be present. Rather than allowing predictions of population size, this form of remote surveying gives an indication of bat activity levels and species presence (where identification techniques allow). The detected echolocation calls may be from a single bat echolocating foraging for a prolonged period in the detection zone, or may be from multiple bats passing the detector commuting from a large roost. However, as each file is stamped with the time and date when the ultrasound was recorded, it can allow for a general prediction of how a site is being used by bats such as a commuting route from a nearby roost or foraging area.

3.23. It should be noted that the automated detector only recorded for 3 night periods in July. However, this is not assessed to be a constraint to the survey given both August and September recorded for a 5-night period and the other bat activity surveys undertaken at the Site in 2017 and historically. It should also be noted that whilst five recording nights were undertaken in August, these were not all consecutive (8th and 10th – 13th August 2017). This is because no recordings were made on the 9th August, it is not known whether this was because no bat recordings were made or if there was an error in the equipment. However, this is not assessed to be a constraint given that five nights of bat data recordings have been attained for August.

4. Results

Internal Preliminary Roost Inspection

4.1. As detailed in the methodology section of this report, the accessible loft space within building B10 (**Figure 2**) was subject to an internal preliminary roost inspection as part of this assessment.

4.2. The accessible loft void within building B10 is approximately 3 m in height to the ridge and felting is present on the underside of the roof. The felting was observed to be in good condition, with the exception some small tears. The loft space was dark indicating that there are no obvious access points into the loft space from the exterior by bats. However, it is possible that bats could be roosting in the presumed void between the external roof tile covering and the roofing felt in the interior. No evidence of bats was recorded during the internal preliminary roost inspection of building B10. Based on the results of the internal preliminary roost inspection, it is considered that building B10 has **low potential** to support roosting bats, as per the original rating given during external preliminary roost inspection.

Bat Evening Emergence and Dawn Re-entry Surveys

4.3. The following results section should be read in conjunction with the bat surveyor positions and bat registration numbers detailed on **Figures 3, 4, 5 and 6** together with **Appendix B**.

4.4. No bats were observed emerging or entering buildings B8, B10, B12, B13 and B14 or the moderate potential trees during the evening emergence and dawn re-entry surveys. However, low activity of common pipistrelle *Pipistrellus pipistrellus,* soprano pipistrelle, noctule and serotine *Eptesicus serotinus* was recorded during the surveys, a summary of which is provided below.

Common pipistrelle

4.5. Common pipistrelle was the bat species most recorded during the surveys. Individuals were observed foraging under tree canopy on edge of Mortlake Green (a public park to the south of the Stag Brewery component of the Site) and commuting from Mortlake Green into and across the Stag Brewery component of the Site.

Soprano pipistrelle

4.6. Soprano pipistrelle was the second most recorded bat species. None of these bats were observed. However, all calls were recorded within the vicinity of the southern boundary of the Stag Brewery component of the Site and therefore it is considered likely that the bats were associated with the habitats within Mortlake Green.

Noctule

4.7. At 04:27 on 07/07/2016 a single noctule was recorded foraging briefly within Watney's Sports Ground playing fields. Intervals of noctule foraging activity were also recorded over the River Thames during the dawn survey on 20/07/2016. Four other passes of noctule were recorded throughout the surveys. Two of these bats were seen commuting. One individual was commuting south east to north east at approximately 10 m above ground level over Watney's Sports Ground playing fields. A second individual was recorded commuting over the River Thames together with a serotine (see below).

Serotine

4.8. A single serotine was recorded at 03:42 on 20/07/2016 commuting over River Thames at 10 m above water level in an easterly direction.

Bat Activity Surveys

4.9. Detailed descriptions of bat activity recorded during each activity survey are provided below and illustrated on **Figures 7**, **8** and **9**. Full bat activity recording forms are provided in **Appendix C**.

13 July 2017 Evening Activity Survey

4.10. A total of eight bat recordings were made along the survey transect. The first bat call at 21:41 was a soprano pipistrelle commuting east over the River Thames (28 minutes after sunset). Two further soprano pipistrelle recordings were made during the survey; notably two bats foraging at the river edge at 21:43 and a further single pass (heard, not seen) at 22:26. The remaining five recordings were of common pipistrelle; notably a single pass (heard, not seen) at 22:05, a foraging bat at the river edge at 22:17, a bat commuting east over the River Thames then back toward the Stag Brewery component of the Site at 22:32, then single passes (heard, not seen) at 22:35 and 22:39.

8 August 2017 Dawn Activity Survey

4.11. Bat activity during this survey was low, with only three bat passes recorded. Two common pipistrelle passes were recorded (04:02 and 05:02) and a single soprano pipistrelle was recorded at 04:31. None of the bats were observed, just heard.

4 September 2017 Evening Activity Survey

4.12. As per the August dawn activity survey, bat activity during this evening activity survey was also low, with again only three bat passes recorded. The first bat recorded was a soprano pipistrelle foraging under the tree canopy along the tow path at 20:19 (37 minutes after sunset). The remaining bat recordings were both common pipistrelle. One individual was recorded commuting west to east along the towpath at 20:23 and another individual commuting east to west along the towpath at 20:20.

Automated Bat Detector Surveys

4.13. A total of five confirmed bat species were recorded by the automated detectors deployed at the Stag Brewery component of the Site (**Figures 7, 8** and **9**) in 2017, namely common pipistrelle, soprano pipistrelle, noctule, serotine and leisler's. In addition, at least two more species from the long-eared and myotis family were also recorded. Where recordings could not be identified to species level for the big bat species (i.e noctule, serotine and leisler's) they were assigned to this separate category. However, no additional species would have been recorded as all 3 big bat species were recorded during the automated detector surveys.

4.14. Nearly all of the bat recordings from the automated detectors were of common and soprano pipistrelle (98.03% when combined) which is consistent with the results of the bat activity surveys. Noctule, serotine, leisler's and long-eared species were also recorded on the automated bat detectors but in very low registrations.

4.15. **Table 5** provides a summary of the number of recordings made of each species during each automated bat detector survey session. Detailed descriptions of bat activity recorded during each automated detector survey is provided below **Table 5**.

Table 5: Summary of Automated Bat Detector Surveys

Recording Period	Common Pipistrelle Recordings	Soprano Pipistrelle Recordings	Noctule Recordings	Serotine Recordings	Leisler Recordings	Big Bat Species Recordings	Long-eared Species Recordings	Myotis Species Recordings	Total no. of Bat Recordings
13/07/2017 – 15/07/2107	3864	2290	5	**N/A**	**N/A**	**5**	**N/A**	**2**	**6166**
08/08/2017 & 10/08/2017 - 13/08/2017	3064	675	17	**N/A**	**1**	**23**	**N/A**	**4**	**3784**
04/09/2017 – 08/09/2017	1524	254	169	**2**	**N/A**	**2**	**3**	**1**	**1955**
Total	**8452**	**3219**	**191**	**2**	**1**	**30**	**3**	**7**	**11905**

13 – 15 August 2017 Automated Bat Detector Survey

4.16. A total of 6,166 bat registrations were made during this survey period. Common pipistrelle accounted for 3,864 (62.6%) of the registrations, whilst soprano pipistrelle accounted for 2,290 (37.13%) of the registrations. Both common and soprano pipistrelles were recorded on all nights of the August recording period, spanning a time range from 21:36 (23 minutes after sunset) to 04:28 (30 minutes prior to sunrise).

4.17. Recordings of noctule and Big Bat Species were also made with 5 registrations respectively. The earliest registration was made at 23:49 and the last at 03:16.

8 and 10 – 13 August 2017 Automated Bat Detector Survey

4.18. A total of 3,784 bat registrations were made during this survey period. Common pipistrelle accounted for 3,064 (80.97%) of the registrations, whilst soprano pipistrelle accounted for 675 (17.83%) of the registrations.

4.19. Common pipistrelles were recorded on all nights of the August recording period, spanning a time range from 20:43 (7 minutes after sunset) to 05:20 (15 minutes prior to sunrise). Soprano pipistrelles were also recorded on all nights of the August recording period, spanning a time range from 20:49 (13 minutes after sunset) to 05:21 (14 minutes prior to sunrise)

4.20. Recordings of noctule, leisler's and Big Bat Species were also made with 17, 1 and 23 registrations respectively. The earliest registration was made at 20:32 and the last at 05:27. Recordings of myotis species were also made with 4 registrations. The earliest registration was made at 22:33 and the last at 01:20.

04 – 08 September 2017 Automated Bat Detector Survey

4.21. A total of 1,955 bat registrations were made during this survey period. Common pipistrelle accounted for 1,524 (77.95%) of the registrations, whilst soprano pipistrelle accounted for 254 (12.99%) of the registrations.

4.22. Common pipistrelles were recorded on all nights of the September recording period, spanning a time range from 19:58 (19 minutes after sunset) to 05:53 (25 minutes prior to sunrise). Soprano

pipistrelles were also recorded on all nights of the September recording period, spanning a time range from 19:57 (18 minutes after sunset) to 05:52 (26 minutes prior to sunrise).

4.23. Recordings of noctule, serotine and Big Bat Species were also made with 169, 2 and 2 registrations respectively. The earliest registration was made at 20:01 and the last at 05:35. Recordings of myotis species and long-eared species were also made with 1 and 3 registrations respectively. The earliest registration for the myotis was made at 21:07. The earliest registration for the long-eared was made at 01:01 and the last at 01:38.

Bat Summary

4.24. Given the results of the bat surveys undertaken it is assessed that no roosting bats are present and the Site is used on a sporadic basis by urban bat species typically associated to be non-light sensitive[33]. The results of the bat activity and automated survey has demonstrated that bat activity is low at and adjacent to the northern boundary of the Stag Brewery component of the Site adjacent to the River Thames and it is more readily used for commuting. However, bat species were recorded in good diversity with 5 identified to species level and a confirmed further two species present that could only be identified to family level. Bats are therefore assessed to be of **Local value** at the northern boundary of the Stag Brewery component of the Site and directly adjacent to the River Thames.

Black Redstarts

4.25. No black redstarts were recorded on-Site or adjacent during the five black redstart survey visits. As such, the Site is considered to be of **negligible** value to black redstarts.

Other Bird Species

4.26. A total of 33 species of bird were recorded on, adjacent to or overflying the Site during the five surveys (**Appendix C**). Of these, 22 species were recorded on the Site itself (excluding species seen flying over the Site only). These included three species that are classified as BTO Conservation Red Listed; herring gull, grey wagtail *Motacilla cinerea* and common starling, and three species that are BTO Conservation Amber Listed; black-headed gull *Chroicocephalus ridibundus*, lesser black-backed gull *Larus fuscus* and stock dove *Columba oenas*.

4.27. Two SoPI were recorded on the Site itself; herring gull and common starling with two further SoPI species, dunnock and song thrush, being recorded outside the Site boundary.

4.28. Common kingfisher *Alcedo atthis* (Schedule 1 and Annex 1) and common tern *Sterna hirundo* (Annex 1) were recorded outside the Site, along the River Thames.

4.29. A single RBAP species, song thrush, was recorded adjacent to the Site.

4.30. Ring-necked parakeets *Psittacula krameri* were recorded on-Site. This is a non-native species listed on Schedule 9, Part 1 of the Wildlife and Countryside Act 1981 (as amended) and as Category 4 on the London Invasive Species Initiative (LISI).

4.31. Several bird species were observed breeding on and adjacent to the Site within / upon buildings and trees (**Appendix C**).

33 Bat Conservation Trust (2009); 'Bats and Lighting in the UK. Bats and the Built Environment Series', version 3, May 2009.

4.32. Overall, herring gull was the commonest species recorded (by numbers of birds over the five visits). These numbers were boosted by the birds that used the amenity grassland for feeding, especially during visits 1 and 2. Other notable species that used the Site in reasonable numbers were lesser-black-backed gull and common starling. Detailed descriptions of the status of each bird species recorded is provided in **Appendix C**. Overall the Site is assessed to be of **Site value** to other bird species.

5. Conclusions and Recommendations

Bat Roosts

5.1. No evidence of roosting bats was recorded within building B10 during the internal preliminary roost inspection. Furthermore, no bats were observed emerging or entering buildings B8, B10, B12, B13 and B14, nor were bats observed emerging or entering those trees originally identified as having moderate potential to support roosting bats. It is therefore considered that the Site (and building B14 adjacent to the Site) do not contain any active bat roosts.

5.2. Although bats are not considered to be roosting within buildings B8, B10, B12, B13 and B14, or trees identified as having a moderate potential for bats, there remains a chance that opportunist bats within in the vicinity of the Site could potentially start roosting within these buildings and trees. Therefore, in the extremely unlikely event that bats are identified (given the current survey results) during any future development works, including those associated with the Development, it is advised that all works would cease and a suitable ecologist be contacted. Liaison would then be undertaken between the suitable ecologist, LBRuT and / or Natural England to agree a suitable way forward.

Bat Activity

5.3. During the bat activity surveys, common pipistrelle and soprano pipistrelle were the only species recorded utilising the habitats associated with and adjacent to (i.e. the River Thames) the northern boundary of the Stag Brewery component of the Site. It was also noted at a single commuting serotine and foraging noctule were recorded over the River Thames during the dawn re-entry survey conducted on 20th July 2016.

5.4. During the bat automated surveys nearly all of the bat recordings were of common and soprano pipistrelle. Noctule, serotine, leisler's and long-eared species were also recorded on the automated bat detectors but in low registrations.

5.5. Overall, bat activity is assessed to be low at and adjacent to the northern boundary of the Stag Brewery component of the Site. The Site and its surrounds are assessed to be utilised for commuting. However, bat species were recorded in good diversity with five identified to species level and a confirmed further two species present that could only be identified to family level.

5.6. As previously stated, common pipistrelle was the most frequently recorded bat species during the activity and automated detector surveys, with soprano pipistrelle second. Common pipistrelle and soprano pipistrelle are considered to be the most common and widespread bat species in England (population over 100,000)[34]. This would be the same for the long-eared species recorded (if assessed to be brown long-eared). However, only very low registration were made of this bat species. Recordings of noctule, serotine, leisler's and myotis species (if common member of the myotis family present) were also recorded on-Site but in very low registrations. All of these species are assessed to be rarer (population between 10,000 – 100,000) and less widespread than that of the common and soprano pipistrelle bats.

34 Wray, S., Wells, D., Long, E., Mitchell-Jones, T. (2010); 'Valuing Bats in Ecological Impact Assessment', IEEM In-Practice.

5.7. The automated detectors picked up some early emerging bats that could indicate that roosts are in proximity to the Site. For example, the earliest common pipistrelle recorded after sunset was in August 2017 which was 7 minutes post-sunset. The mean average roost emergence time for common pipistrelle is 24.8 minutes after sunset[35].

5.8. To minimise impacts to foraging and commuting bats at and adjacent to the northern boundary of the Stag Brewery component of the Site any bats passing through the Site during the demolition, alteration, refurbishment and construction works (the 'Works'), night time working should be avoided to prevent disturbance from light spill. In the event that night time work is necessary, lighting should be kept to a minimum and light spill to the adjacent habitats avoided (having due regard to health and safety issues).

5.9. In line with local planning policy DM OS 5, as well as other planning policy and LBAP targets it is recommended that the Site is enhanced for bats. Enhancement measures are provided below at a level to provide both roosting and foraging opportunities in the local area for bats:

- bat roosting opportunities 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 (where suitable). A minimum of 20 bat boxes, tubes and / or bricks is suggested for the Development. It is recommended that bat boxes, tubes and / or bricks are targeted at those species recorded at the Site. All bat boxes, tubes and / or bricks should be orientated facing between south-east and south-west, in proximity to soft landscaping features and at least 4 m above ground level (to prevent vandalism) with a clear aspect. Appropriate bat box / tube and / or brick models include:
  - 'Schweglar Bat Tube 1FR' or 'Schwegler Bat Box Brick N27' – These models are designed to be installed on the external walls of buildings, either flush or beneath a rendered surface. Therefore, they provide bat roosting opportunities which are unobtrusive and aesthetically pleasing. This bat tube provides roosting opportunities for pipistrelles;
  - 'Schweglar Bat Box 1FF' - The Schwegler 1FF bat box is spacious enough for bats to use as a summer roost or nursery site. This bat box can be affixed to suitably mature trees or upon the exterior walls of buildings. Suitable for pipistrelle species and noctules;
  - 'Schweglar Bat Roost 1FQ' – This bat box is affixed to the exterior walls of buildings. Provides opportunities for pipistrelle species; and
  - 'Schweglar Bat Box 2FN' – This bat box is appropriate for being installed upon trees. Suitable for pipistrelle species and noctules.
- the Development could provide enhanced foraging and commuting habitat for bats. This could be achieved by the provision of green corridors using native plant species. The location of the corridors could be situated north to south and east to west within the Stag Brewery component of the Site. The north to south corridor could be created by including green infrastructure either side of Ship Lane and would connect bat foraging habitat associated with the River Thames and Mortlake Green. The west to east corridor could be provided alongside the River Thames at the northern boundary of the Stag Brewery component of the Site via the provision of green / brown roofs on buildings in addition to tree / hedge planting; and

35 Davidson-Watts & Jones (2006); 'Differences in foraging behaviour between Pipistrellus pipistrellus (Schreber, 1774) and Pipistrellus pygmaeus (Leach, 1825)'. Journal of Zoology, London, 268 (1), 55-62.

- a sensitive lighting scheme should be designed as part of the Development to minimise any associated negative impacts of the Development on bats commuting / foraging on-Site and the adjacent River Thames.

5.10. In addition, if works do not commence within 18 months after the issue of this report (but within the recognised bat active period of May to August), and in order to protect bats during any future development works, including those associated with the Development, it is recommended that further evening emergence / dawn re-entry bat surveys are undertaken. Prior to the Works commencing on the Site, contractors should be made aware of the potential for buildings and trees to contain opportunist bats and the legislation relating to the protection of bats.

Black Redstarts

5.11. No black redstarts were recorded on or adjacent to the Site. However, if the Site is left undisturbed for a significant amount of time during the 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). Such enhancement could result in the species moving onto the Site. Black redstarts should therefore be identified to the workforce during Site induction so that this species is recognised if present and subsequent disturbance avoided. Advice should be sought from a suitably qualified ecologist if this species is recorded on-Site during or preceding the Works. If the species is suspected to be breeding (for example if birds are observed singing or nest building; or a nest is found) any work in the immediate vicinity which could cause a disturbance to the breeding pair should be immediately stopped and further advice sought.

5.12. It is recommended that the Development includes enhancement measures for this species in line with local planning policy DM OS 5, as well as LBAP targets. Suitable enhancement measures for this species are outlined below:

- provision 5 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 2 m in height in areas with restricted public access (i.e. upon rooftops), or if this is not feasible, 3 m above ground level to prevent vandalism and face east or west; and
- the provision of brown roofs upon buildings to create suitable habitat for black redstarts.

Other Bird Species

5.13. Overall the Site is of limited ornithological value, with only a mean of 13.8 species recorded across the five visits, which is below local status based on the criteria used by Fuller[36] (**Table 3**).

36 Fuller, R.J., (1980); 'A method for assessing the ornithological interest of sites for conservation'. Biological Conservation 17: 229-239.

Table 6: Evaluation Criteria for Breeding Bird Assemblages

Geographic Frame of Reference	Local	County	Regional	National
Number of Breeding Bird Species	25-49	50-69	70-84	85+

5.14. Evidence of nesting birds was recorded on and adjacent to Site. This included the observation of nesting feral pigeon, a species which can breed at any time of year with peak nesting occurring during the normal bird breeding season (March to August). As such it is recommended that a check for nesting birds is undertaken at buildings and trees before they are removed. An experienced ecologist should be deployed to carry out an inspection within five days prior to the commencement of the removal works. If an occupied nest is detected, then a buffer zone should be created around the nest, and clearance of this area delayed until the young have fledged. Any nests that are recorded should be monitored until the young have fledged and the adults are no longer using the nest for breeding. To avoid any delays in the future Development programme it is recommended that bird deterrents such as netting and spike ledges are installed upon buildings at the Site.

5.15. Ring-necked parakeets were observed on-Site. This species is listed as LISI Category 4 which states:

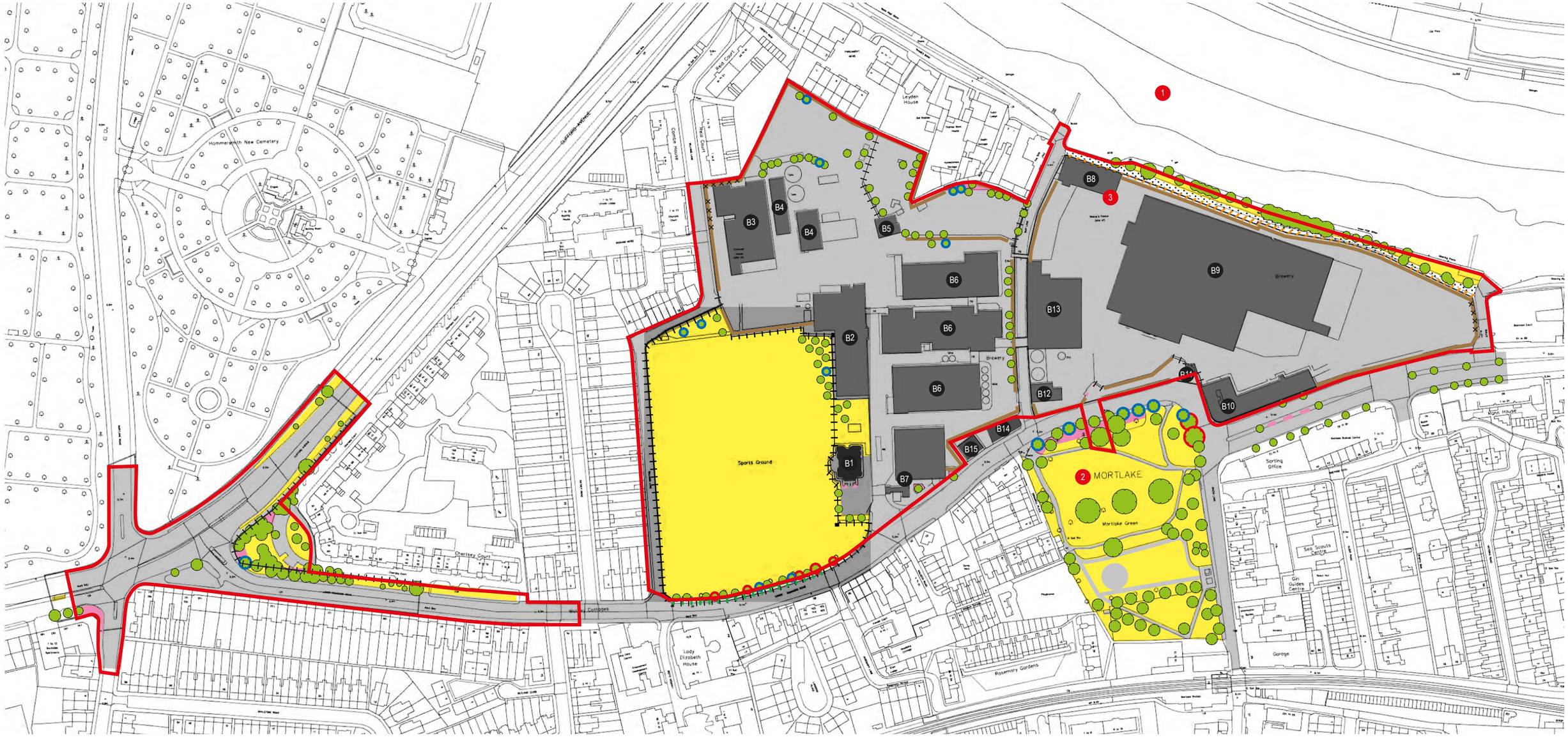
"*Species which are widespread for which eradication is not feasible but where avoiding spread to other sites may be required*."

5.16. As such the presence of this species on-Site does not require any further consideration.

5.17. In line with local planning policy DM OS 5, it is recommended that the Development includes enhancement measures for bird species, in particular those notable species (Red Listed, Amber Listed, SoPI, Schedule 1 and Annex 1), recorded on and adjacent to the Site. Suitable enhancement measures for these species are outlined below:

- as indicated previously, the Development proposals could include green infrastructure corridors within landscape proposals to create and connect habitats of value to birds. The use of native species or species of benefit to wildlife within any proposed landscape scheme to provide foraging opportunities for birds is recommended;
- the provision of a range of bird boxes should be considered. For a Development of the scale proposed approximately 20 bird boxes are recommended, and as indicated previously, 5 of these boxes should be aimed at black redstarts. These bird boxes should be placed at least 3 m above ground level to prevent vandalism and face east or west. Placing bird boxes on brown roofs or in proximity to the River Thames would also be useful. Suitable models include:
  - 'Schwegler Starling Next Box 3S' – This nest box has been designed with a large, deep cavity and 45mm 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;
  - 'Schwegler Nest Box 1B' - This is a general purpose nest box that is suitable for a range of bird species;
  - 'Schwegler Avianex 1MR' - The nest box has a 32 mm entrance hole to attract common garden birds. Suitable for installation upon buildings.

FIGURES



- The Site
- Building with Building Numbers
- Hardstanding
- Ornamental Planting
- Bare Ground
- Amenity Grassland
- Ephemeral
- Scattered Tree
- Wall
- Hedge
- Fence
- Tall Ruderal Vegetation
- Target Note

Bat Roost Potential within Trees

- Negligible Potential
- Low Potential
- Moderate Potential

N

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 1: Habitat Features Plan
Figure Ref	WIE10667-100_GR_EC_1E
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures

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Sports Ground
Cromwell House
Bishop's Palace
MORTLAKE
Mortlake Green
Playground
Garage
Sorting Office
Sea Scouts Centre
Girl Guides Centre
Lady Elizabeth House
Leyden House
Thames Bank House
PARLIAMENT MEWS
Boatrace Court
Rann House
Car Park
Shingle
LOWER RICHMOND ROAD
WILLIAMS LANE
SHIP LANE
SHEEN LANE
VINEYARD PATH
ALDER ROAD
VICTORIA ROAD
WATNEY ROAD
CLIFFORD AVENUE
ROSEMARY LANE
Rosemary Gardens
Watney Cottages

The SIte

Loft Space Inspected

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 2: Internal Building Inspection
Figure Ref	WIE10667-100_GR_EC_2E
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures

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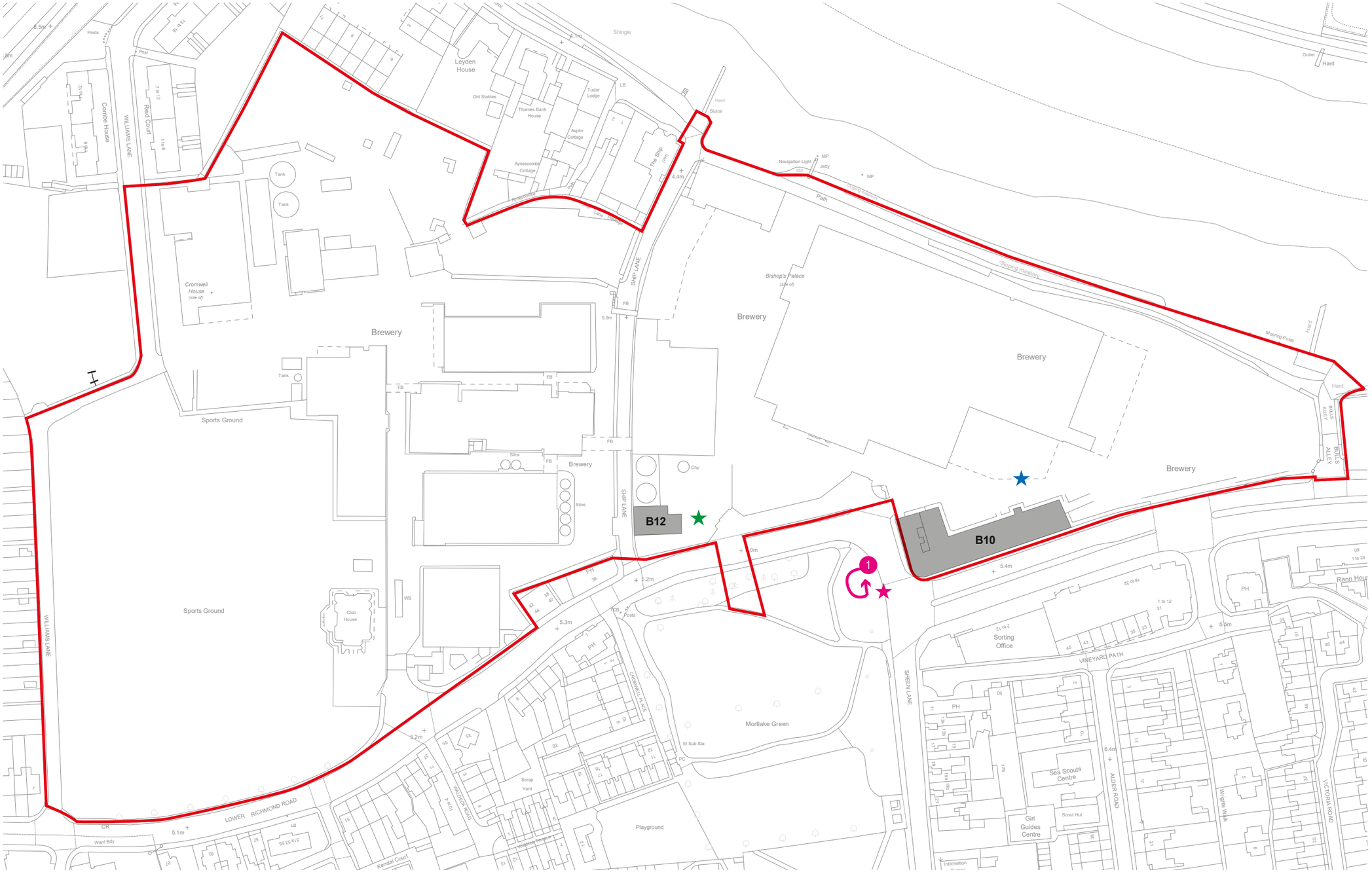

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The Site	Surveyor 1 Location	Surveyor 2 Location	Surveyor 3 Location
BX Building Number	Bat Registration	Bat Registration	Bat Registration
	Bat Flight Path	Bat Flight Path	Bat Flight Path

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 3: Results of the Evening Emergence Bat Survey 06/07/16 - B10 and B12
Figure Ref	WIE10667-100_GR_EC_3D
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures

N

The Site	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Surveyor 4**	**Surveyor 5**
BX Building Number	Surveyor 1 Location	Surveyor 2 Location	Surveyor 3 Location	Surveyor 4 Location	Surveyor 5 Location
Tree Subject to Survey	Bat Registration	Bat Registration	Bat Registration	Bat Registration	Bat Registration
	Bat Flight Path	Bat Flight Path	Bat Flight Path	Bat Flight Path	Bat Flight Path

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 4: Results of the Dawn Re-entry Bat Survey 07/07/16 B14 and Trees
Figure Ref	WIE10667-100_GR_EC_4D
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures

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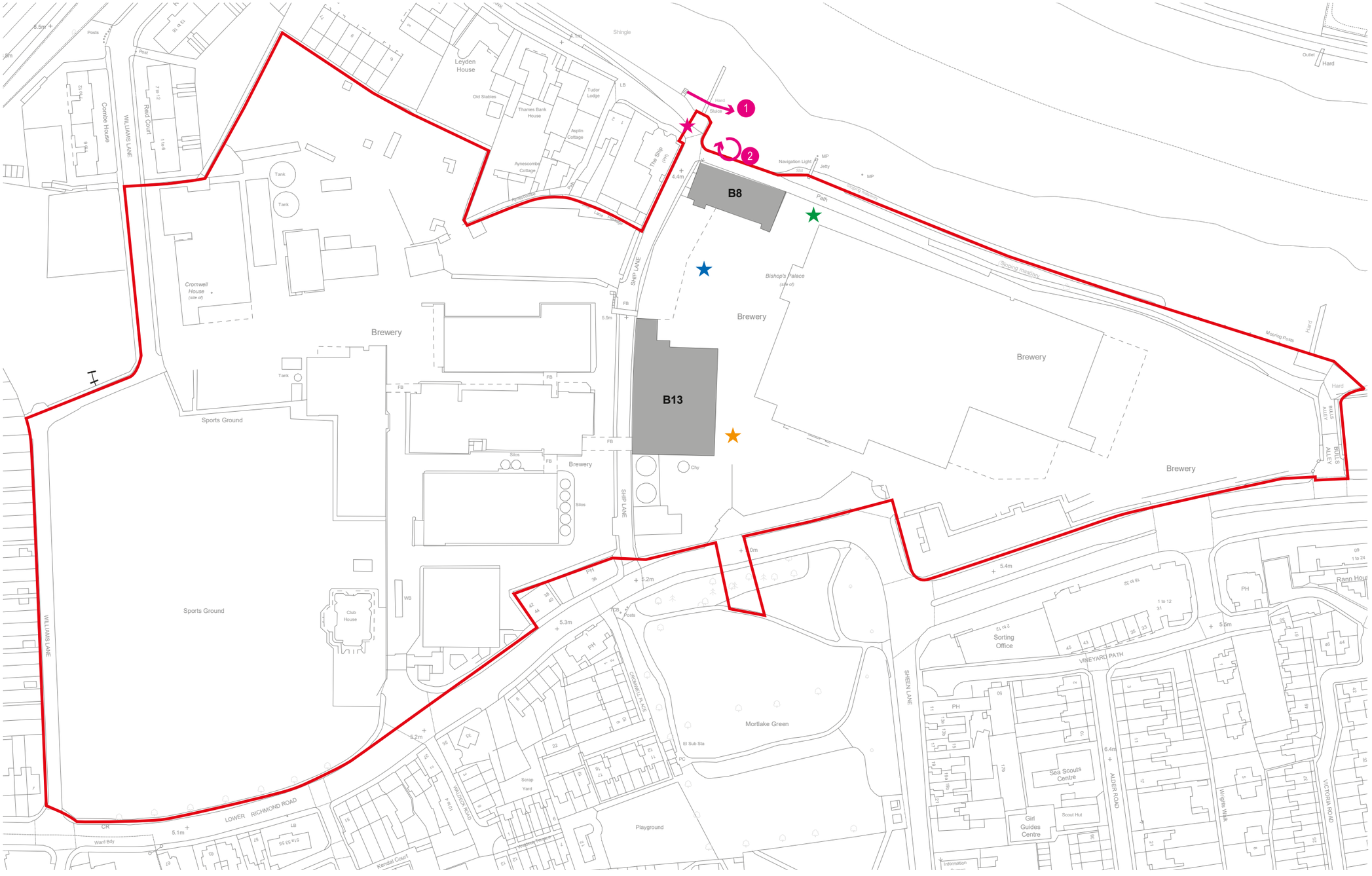
The Site	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Surveyor 4**	**Surveyor 5**
BX Building Number	Surveyor 1 Location	Surveyor 2 Location	Surveyor 3 Location	Surveyor 4 Location	Surveyor 5 Location
Tree Subject to Survey	1 Bat Registration	1 Bat Registration	1 Bat Registration	1 Bat Registration	1 Bat Registration
	Bat Flight Path	Bat Flight Path	Bat Flight Path	Bat Flight Path	Bat Flight Path

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 5: Results of the Evening Emergence Bat Survey 19/07/16 - B14 and Trees
Figure Ref	WIE10667-100_GR_EC_5D
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures



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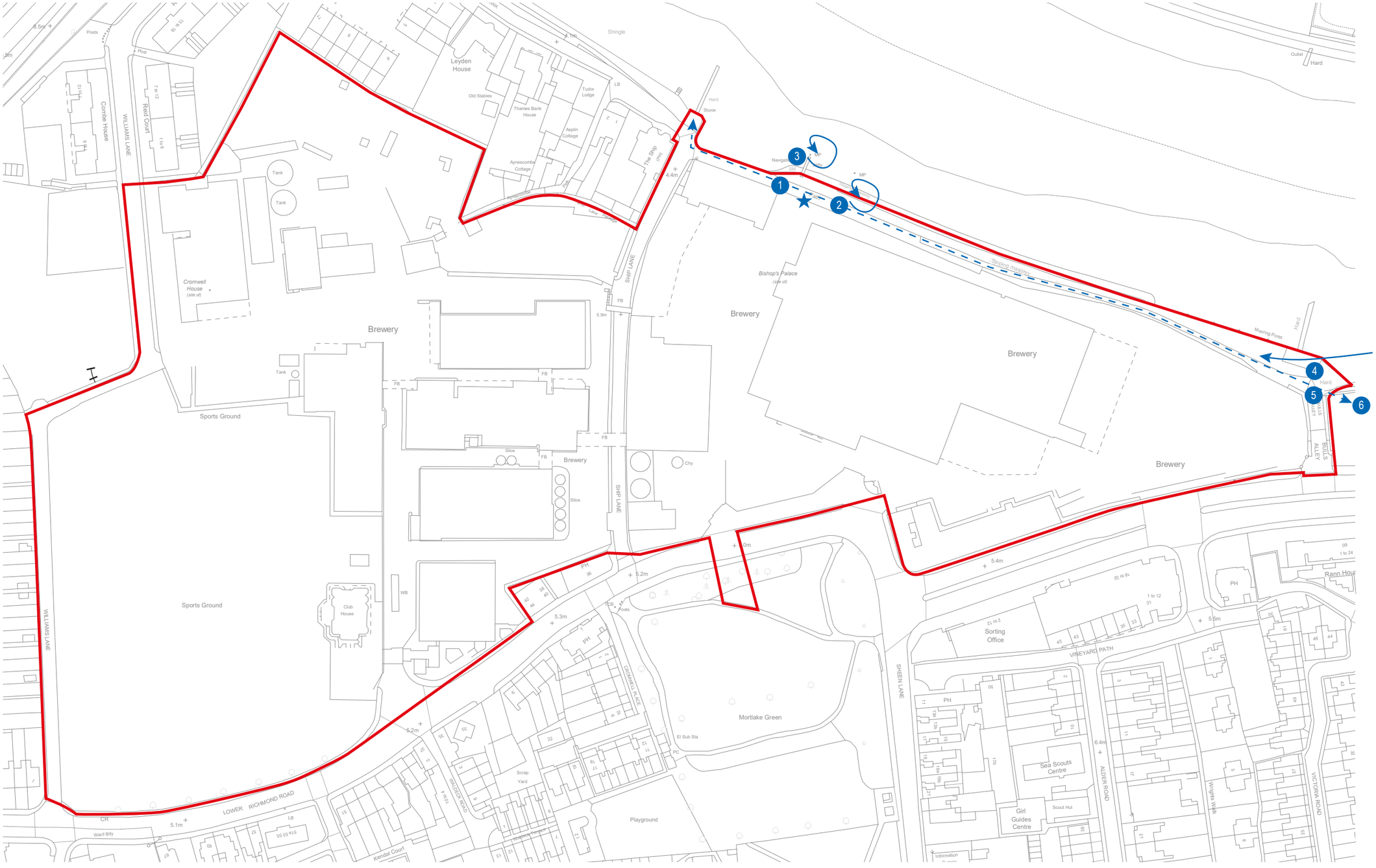
The Site	**Surveyor 1**	**Surveyor 2**	**Surveyor 3**	**Surveyor 4**
BX Building Number	Surveyor 1 Location	Surveyor 2 Location	Surveyor 3 Location	Surveyor 4 Location
Tree Subject to Survey	1 Bat Registration	1 Bat Registration	1 Bat Registration	1 Bat Registration
	Bat Flight Path	Bat Flight Path	Bat Flight Path	Bat Flight Path

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 6: Results of the Dawn Re-entry Bat Survey 20/07/16 - B8 and B13
Figure Ref	WIE10667-100_GR_EC_6C
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures



N

The Site

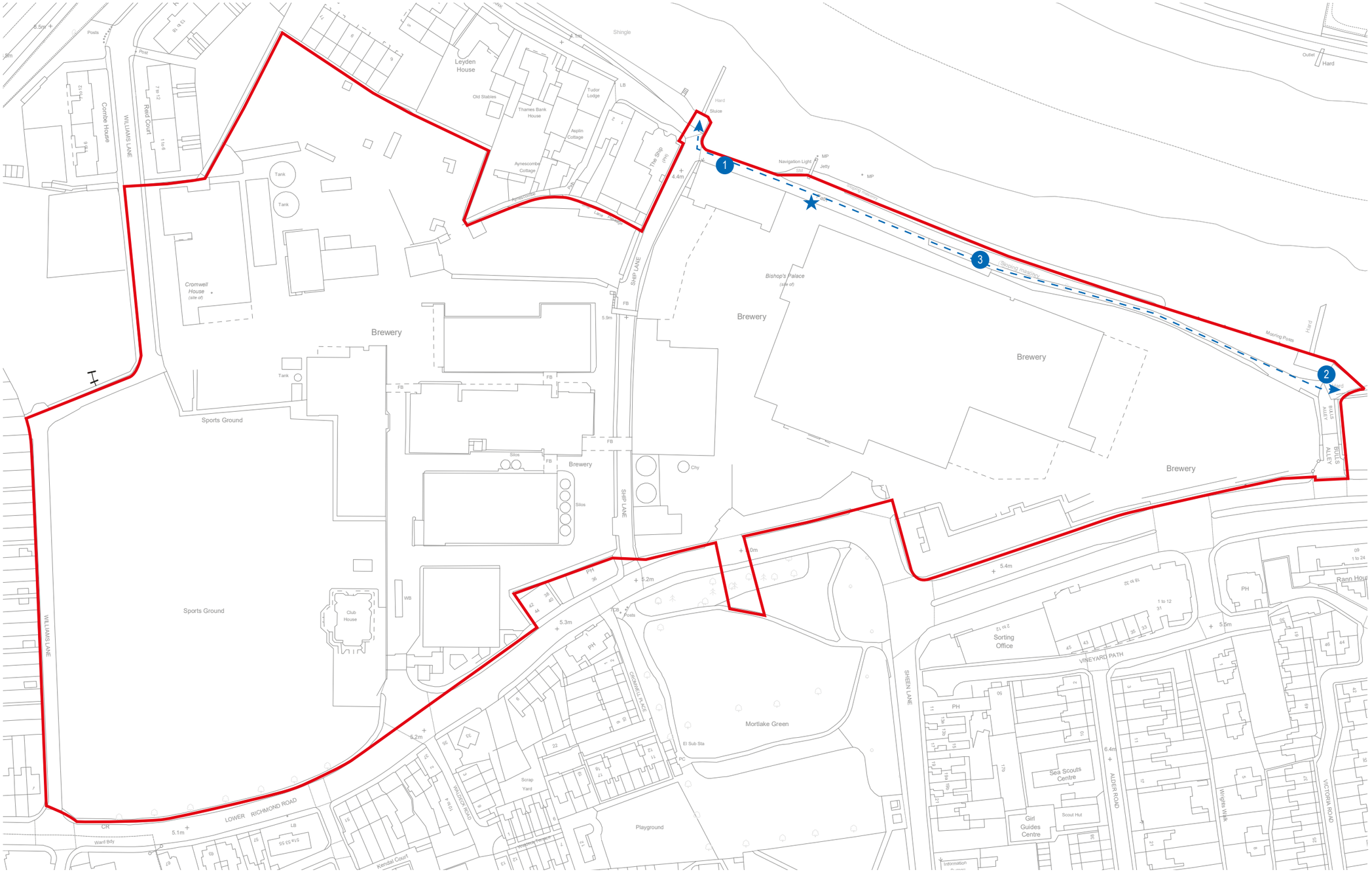
Location of Automated Bat Detector

Bat Activity Transect

Bat Registration

Bat Flight Path

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 7: Results of the Evening Bat Activity Survey 13/07/17
Figure Ref	WIE10667-100_GR_EC_7B
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures



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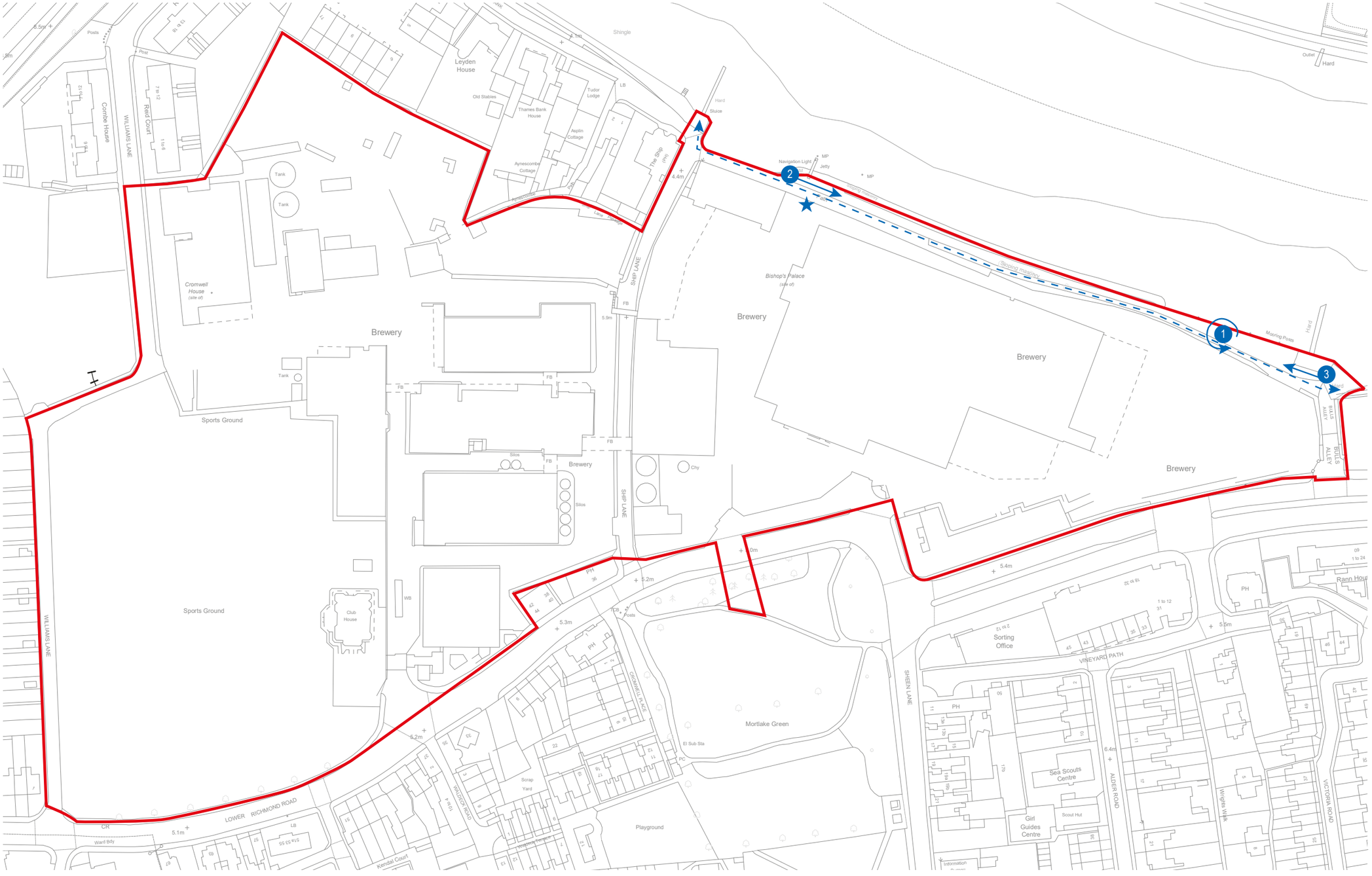
The Site

Location of Automated Bat Detector

Bat Activity Transect

Bat Registration

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 8: Results of the Dawn Bat Activity Survey 08/08/17
Figure Ref	WIE10667-100_GR_EC_8B
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures



N

The Site

Location of Automated Bat Detector

Bat Activity Transect

Bat Registration

Bat Flight Path

Project Details	WIE10667-100: Stag Brewery
Figure Title	Figure 9: Results of the Evening Bat Activity Survey 04/09/17
Figure Ref	WIE10667-100_GR_EC_9B
Date	2018
File Location	\\s-lncs\wiel\projects\wie10667\100\graphics\ec\issued figures

APPENDICES

A. Consultation with Tasha Hunter (Ecology Policy and Planning Officer serving Richmond and Wandsworth Councils)

Hannah Buck

From: Hunter, Tasha <Tasha.Hunter@richmondandwandsworth.gov.uk>
Sent: 06 July 2017 13:09
To: Lee Mantle; Lucy Thatcher
Cc: Ellen Smith; Hayley Bishop; Hannah Fiszpan
Subject: RE: Stag Brewery - Ecology

Dear Lee

Thank you for your email, this does help resolve my concerns.

However I must add a caveat, at this time I have not carried out a site visit or seen the final design of the development and depending upon how long it is between ES, planning permission and actual on site development the environmental conditions may change, I therefore reserve the right to change my comments.

Best wishes

Tasha Hunter
Ecology Policy and Planning Officer
Serving Richmond and Wandsworth Councils

Tel:- 020 8831 6125

tasha.hunter@richmondandwandsworth.gov.uk
www.richmond.gov.uk / www.wandsworth.gov.uk

From: Lee Mantle [mailto:lee.mantle@watermangroup.com]
Sent: 05 July 2017 16:55
To: Hunter, Tasha <Tasha.Hunter@richmondandwandsworth.gov.uk>; Lucy Thatcher <L.Thatcher@richmond.gov.uk>
Cc: Ellen Smith <ellen.smith@watermangroup.com>; Hayley Bishop <hayley.bishop@watermangroup.com>; Hannah Fiszpan <hannah.fiszpan@watermangroup.com>
Subject: RE: Stag Brewery - Ecology

Tasha,

As set out in Waterman IE's scoping clarification letter sent to Lucy Thatcher on the 26th June, it is our expert and professional view that undertaking bat activity surveys would not materially alter the conclusions of the ecological assessment proposed within the Environmental Statement (ES). This is due to the fact that we would reasonably assume the presence of commuting bats in and surrounding the Site based on our previous on-Site observation.

Despite the above, our client has agreed to undertake additional bat activity surveys in accordance with the methodology set out below and agreed by yourself in your email of 20th June.

We trust that undertaking the bat activity surveys will resolve your concerns.

Kind regards,

Lee

From: Tasha Hunter [mailto:T.Hunter@richmond.gov.uk]
Sent: 20 June 2017 15:04
To: Lee Mantle <lee.mantle@watermangroup.com>; Lucy Thatcher <L.Thatcher@richmond.gov.uk>
Cc: Ellen Smith <ellen.smith@watermangroup.com>; Hayley Bishop <hayley.bishop@watermangroup.com>
Subject: RE: Stag Brewery - Ecology

Hi Lee

Apologies for the delay I seem to have lots of planning queries all coming at once!

Thank you for providing your explanation, I do appreciate that the site currently offers limited potential for bat roosting. My main concerns are for the movement of bats along the River Thames and therefore I would like the bat activity assessed on the River Thames side/towpath and agree with your survey proposals as highlighted below.

However if bat activity surveys are still considered to be necessary by the LPA we would recommend that these are done adjacent to the river Thames only (site side) and based on best practice guidelines (Collins J, 2016), with 3 surveys undertaken in total (1 in July, August and September). In addition and if safe to do so we would deploy 2 automated (SM2) bat detectors adjacent to the river (site side) to record for 5 consecutive nights.

I also note the proposed mitigation and compliance measures and will be looking for opportunities to provide enhanced habitat for bats and other wildlife as part of the application.

Best wishes

Tasha Hunter
Ecology Policy and Planning Officer
Serving Richmond and Wandsworth Councils

Tel:- 020 8831 6125

t.hunter@richmond.gov.uk
www.richmond.gov.uk / www.wandsworth.gov.uk

From: Lee Mantle [mailto:lee.mantle@watermangroup.com]
Sent: 20 June 2017 07:43
To: Tasha Hunter
Cc: Ellen Smith; Hayley Bishop
Subject: Stag Brewery - Ecology

Tasha,

Many thanks for your time yesterday afternoon. As briefly discussed I have been asked to look at the scoping opinion and the request by the LPA to undertake bat activity surveys at the site. As such I thought it would be prudent to get in touch with you to firstly explain our rational for not recommending these surveys in support of the planning application and secondly, and if still required by the LPA agree the scope moving forward.

As part of ecological surveys undertaken to date Waterman completed a Preliminary Ecological Appraisal (PEA) in March 2016 and this concluded that '*the site offers limited potential for foraging and commuting bats and it is therefore not considered necessary to undertake bat activity surveys at the site*'. Waterman however did undertake evening emergence and pre-dawn re-entry surveys as part of a Protected Species Report (PSR) at certain buildings and trees on site to determine the presence or absence of roosting bats. No roosting bats were recorded however a surveyor (me!!) was positioned outside the Ship public house (for a pre-dawn re-entry survey on the 20 July 2016) and recorded a single serotine commuting pass and one/two commuting and foraging noctule bats, level and species that you would expect given the light spill from the site and existing street/road lighting present (I was surprised that no pipistrelle bats were recorded on that survey however!!). Other surveys at the buildings and trees on the site recorded noctule, soprano and common pipistrelle bats, again level and species you would expect given

the habitats and lighting on site. It is noted that none of the species recorded are sensitive to lighting, unlike bat species from the myotis and plecotus family.

As part of the PEA and PSR mitigation/compliance measures were made to inform the scheme design for the development to both minimise/avoid impacts on ecological features during the construction and completed development phase and to enhance the site for bats. These measures included;

- The provision of a Construction Environmental Management Plan (CEMP) including ways to minimise avoid impacts form light, noise and vibration
- The provision of a sensitive lighting strategy post construction
- The provision of enhanced foraging and commuting habitat across the Site including an area adjacent to the River Thames
- The provision of enhanced roosting habitat

There is the opportunity to enhance the Site for bats and to also minimise any noise and vibration impacts to foraging and commuting bats. However whilst we are aware of research papers that detail disturbance events at bat roosts from excessive noise and vibration, we are not aware of any proven disturbance events to foraging and commuting bats from these indirect impacts. This is there not assessed to be a potential impact as a result of the development as noted in the scoping opinion. With regards to lighting, with the provision of no night time working during the construction period and a sensitive lighting strategy we would assumed that lighting as a result of the completed Development stage, would have negligible impacts on foraging and commuting bats.

However if bat activity surveys are still considered to be necessary by the LPA we would recommend that these are done adjacent to the river Thames only (site side) and based on best practice guidelines (Collins J, 2016), with 3 surveys undertaken in total (1 in July, August and September). In addition and if safe to do so we would deploy 2 automated (SM2) bat detectors adjacent to the river (site side) to record for 5 consecutive nights.

I hope the above provides sufficient justification of why we did not recommended the bat activity surveys, however and if deemed to still be required I would be grateful if you would comment on the brief scope I have pulled together so we can agree a way forward.

As discussed in am in the office today and tomorrow to discuss the issues and answer any queries you may have.

Regards

Lee Mantle
Associate Director
Ecologist
Waterman Infrastructure & Environment Ltd

T - 0330 060 4327

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https://www.watermangroup.com/what-we-do/group-services/environmental/

B. Evening Emergence and Dawn Re-entry Survey Results

Time	Point on Figure 3	Bat Species	Activity
Evening Emergence Survey 06/07/16 – Surveyor 1 (B10)			
22:20	N/A	Soprano pipistrelle	Heard not seen – one pass.
Evening Emergence Survey 06/07/16 – Surveyor 2 (B10)			
22:22	1	Common pipistrelle	Foraging under tree canopy on edge of Mortlake Green.
Evening Emergence Survey 06/07/16 – Surveyor 3 (B12)			
22:03	N/A	Common pipistrelle	Heard not seen – one pass, faint call.
22:07	N/A	Common pipistrelle	Heard not seen – one pass.
22:13	N/A	Common pipistrelle	Heard not seen – one pass.
22:17	N/A	Common pipistrelle	Heard not seen – one pass.
22:26	N/A	Common pipistrelle	Heard not seen – one pass.
22:39	N/A	2 x Soprano pipistrelle	Heard not seen – one pass.
22:43	N/A	Common pipistrelle	Heard not seen – one pass.
22:45	N/A	Common pipistrelle	Heard not seen – one pass.
22:50	N/A	Common pipistrelle	Heard not seen – one pass.

Time	Point on Figure 4	Bat Species	Activity
Dawn Re-entry Survey 07/07/16 – Surveyor 1 (B14)			
04:30	N/A	Noctule	Heard not seen – one pass.
Dawn Re-entry Survey 07/07/16 – Surveyor 2 (B14)			
03:28	N/A	Common pipistrelle	Heard not seen – foraging.
03:30	N/A	Common pipistrelle	Heard not seen – foraging.
03:32	N/A	Common pipistrelle	Heard not seen – foraging.
03:41	N/A	Soprano pipistrelle	Heard not seen – foraging.
Dawn Re-entry Survey 07/07/16 – Surveyor 3 (B14)			
03:46	N/A	Common pipistrelle	Heard not seen – one pass.
Dawn Re-entry Survey 07/07/16 – Surveyor 4 (Trees)			

Time	Point on Figure 4	Bat Species	Activity
03:25	N/A	Common pipistrelle	Heard not seen – one pass.
03:41	N/A	Common pipistrelle	Heard not seen – one pass.
03:50	N/A	Soprano pipistrelle	Heard not seen – one pass.
04:22	1	Noctule	Commuting south-east to north-east at approximately 10m above ground level.
Dawn Re-entry Survey 07/07/16 – Surveyor 5 (Trees)			
03:20	N/A	Common pipistrelle	Heard not seen – one pass.
03:45	N/A	Common pipistrelle	Heard not seen – one pass.
03:58	N/A	Common pipistrelle	Heard not seen – one pass.
04:27	1	Noctule	Foraging in playing field at approximately 8m above ground level, then flew off in a southerly direction.

Time	Point on Figure 5	Bat Species	Activity
Evening Emergence Survey 19/07/16 – Surveyor 1 (B14)			
No bats recorded.			
Evening Emergence Survey 19/07/16 – Surveyor 2 (B14)			
21:44	1	Common pipistrelle	Commuting at 8m above ground level from the park into the Site in a NW direction (not recorded, faint call).
21:46	1	2 x Common pipistrelle	Commuting at 8m above ground level from the park into the Site in a NW direction.
21:51	N/A	Soprano pipistrelle	Heard not seen – one pass.
21:54	1	Common pipistrelle	Commuting at 8m above ground level from the park into the Site in a NW direction.
22:10	N/A	Soprano pipistrelle	Heard not seen – one pass.
22:24	N/A	Common pipistrelle	Heard not seen – one pass.
22:29	N/A	Noctule	Heard not seen – one pass.
22:35	N/A	Common pipistrelle	Heard not seen – one pass.
Evening Emergence Survey 19/07/16 – Surveyor 3 (B14)			
21:45	N/A	Common pipistrelle	Heard not seen – the direction of the call appeared to come from Mortlake Green.
21:46	N/A	Pipistrelle sp	Heard not seen – the direction of the call appeared to come from Mortlake Green (not recorded).
21:50	N/A	Soprano & Common pipistrelle	Foraging, heard not seen – the direction of the call appeared to come from Mortlake Green.
21:54	N/A	Common pipistrelle	Foraging, heard not seen – the direction of the call appeared to come from Mortlake Green.
22:24	N/A	Common pipistrelle	Foraging, heard not seen – the direction of the call appeared to come from Mortlake Green.
22:36	N/A	Common pipistrelle	Foraging, heard not seen – the direction of the call appeared to come from Mortlake Green.
Evening Emergence Survey 19/07/16 – Surveyor 4 (Trees)			

Time	Point on Figure 5	Bat Species	Activity
22:14	N/A	Common pipistrelle	Heard not seen – one pass.
22:39	N/A	Soprano pipistrelle	Heard not seen – one pass.
Evening Emergence Survey 19/07/16 – Surveyor 5 (Trees)			
No bats recorded.			

Time	Point on Figure 6	Bat Species	Activity
Dawn Re-entry Survey 20/07/16 – Surveyor 1 (B8)			
No bats recorded.			
Dawn Re-entry Survey 20/07/16 – Surveyor 2 (B8)			
03:42	1	Serotine and Noctule	Commuting over River Thames at 10m above water level in an easterly direction.
03:43	N/A	Noctule	Heard not seen – foraging.
03:47	2	Noctule	Foraging over River Thames at 10m above ground level.
03:50	2	Noctule	Constant foraging over River Thames at 10-15m above ground level.
Dawn Re-entry Survey 20/07/16 – Surveyor 3 (B8)			
No bats recorded.			
Dawn Re-entry Survey 20/07/16 – Surveyor 4 (B13)			
No bats recorded.			

C. Bat Activity Survey Results

Time	Point on Figure 7	Bat Species	Activity
Evening Activity Survey 13/07/17			
21:41	1	Soprano pipistrelle	Commuting 6m above ground level over river in an easterly direction.
21:43	2	Soprano pipistrelle	Constant foraging (10+ passes) by two bats at 0-8m above ground level.
22:05	2	Common pipistrelle	Heard not seen, one pass.
22:17	3	Common pipistrelle	Foraging (5+ passes) by two bats at 0-8m above ground level.
22:26	4	Soprano pipistrelle	Heard not seen, one pass.
22:32	4	Common pipistrelle	Commuting 8m above ground level along river back to site side.
22:35	5	Common pipistrelle	Heard not seen, one pass.
22:39	6	Common pipistrelle	Heard not seen, one pass.

Time	Point on Figure 8	Bat Species	Activity
Dawn Activity Survey 08/08/17			
04:02	1	Common pipistrelle	Heard not seen, one pass.
04:31	2	Soprano pipistrelle	Heard not seen, one pass.
05:02	3	Common pipistrelle	Heard not seen, one pass.

Time	Point on Figure 8	Bat Species	Activity
Evening Activity Survey 04/09/17			
20:19	1	Soprano pipistrelle	Numerous passes, foraging under the tree canopy 4-6m above ground level.

Time	Point on Figure 8	Bat Species	Activity
20:23	2	Common pipistrelle	Commuting 8m above ground level west to east.
20:50	3	Common pipistrelle	Commuting 8m above ground level east to west.

D. Bird Species Recorded During the Black Redstart Survey

Summary of Results

Species Code	Species Name	Visit No	1	2	3	4	5	All Visits
		Date	13/05/2016	26/05/2016	06/06/2016	17/06/2016	29/06/2016	
B.	Blackbird		X	X	X	O	O	**X**
BH	Black-headed gull				X	X	X	**X**
BT	Blue tit		O	O	X	X	X	**O**
C.	Carrion crow		X	X	X	X	X	**X**
CA	Great cormorant					O	O	**O**
CH	Common chaffinch				X			**X**
CN †	Common tern		O	O				**O**
D. *	Dunnock			O	O		O	**O**
EG	Egyptian goose						(F)	**(F)**
FP	Feral pigeon		X	X	X	X	X	**X**
GC	Goldcrest						X	**X**
GL	Grey wagtail		X	X	X	X	X	**X**
GO	European goldfinch		O	F	X	X	O/F	**X**
GR	European greenfinch			F	F			**F**
GT	Great tit		O	O	X	O	O	**X**
H.	Grey heron						O	**O**
HG *	Herring gull		X	X	X	X	X	**X**
J.	Eurasian jay		X	X	O		X	**X**
JD	Western jackdaw				O	F	(F)	**F / O**
KF †	**Common kingfisher**			(F)				**(F)**
LB	Lesser black-backed gull		X	X	X	X	X	**X**
MA	Mallard		O	O	F	O	O	**F / O**
MG	Magpie		X	X	X		X	**X**
MS	Mute swan			O			O	**O**
PW	Pied wagtail			X				**X**
R.	Eurasian robin		X	X	X	X	X	**X**

Species Code	Species Name	Visit No	1	2	3	4	5	All Visits
		Date	13/05/2016	26/05/2016	06/06/2016	17/06/2016	29/06/2016	
RI	Ring-necked parakeet		X	X	F	F	F/O	**X**
SD	Stock dove			X	X			**X**
SG *	Common starling		F / O	X	X	O	X	**X**
SI	Common swift			F			(F)	**F**
ST * ‡	Song thrush			O		O		**O**
WP	Wood pigeon		X	X	X	X	X	**X**
WR	Eurasian wren		X	X	X	X	X	**X**
No. Species			**18**	**26**	**23**	**19**	**26**	**33**

Key:

Red-listed Species	X - Seen within Site boundary
Amber-listed Species	O - Seen outside redline (Site) boundary
Schedule 1 Species	F - Overflying Site
***** - S41 Priority species	(F) - Overflying outside Site boundary
† - Annex 1 species	
‡ - LBAP Priority Species	

Description of the Status of Bird Species Recorded on-Site

Species	Description of Species Status on-Site
Blackbird *Turdus merula*	Recorded on-Site on Visits 1-3. Two birds were holding territories to the north of the Site. The species is not believed to have bred on the Site itself, but almost certainly will have bred adjacent to the Site, despite no young being seen.
Black-headed gull *Chroicocephalus ridibundus*	Seen on three occasions (Visits 3, 4 and 5) feeding on the amenity grassland at the west of the Site. This species does not

Species	Description of Species Status on-Site
	breed on-Site, but does breed at the WWT London Wetland Centre and Leg O' Mutton Reservoir nearby.
Blue tit *Cyanistes caeruleus*	Present in small numbers around the Site. A nest thought to be of this species was located on the outside of the north wall of the Site (on the towpath) on Visit 3. It is also likely that the species breeds in the gardens and along the towpath to the north of the Site and possibly in the amenity park to the south of the Site.
Carrion crow *Corvus corone corone*	At least one pair present on the Site on all visits. No evidence of breeding on the Site was recorded, though there are several suitable trees to the north and south of the Site that provide nesting opportunities.
Common chaffinch *Fringilla coelebs*	A male was singing on the northern boundary of the Site on Visit 3. The species probably breeds nearby, but was not recoded breeding on-Site.
Feral pigeon *Columba livia*	Common around the Site. A nest with calling chicks was located on Visit 4.
Goldcrest *Regulus regulus*	A single bird was seen in the south-west corner of the Site during Visit 5. Several other birds were heard adjacent to the west edge of the Site in Williams Lane during this visit, including a singing male. It is therefore presumed that the bird was part of a fledged brood from a nest in Williams Lane.
Grey wagtail *Motacilla cinerea*	A pair was present in the south-western corner of the eastern part of the Site throughout the survey. Two recently fledged young were seen on Visit 3, proving breeding on the Site. It is thought that the nest was situated in the vicinity of the silos (which were not accessible, so could not be checked). On Visits 4 and 5, the male was still singing, though there was no sign of the female – presumably she was sitting on eggs again.
Goldfinch *Carduelis carduelis*	Small numbers were seen around the Site on Visits 3 and 4, though no proof of breeding was observed. It is possible that this species could have bred on-Site, or if not almost certainly did adjacent to the Site, as singing birds were recorded on most visits outside the red-line boundary.
Great tit *Parus major*	Birds were seen adjacent to the north side of the Site, but were not present as a breeding species on the Site. Fledged young were seen on Visit 4 at the northern end of Ship Lane, proving that breeding did occur near to the Site (probably in trees along the towpath).
Herring gull *Larus argentatus argenteus*	Birds were seen frequently circling over the Site (especially the eastern section) and were also seen feeding on the amenity grassland at the western edge of the Site. The species does not breed on the Site.

Species	Description of Species Status on-Site
Eurasian jay *Garrulus glandarius*	A single bird was seen on the amenity grassland during Visit 1 and a family party was located in the northwest corner of the Site during Visit 5. It is possible that this species nests in the trees in the northwest corner of the Site, or nearby, just outside the red-line boundary.
Jackdaw *Corvus monedula*	A single bird was seen in the eastern section on Visit3. The species does not breed on-Site – most of the observations related to birds overflying the Site.
Lesser black-blacked gull *Larus fuscus graelsii*	Seen on all Visits in varying numbers. A pair frequented the rooftops of the eastern part of the Site. No evidence of breeding was found, though this pair did show territorial behaviour. Birds were also seen feeding on the amenity grassland at the west of the Site.
Magpie *Pica pica*	It is thought that a pair of magpie nested in a tree bordering the amenity grassland at the south-western corner of the Site, as they showed aggressive behaviour towards a carrion crow. Another nest may have been present near the Ship Inn public house to the north of the Site. Parties of birds were seen through it could not be ascertained if these were family parties or a loose flock.
Pied wagtail *Motacilla alba yarellii*	A single bird was located on the top of one of the roofs in the eastern section on Visit 2. The Site is suitable for this species to breed but perhaps the presence of breeding grey wagtail led to inter-specific competition.
Eurasian robin *Erithacus rubecula*	Robin were present in small numbers, mainly at the northern edge of the western section. No evidence of breeding was noted, but the species probably bred in or adjacent to this area.
Ring-necked parakeet *Psittacula krameri*	This species was frequently seen overflying the site, usually in a southerly direction from a roost located on the north of the River. Birds were occasionally seen in trees on the Site. The species showed no evidence on breeding on the Site.
Stock dove *Columba oenas*	This species was seen feeding on the amenity grassland during Visits 3 and 4. All the birds appeared to be adults, but the possibility of some being juveniles from earlier in the year cannot be ruled out. The species was not seen to be breeding on the Site – rather they probably nest in trees either on the amenity parkland to the south of the Site or in a nearby garden.
Common starling *Sternus vulgalis*	This species was seen occasionally, mostly overflying the Site. A pair was found nest-building in a disused drainpipe on the outside wall of the Site adjacent to Mortlake High Street during Visit 3 but there was no sign of any nest during the subsequent Visits. Birds were seen to be nesting in houses that backed onto Williams Lane and a family party were seen on the amenity

Species	Description of Species Status on-Site
	grassland during Visit 3. A bird was also seen on territory on a house to the south if the amenity grassland on the lower Richmond Road.
Wood pigeon *Columba palumbus*	Several birds present, mainly around the trees at the north-west of the Site and feeding on the amenity grassland. May have bred in the north-western area, though no definite young seen.
Eurasian wren *Troglodytes troglodytes*	Several birds were present on the Site perimeter, either in the gardens to the north, along the towpath or in the amenity park to the south of the Site. This species is not thought to have bread in the Site though it almost certainly did nearby.

UK and Ireland Office Locations