



Rose of York

Richmond

Ecological Surveys

October 2022

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Rose of York, Richmond Ecological Surveys				
Revision	Date	Prepared by	Checked by	Verified by
1.0	12 th October 2022	Paul Hudson MCIEEM Principal Ecologist	Cari Ormerod Senior Ecologist	Paul Hudson MCIEEM Principal Ecologist

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Summary

Site Location	Acer Ecology Ltd was commissioned to conduct a ecological assessment of the land at the Rose of York Public House and Hotel, Petersham Road, Richmond, TW10 6UY (Ordnance Survey Grid Reference: TQ 18418 73737). The site is situated within the boundary of Richmond upon Thames Borough Council.
Development Proposals	The proposed works include: A two-storey extension from the southern elevation, this will involve the removal of two existing trees in the rear garden; The slates of the existing roof will be replaced; and Clearance of a small parcel of land to create 11 new parking spaces in the existing car park.
Statutory and Non-Statutory Nature Designations	Numerous statutory and non-statutory designated sites were recorded within 1km of the site (GIGL data, 2016) (see section 3.1 for full list). There are two sites adjacent to the site including; Richmond Park and Associated Areas Site of Metropolitan Importance (SINC); Terrace Field and Terrace Gardens Site of Local Importance (SINC). None of these sites will be affected by the works.
Impacts to Habitats of Value	No habitats on site are likely to be greater than site value. Whilst the loss of these habitats would be unlikely to have a significant impact outside of the local context of the site, it would nevertheless be desirable that the impacts be either minimised or appropriately mitigated where possible.
Results of Bat Surveys	No evidence of bats was found during the update preliminary inspection and no bats were observed emerging or re-entering the building during the dusk emergence and dawn re-entry surveys. There was a low level of bat activity (comprising 4 species: common and soprano pipistrelle, noctule and <i>Myotis</i> species) within the site.
Impacts to other Protected and Notable Species	The proposed development could potentially have adverse impacts of varying degrees on a range of legally protected species, including nesting birds, hedgehog and stag beetle. Appropriate mitigation measures are set in place to avoid or minimise impacts to these species (see section 5.).
Invasive Non-native Species	None recorded.
Requirements for Additional Survey	None Required.
Licensing Requirements	None Required.
Recommendations	The following provisional recommendations are outlines in Section 5 and have been developed based on the development proposals available at the time of writing: Precautionary measures; and Compensatory and Enhancement measures.

1. Introduction

1.1. Brief

Acer Ecology Ltd was commissioned to conduct an ecological assessment including bat surveys of the land at Rose of York Public House and Hotel, Petersham Rd, Richmond TW10 6UY (Ordnance Survey Grid Reference: TQ 18418 73737¹). The site is situated within the boundary of Richmond upon Thames Borough Council.

The purpose of the ecological assessment was to document the baseline ecological condition of the survey area, which comprises the red line boundary shown in Plan 1, as well as any adjacent habitats which could be affected by the proposed works. This included identification of any designated sites or habitats that could be affected by the proposed works, and identification of potential for protected and/or otherwise notable species of conservation interest that could be affected. Potential ecological constraints were identified, and subsequent recommendations developed. The tree constraints plan is used to determine whether a full arboricultural survey will be required.

This assessment will provide initial recommendations based on the development proposals available at the time of writing.

1.2. Site Description

The site comprises a building and associated grounds measuring approximately 0.63ha. The grounds to the north comprise car parking and a triangular area of amenity grassland with scattered broadleaved trees enclosed by hedgerows. The grounds to the south comprise the building with a small patio garden containing three trees to the rear of the property which continues on to an area of broadleaved woodland adjacent to the site boundary, which forms part of Richmond Park & Associated Areas Metropolitan Site. The A307 runs adjacent to the western boundary of the site, which continues immediately on to Petersham Meadows Borough Grade II Site and the River Thames Metropolitan Site, which lies approximately 200m from the site.

1.3. Proposed Works

The proposed works include the refurbishment and extension of the Rose of York Public House to provide an additional fifteen guest bedrooms as well as associated landscaping and car parking. A planning application has been sought under reference 22/0195/FUL². Specifically this includes:

A two-storey extension from the southern elevation, this will involve the removal of at least two existing trees, potentially three, in the rear garden;

Removal and replacement of the slates of the existing roof; and

¹ Latitude and Longitude: 51.450853070917944, -0.3000313807029904

² https://www2.richmond.gov.uk/lbrplanning/Planning_CaseNo.aspx?strCASENO=22/0195/FUL

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Clearance of a small parcel of land to create 8 new parking spaces in the existing car park.

Existing and proposed plans can be found in Plan 2a & b: Development Proposals.

1.4. Scope of the Study

The study comprised the following:

A desk study to identify existing information on statutory and non-statutory sites of nature conservation interest, and records of notable or protected habitats or species within the site and its environs;

A Phase 1 Habitat Survey of the site, extended to search for evidence of, and potential for, protected fauna;

Dusk emergence and Dawn Re-entry Bat Surveys; and

Identification of potential ecological constraints to the proposed works at the site and assessments of impacts including appropriate mitigation measures where necessary.

1.5. Reporting

This report aims to:

Outline the methodology used during the survey;

Present the results of the survey;

Provide an ecological evaluation of on-site habitats, including an assessment of the potential for protected species;

Provide an assessment of the potential impacts of the development proposals on ecological receptors identified through the desk and field study;

Provide an assessment of the potential ecological constraints to the proposals; and

Provide recommendations for further survey, avoidance, mitigation and enhancement where appropriate.

2. Methods

The survey was undertaken following standard methods as described in the Chartered Institute of Ecology and Environmental Management (CIEEM) Preliminary Ecological Appraisal 2012 guidelines, and the Phase 1 Habitat Survey methodology (Joint Nature Conservation Committee, 2010). The methodology utilised for the survey work comprised a desk study, habitat survey and a survey of protected and notable species.

2.1. Desk Study

2.1.1. Protected Sites, Habitats and Species

Information on designated sites and protected species was obtained from the following sources. The legislation and policy relating to statutory and non-statutory designated sites can be found in Appendix 3.

Source	Data	Radius of Search
GIGL	Statutory and non-statutory nature conservation designated sites	RAMSAR/ Special Areas of Conservation (SACs)/ Special Protection Areas (SPAs)/ Sites of Special Scientific Interest (SSSIs)/ National Nature Reserves (NNRs)/ Local Nature Reserves (LNRs) – 1km ³ . SINCS - Sites of Metropolitan Importance/ Sites of Borough Importance (Grade I & II)/ Sites of Local Importance – 1km.
	Protected and notable species	1km.
Natural ENGLAND QGIS Layer	Statutory and non-statutory nature conservation designated sites	SACs (designated for bats) - 10km. RAMSAR/ Special Areas of Conservation (SACs)/ Special Protection Areas (SPAs)/ Sites of Special Scientific Interest (SSSIs)/ National Nature

³ The citations of all of the SSSIs and SACs within 1km of the site were consulted to determine if any of them had features or species which could be affected by the development proposals

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		Reserves (NNRs)/ Local Nature Reserves (LNRs) – 2km ⁴ .
Natural England QGIS Layer	Ancient semi-natural Woodland (ASNW)	ASNW - 2km.

2.1.2. Landscape Context

The site and wider landscape was assessed and characterised using aerial images, Ordnance Survey maps and GIGL habitat/ protected sites maps. The presence of off-site features and habitats, which add to the ecological value within the wider area (for example, ponds within 500m of the site) were identified. Where appropriate, such features were scoped into the detailed assessment of impacts presented in Section 4.0 below.

2.1.3. Planning Authority

The Richmond upon Thames Borough Council Planning Portal was consulted to determine if any previous survey information was available for the site, or immediate surroundings.

2.1.4. Site History

A request was submitted to GIGL for access to habitat survey data. The data provided by GIGL is via different survey methodologies i.e. NVC, Phase 1 habitat assessments and BAP broad habitat classification. The GLA conducted a series of rolling habitat surveys between the mid-1980s and 2009. This information was reviewed to identify any change in habitat or management of the site and the surrounding area.

2.1.5. Ancient Woodland

Although ancient woodland is not a designated site as such, it is often listed as a designated site due to its ecological significance and associated protection. It has therefore been included within the non-statutory designated site section of this report.

2.2. Field Study

2.2.1. Personnel

An update ecology/protected species survey was undertaken by Paul Hudson MCIEEM⁵ on 8th October 2022.

⁴ The citations of all of the SSSIs and SACs within 1km of the site were consulted to determine if any of them had features or species which could be affected by the development proposals

⁵ Paul graduated with a degree in Environmental Biology from Reading University and a Postgraduate Diploma in Conservation Management from the University of East Anglia. He has worked within ecological consultancy since 2000 and has been involved in bat work since 2001. He holds licences to disturb bats in both Wales (S088190-7 valid until June 2022) and England (2018-36707-CLS-CLS valid until 2028). Further details of his qualifications and experience can be found at <http://linkd.in/19aGTf4>

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Five surveyors undertook both of the dawn re-entry surveys and the dusk emergence survey: Terry Collins, Jeremy Anderson, Connor James, and Peter Hartman on all three surveys, Paul Hudson on two surveys and Simon Hartman on one survey.

2.2.2. Vegetation and Habitats

The vegetation and habitat types present within the predicted zone of influence⁶ were categorised and mapped in accordance with the standard⁷ Phase 1 Habitat assessment methodology (Joint Nature Conservation Committee, 2010), Dominant and conspicuous plant species were recorded for each habitat. Target notes were used to record information on features of ecological interest, such as evidence of, or habitats with potential to support protected species. Following the completion of the survey, a colour coded habitat plan was digitised using Corel Draw 12 to show the extent and distribution of the different habitat types present within the site (see Plan 3).

Hedgerows within the site were not formally assessed against the definitions within the Hedgerow Regulations 1997.

The presence of invasive plant species listed on Schedule 9 of the Wildlife and Countryside Act (1981), as amended, such as Himalayan balsam (*Impatiens glandulifera*) and Japanese knotweed (*Fallopia japonica*) were also noted during the survey, if present.

2.2.3. Protected and Notable Species

During the survey, emphasis was placed on searching for evidence of, and habitats with, potential to support protected or notable species, especially species meeting any of the following criteria:

- Listed under the Conservation of Habitats and Species Regulations 2010 (as amended), the Wildlife and Countryside Act 1981 (as amended);

- Listed under The Natural Environment and Rural Communities (NERC) Act 2006 Section 41 Habitats or Species of Principle Importance for Conservation of Biological Diversity in England;

- UK BAP priority species or Local BAP (LBAP) priority species;

- Nationally rare or nationally scarce species; and

- Species of Conservation Concern (e.g. JNCC Red List, RSPB/ BTO Red or Amber Lists).

It should be noted that only those species with potential to be present on site are mentioned within this report. The methodologies used were as follows:

Birds

⁶ Zone of influence: the area that may be affected by the activities associated with the proposed works.

⁷ Some additional categories also used e.g. hard standing and Japanese knotweed.

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Any birds observed during the field survey were recorded, in addition to features capable of supporting nesting birds (e.g. trees, hedgerows, buildings, bramble, ruderal vegetation and rough grassland etc.). The site was also assessed for its actual and potential suitability to support Wildlife and Countryside Act 1981 (as amended) Schedule 1 species.

A comprehensive bird survey such as a breeding bird survey was not undertaken as this was beyond the scope of the assessment.

Bats

Daytime Internal and External Building Inspection

Greenwillows Associates undertook a Preliminary Roost Assessment of the building in September 2021. Previously, the building has been subject to a roost assessment in 2016 by Acer Ecology Ltd. A further update roost assessment was undertaken by Acer Ecology Ltd in 2019. Both of these assessments found no evidence of bats internally or externally but assessed the building as having high bat roosting suitability.

Dusk Emergence and Dawn Re-entry Surveys

Previous dusk emergence and dawn re-entry surveys were undertaken by Acer Ecology Ltd in 2019. Two dawn re-entry and one dusk emergence survey were repeated in 2022, each with five surveyors.

The evening dusk emergence survey commenced approximately 30 minutes prior to sunset and continued until approximately 90 minutes after sunset. The dawn re-entry surveys commenced 90 minutes before sunrise and continued for 15 minutes after sunrise.

The surveyors were equipped with; Elekon Batlogger M or Echometer Touch Professional bat detectors.

Surveyors were positioned at viewpoints where they had good sight of all elevations of the building, so that all potential roosting features could be observed to detect any bat emerging from, or re-entering, the building. Bat activity near the building was recorded to help ascertain flight lines.

In accordance with Section 2.6.1 of the Bat Conservation Trust's Bat Surveys for Professional Ecologists (Collins, 2016) surveys were undertaken during nights with temperatures above 10°C at sunset and during mornings where the previous sunset temperature was above 10°C. The surveys were also undertaken in the absence of rain and strong wind (5.4 m/s or greater, which is equivalent to 13 mph or Beaufort 4).

Terrestrial Habitat assessment

A preliminary assessment of the value of the site for bats (and any potential roost sites therein) was made in accordance with Table 4.1 of the Bat Surveys for Professional Ecologists (Collins, 2016) (see Appendix 4). The assessment was based on the relative abundance and quality of habitat features within the site, and surrounding landscape, suitable for roosting, foraging and commuting bats.

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Badgers

Earth embankments, wooded copses, hedgerows etc. are habitat features that often contain evidence of badger (*Meles meles*). Any of these features present within the survey area and a 50m buffer adjacent to it were searched for such evidence. Where present the location of badger signs such as setts, runs, dung pits, prints, hair and foraging snuffle holes were recorded.

Dormouse

The hedgerows, trees and adjacent woodland (which lies off-site), was assessed for their suitability to support dormice (*Muscardinus avellanarius*) with reference to guidance such as The Dormouse Conservation Handbook (Bright, Morris & Mitchell-Jones, 2006). The structure and composition of the habitats within and adjacent to the site were assessed with respect to the presence of flower, fruit or nut-bearing food-plants such as hazel (*Corylus avellana*) (a favoured food-plant of dormice), oak sp., honeysuckle (*Lonicera periclymenum*), bramble (*Rubus fruticosus* agg.), sycamore (*Acer pseudoplatanus*), as well as other trees and shrubs listed in Bright, Morris & Mitchell-Jones (2006) as of value to dormice. In addition, connectivity to other areas of suitable habitat in the wider landscape, such as hedgerows and woodland, was assessed.

No hazel was recorded during the survey and therefore a search for hazelnuts opened by dormice was not possible. A full nest tube/ box survey was not undertaken as this was beyond the scope of the assessment.

Considering that the scattered trees proposed for removal in the rear garden have little potential to support dormice and that the development will not result in the removal of hedgerow, dense scrub (on site) or the adjacent woodland to the south (off-site), and that there are no records of dormice within 1km (GIGL data, 2016), there is a very low probability of this species residing on site and/ or being affected by the proposed works. This species is not mentioned further in this report.

Great Crested Newts

The survey area was appraised for its suitability to support great crested newts (*Triturus cristatus*). The assessment was based on guidance outlined in the Joint Nature Conservation Committees' published Herpetofauna Workers' Manual (Joint Nature Conservation Committee, 2003) and the Great Crested Newt Conservation Handbook (Langton, Beckett & Foster, 2001).

Ordnance Survey maps and aerial images of the land surrounding the site were consulted to determine if any water bodies were present within the site or 500m of it. No suitable water bodies were identified within the study area. Also, there do not appear to be any suitable water bodies present within 500m of the site. Furthermore, there are no records of great crested newt within 1km of the site (GIGL data, 2016).

This species is highly unlikely to occur on site and is therefore not mentioned further in this report.

Reptiles

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An assessment of the suitability of on-site habitats to support reptiles was made. Reptiles require a diverse range of habitats to meet their needs such as hedgerows, scrub, rough grassland, wood piles, rubble, banks and compost heaps. The potential of the site to provide hibernation opportunities and spring/ summer/ autumn habitat was also assessed, with reference to guidance provided in the Herpetofauna Workers' Manual (Joint Nature Conservation Committee, 2003), the Reptile Management Handbook (Edgar, Foster & Baker, 2011) and the Reptile Mitigation Guidelines Technical Note TIN 102 (Natural England, 2013). The following factors were considered: vegetation type and structure; insolation (sun exposure); slope aspect; topography; surface geology; habitat connectivity; habitat size; prey abundance; refuge opportunity; hibernation opportunity; egg-laying potential (grass snakes (*Natrix natrix*)); public pressure; percentage of shade; levels of disturbance and management regime.

A targeted presence/absence reptile survey was not undertaken as it was beyond the scope of this assessment.

Invertebrates and Other Species

General habitat suitability and incidental sightings of invertebrates recorded in the wider area (GIGL data, 2016) other animal species were also noted.

2.2.4. Assessment of Ecological Value

The value of the habitats and features of the site have been provisionally evaluated and graded in accordance with a geographical frame of reference as detailed in Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland (IEEM, 2016). The level of value of specific ecological receptors is assigned using a geographic frame of reference, i.e. international value being most important, then national, regional, county, district, local and lastly, within the immediate zone of influence of the site only. Brief descriptions of how Acer Ecology interprets these categories are set out in Appendix 2.

2.2.5. Constraints and Limitations

General Temporal Constraints

Any ecological survey can only identify what was present on site at the time the survey was conducted. Habitat usage by species can change over time, and if development works do not begin within two years of the date of this report, an update survey is likely to be required in accordance with guidance from Natural England and BS 42020:2013⁸, to determine if conditions have changed since those described in the current report.

Restricted View

⁸ As set out in Section 6.2.1, point 7 which states that ecological information should not normally be more than two/three years old, or as stipulated in good practice guidance).

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During the dusk emergence and the dawn re-entry surveys, only a partial view of the north-eastern elevation was possible due to due to vegetation and site boundaries lying so close to the building. Surveyors were positioned in the best possible places to maximise view of the building.

3. Results

3.1. Desk Study

3.1.1. Statutory Nature Conservation Designated Sites

Statutory Sites (SACs or SSSIs) Designated for Bats within 10km

No SACs or SSSIs specially designated for bats lie within 10km of the site.

SSSIs or SACs within 2km

There is one SACs/ SSSIs designated for its conservation value within a 2km search radius of the site. These are listed in order of proximity below:

Richmond Park SAC & SSSI is located approximately 280m to the south-east of the site proposed for development, at its closest point. Richmond Park SAC has been managed as a royal deer park since the seventeenth century, producing a range of habitats of value to wildlife. In particular, Richmond Park is of importance for its diverse deadwood beetle fauna associated with the ancient trees found throughout the parkland. Many of these beetles are indicative of ancient forest areas where there has been a long continuous presence of over-mature timber. The site is at the heart of the south London centre of distribution for stag beetle (*Lucanus cervus*), an Annex II species which is the primary reason for the selection of this site at the European level.

Richmond Park SSSI is designated for similar reasons, the long-established grazing by deer has produced a mosaic of dry acid grassland, marshy grassland and unimproved neutral grassland. These important communities grade into more improved grasslands and into areas dominated by bracken *Pteridium aquilinum*. Broadleaved woodlands, ponds and ditches add to the diversity of habitats present and ancient trees are present throughout. The acid grassland support a range of species indicative of this habitat as well as uncommon and notable species such as heath grass (*Danthonia decumbens*) and mat grass (*Nardus stricta*). A range of herbs also exist including upright chickweed (*Moenchia erecta*), a nationally uncommon species. The damper areas support wet grassy heath species such as purple moor-grass (*Molinia caerulea*) and heath rush (*Juncus squarrosus*). Wetter areas support a wider range of rushes, sedges and tufted hair grass (*Deschampsia cespitosa*). The ponds and ditches support two species scarce within Greater London namely alternate-flowered watermilfoil (*Myriophyllum alterniflorum*) and lesser skullcap (*Scutellaria minor*). Finally, Richmond park also supports two nationally restricted click beetles *Ampedus cardinalis* and *Procræus tibialis*, listed as Red Data Book Species. Both species live in rotting oak trunks. Other RDB listed species found in the park include *Lymexylon navale*, recorded from dead standing oak, and *Uleiota planata* and *Tomoxia biguttata* more associated with beech. The larvae of *Agrilus sinuatus* live beneath the bark of old hawthorn trees and *Trinodes hirtus* is generally recorded from old oaks where it feeds on

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spiders' webs. In addition to the beetles, the yellow legged clearwing moth (*Synanthedon vespiformis*) which bores into oak stumps has been recorded from the park.

NNRs with 2km

Richmond Park, as mentioned above, is also a national nature reserve. Richmond park is London's largest NNR covering 850ha. It is recognised for its rare and species beetles (over 1000 species) which feed on dead and decaying wood, deer droppings or are associated with wetland habitat. Habitats present in the park include dry acid and neutral grassland, species poor wet grassland, mire, plantation woodlands, streams, ponds, veteran trees, scrub and bracken.

LNRs

There are two LNRs within 2km of the site:

Ham Lands LNR lies approximately 1.5km to the south-west of the site proposed for development. Ham Lands local nature reserve is an extensive area of grassland and scrub with abundant wildlife. The site was once extensively excavated for gravel, then back-filled over time with a variety of soil types from all over London. This has created a unique mosaic of different vegetation types attracting many butterfly and bird species. In spring, the site is full of hawthorn blossom and in the summer, the meadows support hundreds of wildflowers.

Ham Common LNR lies approximately 1.8km to the south of the site proposed for development. Ham Common supports birch and oak woodland with wet hollows and acid grassland. Notable species include remote sedge (*Carex remota*), cow-wheat (*Melampyrum pratense*) and purple hairstreak butterfly (*Neozephyrus quercus*), birds and owls.

3.1.2. Non-statutory Nature Conservation Designated Sites

Sites of Importance for Nature Conservation (SINCs)

SINCS in London are categorised in to three tiers with Sites of Metropolitan Importance being the highest importance followed by Sites of Borough Importance Grade I and Grade II and finally Sites of Local Importance. The SINCs identified below are listed in order of distance from the site.

Several SINCs were recorded within 1km of the study area. These include:

Richmond Park and Associated Areas Site of Metropolitan Importance, which lies adjacent to the southern boundary of the site proposed for development. In addition to Richmond Park itself, this includes surrounding areas which together form an extensive area of high quality wildlife habitats. The site is important for invertebrates, especially beetles, and also support a wide range of fungi and hole-nesting birds. The stag beetle is also common here. Acid grassland is the most extensive habitat on site, and includes both dry and damp areas which support regionally uncommon plants such as upright chickweed (*Moenchia erecta*), blinks (*Montia fontana*) and subterranean clover

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(*Trifolium subterraneum*). The ponds and wetland support locally uncommon plants including ivy-leaved crowfoot (*Ranunculus hederaceus*) and 135 species of wetland beetles. The areas of plantation woodland support woodcock and hobby.

Terrace Field & Terrace Garden Site of Local Importance lies adjacent to the northern and eastern boundaries of the site. Terrace Field is designated for its moderate floristic diversity however a very rare spider (*Philodromus praedatus*) has been recorded on site. Terrace Gardens supports an area of amenity grassland and mature planted trees.

Petersham Meadows Site of Borough Importance Grade II, which lies approximately 25m to the west of the site proposed for development. This site is designated for its floristic diversity including species such as bulbous buttercup (*Ranunculus bulbosus*), other common wildflowers and a good variety of grasses. Damper areas support a diverse range of wetland species. The proposed works will not extend beyond the site boundary and no foreseeable adverse direct or indirect impacts upon Petersham Meadows or its designating features are likely to occur. For these reasons, this site is not mentioned any further in this report.

River Thames and Tidal Tributaries Site of Metropolitan Importance, which lies approximately 200m to the west of the site proposed for development. The River Thames and the tidal sections of creeks and rivers which flow into it comprise a number of valuable habitats not found elsewhere in London. The mud-flats, shingle beach, inter-tidal vegetation, islands and river channel itself support many species from freshwater, estuarine and marine communities which are rare in London. The site is important for wading birds and wildfowl. The river walls are also important for black redstart (*Phoenicurus ochruros*). Over 100 species of fish are also present, providing important fish nurseries for nationally uncommon species such as smelt. The site also supports nationally rare and uncommon plants such as cut grass (*Leersia oryzoides*) and marsh sow-thistle (*Sonchus palustris*). The proposed works will not extend beyond the site boundary. Given that there are no watercourses on or adjacent to the site which feed in to the Thames, no foreseeable adverse direct or indirect impacts upon River Thames and Tidal Tributaries or its designating features are likely to occur. For these reasons, this site is not mentioned any further in this report.

Petersham Lodge Wood and Ham House Meadows Site of Borough Importance Grade II, which lies approximately 480m to the south-west of the site proposed for development. The woodland is managed as a nature reserve which supports a lush ground flora. The horse-grazed field supports diverse wetland vegetation when it occasionally floods. The site also has another herb-rich meadow which supports the nationally scarce yellow vetchling (*Lathyrus aphaca*). The proposed works will not extend beyond the site boundary and no foreseeable adverse direct or indirect impacts upon Petersham Lodge Wood and Ham House Meadows or its designating features are likely to occur, given the distance and lack of ecological connectivity between the two sites. For these reasons, this site is not mentioned any further in this report.

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Marble Hill Park and Orleans House Gardens Site of Local Importance, which lies approximately 560m to the west of the site proposed for development, on the opposite side of the Thames. This site comprises floristically rich meadows and woodland important for local birds. The proposed works will not extend beyond the site boundary and no foreseeable adverse direct or indirect impacts upon Marble Hill Park and Orleans House Gardens or its designating features are likely to occur, given the distance and lack of ecological connectivity between the two sites i.e. opposite sides of the River Thames. For these reasons, this site is not mentioned any further in this report.

The Copse, Holly Hedger Field and Ham Avenues Site of Borough Importance Grade II, which lies approximately 690m to the south-west of the site proposed for development. This site comprises a flowery meadow, stand of ancient oaks and a historic avenue of lime trees which combine to provide a habitat for a wealth of animals and plants. The proposed works will not extend beyond the site boundary and no foreseeable adverse direct or indirect impacts upon The Copse, Holly Hedger Field and Ham Avenues or its designating features are likely to occur. For these reasons, this site is not mentioned any further in this report.

East Sheen and Richmond Cemeteries and Pesthouse Common Site of Local Importance which lies approximately 770m to the north-east of the site. This site lying adjacent to Richmond Park provides a range of wildlife habitat including diverse acidic grasslands, mature trees and scrub. The proposed works will not extend beyond the site boundary and no foreseeable adverse direct or indirect impacts upon East Sheen and Richmond Cemeteries and Pesthouse Common or its designating features are likely to occur. For these reasons, this site is not mentioned any further in this report.

Ancient Woodland

There are no areas of ASNW located within the borough of Richmond⁹.

3.1.3. Site History

A habitat survey undertaken in 1999, provided by GIGL, state the habitat types present within the survey parcel include broadleaved woodland, scattered trees and tall herbs. This is fairly consistent (i.e. scattered trees) with what is currently on site. However, amenity grassland, hedgerow, hard standing or buildings are not mentioned. Considering the age of the building on site it is likely that the management of the site has changed little since this time.

⁹ http://www.richmond.gov.uk/home/services/parks_and_open_spaces/parks_improvements_and_conservation/nature_conservation.htm

3.2. Field Survey

3.2.1. Habitats and Vegetation

The results of the general survey of habitats and vegetation are shown on Plan 2. A botanical species list is given in Appendix 1.

3.2.2. Summary of Habitats Present within the Site

The site consists of 11 elements which are described in detail below. These comprise:

Semi-Natural Broadleaved Woodland (A1.1.1);

Dense Scrub (A2.1);

Scattered Scrub (A2.2);

Scattered Trees (A3.1);

Amenity Grassland (J1.1);

Ornamental Shrubs (J1.1.4);

Intact Hedgerow (J2.3.2);

Fence (J2.3.4);

Wall (J2.3.5);

Buildings (J3.6); and

Hard Standing.

3.2.3. Notable Plant Species

Data Trawl Results

GIGL returned 23 records of protected/ priority plant species within 1km, however no records of protected or rare plants were provided from within the survey area. The nearest records are box (*Buxus sempervirens*), greater tussock sedge (*Carex paniculata*) and bluebell (*Hyacinthoides non-scripta*), all of which were recorded 170m to the north of the proposed development.

Field Survey Results

No plant species were recorded on the site, which individually by themselves are considered either of national, regional or local significance.

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3.3. Habitat Descriptions

3.3.1. Broadleaved Semi-Natural Woodland (A1.1.1)

Broadleaved woodland, which forms part of the Richmond Park and associated areas Site of Metropolitan Importance, lies adjacent to the southern boundary of the site, although it does not lie within the ownership boundary. The adjacent trees lying immediately south of the ownership boundary (Trees 8-18) are young-semi-mature in age comprising ash and hornbeam (*Carpinus betulus*). Smaller shrubs of the above canopy are also present, as well as elder (*Sambucus nigra*). The ground flora is sparse with ivy the only frequently occurring species. Bramble and wood avens (*Geum urbanum*) were both occasional. The wider woodland further south is of a similar composition to what is mentioned above.

Photo 1: Broadleaved woodland lying within ownership boundary in shown blue (western view) – Photo from 2016



Photo 2: Broadleaved woodland lying within ownership boundary shown in blue (eastern view) – Photo from 2016

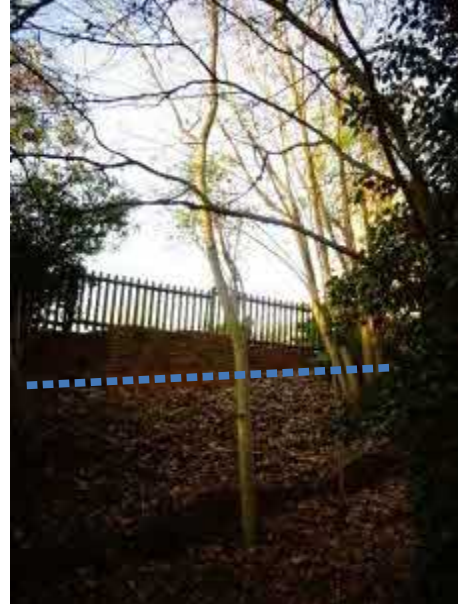


Photo 3: Broadleaved Woodland (October 2022)



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3.3.2. Scattered Trees (A3.1)

There are 17 scattered trees present in the amenity grassland west of the car park. Species recorded in this area include young- semi-mature ash, cherry (*Prunus avium*) and hornbeam with an average DBH of 40cm. A single semi-mature-mature Acer sp. (*Acer* sp.) and oak (*Quercus* sp.) were also recorded with an average DBH of 75cm.

Three scattered trees are present in the rear garden of the property including a semi-mature cherry with a DBH of 36cm and two non-native ornamental trees with DBHs of 51cm and 58cm.



3.3.3. Amenity Grassland (J1.1)

The majority of the site to the north and rectangular lawn to the west is made up of a regularly mown and manicured sward of amenity grassland. Species recorded include red fescue (*Festuca rubra*), perennial rye grass (*Lolium perenne*) Yorkshire fog (*Holcus lanatus*), daisy (*Bellis perennis*), ribwort plantain (*Plantago lanceolata*), creeping cinquefoil (*Potentilla reptans*), creeping buttercup (*Ranunculus repens*), yarrow (*Achillea millefolium*), lesser celandine (*Ficaria verna*) and common sorrel (*Rumex acetosa*). See photos above.

3.3.4. Ornamental Shrubs (J1.1.4)

As a functioning hotel and public house there is a significant amount of non-native ornamental planting. This includes Rhododendron

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Photo 5: Ornamental Shrubs



3.3.5. Intact Hedgerow (J2.3.2)

A well-managed and regularly cut hedgerow forms the western, northern and eastern boundaries of the site. The hedgerow forming the western boundary adjacent to the road is comprised almost entirely of non-native ornamental species such as garden privet (*Ligustrum ovalifolium*), although a few native species were recorded such as beech (*Fagus sylvatica*) and birch (*Betula* sp.). The hedgerow forming the northern and western boundary is made of up natural woody species such as hawthorn (*Crataegus monogyna*), birch, beech, field maple (*Acer campestre*), hornbeam (*Carpinus betulus*) and yew (*Taxus baccata*).

Photo 7: Boundary Hedgerow



3.3.6. Fencing, Walls, Buildings, and Hard Standing (J2.3.4, J2.3.5 and J2.3.6)

No vegetation was recorded in these habitats.

3.4. Protected and Notable Species

3.4.1. Birds

Desk Study Results

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GIGL provided numerous records for birds within 1km of the site. The following table shows nesting birds associated with habitats present on site and their conservation status:

Species	Schedule 1	NERC S41	UK BAP	LBAP	Red list ¹⁰	Amber list ¹¹
House martin (<i>Delichron urbica</i>)						Yes
Linnet (<i>Linaria cannabina</i>)			Yes		Yes	
Dunnock (<i>Prunella modularis</i>)		Yes	Yes			Yes
Song thrush (<i>Turdus philomelos</i>)		Yes	Yes	Yes	Yes	
Mistle thrush (<i>Turdus viscivorus</i>)						Yes
Spotted flycatcher (<i>Muscicapa striata</i>)		Yes	Yes		Yes	

Field Survey Results

A very low number of birds were recorded on site, including wood pigeon (*Columba palumbus*), blackbird (*Turdus merula*), magpie (*Pica pica*), robin (*Erithacus rubecula*) and jackdaw (*Corvus monedula*). The scrub, trees, hedgerow and building offer potential nesting opportunities for a range of birds.

No signs of birds having recently nested was found during the survey within or on the exterior of the building or in any of the trees within the site.

3.4.2. Bats

Desk Study Results

The data search returned a total of 14 species records of bat within 1km of the site. No details were provided of whether these records are of roosts or individuals in flight. Records were as follows:

Seven records of serotine (*Eptesicus serotinus*) within 1km of the site. The nearest record, submitted in 1994, lies 871m to the south-west of the site. The most recent record, submitted in 2008, lies 901m to the north-west of the site;

16 records of unidentified myotis sp. within 1km of the site. The nearest record, submitted in 2006, lies 257m to the west of the site. The most recent record, submitted in 2009, lies 457m to the north of the site;

17 records of Daubenton's bat (*Myotis daubentonii*) within 1km of the site. The nearest record, submitted in 2006, lies 253m to the west of the site. The most recent record, submitted in 2011, lies 698m to the west of the site;

Three records of Natterer's bat (*Myotis nattereri*) within 1km of the site. The nearest record, submitted in 2006, lies 265m to the north-west of the site. The most recent record, submitted in 2006, lies 265m to the north-west of the site;

¹⁰ Bird species of high conservation, such as those whose population or range is rapidly declining, recently or historically, and those of global conservation concern.

¹¹ Bird species of medium conservation concern, such as those whose population is in moderate decline, rare breeders, internationally important and localised species and those of unfavourable conservation status in Europe.

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Eight records of Leisler's bat (*Nyctalus leisleri*) within 1km of the site. The nearest record, submitted in 2008, lies 901m to the north-west of the site. The most recent record, submitted in 2009, lies 993m to the north of the site;

27 records of Noctule (*Nyctalus noctula*) 1km of the site. The nearest record, submitted in 1996, lies 141m to the north of the site. The most recent record, submitted in 2011, lies 968m to the west of the site;

32 records of pipistrelle sp. (*Pipistrellus* sp.) within 1km of the site. The nearest record, submitted in 1994, lies 314m to the north-west of the site. The most recent record, submitted in 2006, lies 328m to the west of the site;

Three records of Nathusius' pipistrelle (*Pipistrellus nathusii*) within 1km of the site. The nearest record, submitted in 2006, lies 522m to the south-west of the site. The most recent record, submitted in 2006, lies 522m to the south-west of the site;

35 records of common pipistrelle (*Pipistrellus Pipistrellus*) within 1km of the site. The nearest record, submitted in 2009, lies 179m to the north of the site. The most recent record, submitted in 2014, lies 938m to the north of the site;

91 records of soprano pipistrelle (*Pipistrellus pygmaeus*) within 1km of the site. The nearest record, submitted in 2009, lies 179m to the north of the site. The most recent record, submitted in 2014, lies 777m to the north of the site;

Three records of long-eared bats (*Plecotus* sp.) within 1km of the site. The nearest record, submitted in 2008, lies 901m to the north-west of the site. The most recent record, submitted in 2008, lies 901m to the north-west of the site;

Four records of brown long-eared bat (*Plecotus auritus*) within 1km of the site. The nearest record, submitted in 2014, lies 429m to the north of the site. The most recent record, submitted in 2014, lies 429m to the north of the site; and

39 records of unidentified bats within 1km of the site. The nearest record, submitted in 2000, lies 223m to the north of the site. The most recent record, submitted in 2006, lies 316m to the west of the site.

Field Survey Results

Building Description

The building is a complex two-storey U-shaped structure with the southern (main) roof section running on a west to east axis. The western roof section (running on a north-south axis) has a hipped northern end and small single storey lean-to extending from the eastern elevation. The eastern roof section (running on a north-south axis) also has a hipped end but with a perpendicularly positioned symmetrical roof extending

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from the northern elevation. These roof sections will be referred to throughout the remainder of the report as the southern, eastern and western roof sections.

The southern and western roof sections (including the lean-to extension) are finished with slate roof tiles and terracotta ridges. On the southern roof section, there are multiple gaps under raised tiles on both the northern and southern pitches. On the western roof section, there are no gaps under well-fitted tiles on the eastern pitch or on the lean-to extension, however there are approximately 16 gaps under the poorly-fitted tiles on the western pitch. There is also a slightly raised tile on the northern hipped-pitch and a number of raised tiles around the base of the chimney placed here.

The eastern roof section is finished with roman tiles and terracotta ridge which are generally well fitted but there are a number of gaps along the edge tiles on both the eastern and western pitches and on the western pitch. The roof extending from the northern elevation (running on a west to east axis) is also constructed from roman tiles and has gaps under the edge tiles on the southern pitch. In addition, there are gaps under the ridge at both gable ends and gaps under the edge tiles on the eastern gable end.

The eaves of the building are well sealed along much of the elevations however, potential access in to the internal voids were recorded along the western elevation of the eastern roof section, along the western elevation of western roof section and along the southern elevation of the southern roof section.

The internal voids under each roof section are all connected and accessible. The void measures 1.8m in height, 6.8m in width and 49m in length. The void is finished with timber sarking and bitumen lining, which is in very good condition with no holes or gaps recorded. The void of the southern and western roof sections are fitted with high-wattage strip lights, the void of the eastern roof section is not fitted with lights. The floor of the void is fitted with a carpet of fibreglass insulation. Light ingress was recorded at the eaves along the southern and western elevations of the building. Although potential access at the eaves was recorded on the western elevation of the eastern roof section during the external inspection, this was not viewable from the internal void which appeared to have been boxed off.

There is a ground level cellar present, however the door is well fitted to the frame with no potential access points for bats. No other potential access points for bats into the cellar were recorded.

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Photo 8: Front Elevation



Photo 9: Side Elevation



Photo 10: Side Elevation



Photo 11: Side Elevation



Photo 12: Rear Elevation



Photo 13: Example of Raised Tiles



<p>Photo 14: Example of Raised Tiles</p> 	<p>Photo 15: Example of Raised Tiles</p> 
<p>Photo 16: Example of Raised Tiles</p> 	

Evidence of Bats

No bats or signs of bats were found anywhere in either the interior spaces or external parts of the building during the building inspection during the 2016, 2019 or 2021 surveys.

Update Preliminary Roost Assessment Results

The update inspection found that the building was structurally the same as the initial inspection undertaken in 2016. No evidence of bats recorded internally or externally within the building, but the building was assessed as having high bat roosting suitability.

Dusk Emergence and Dawn Re-entry Survey Results

The dusk emergence survey and dawn re-entry surveys found no evidence of bats roosting within the building. Bat activity around the site during the survey was low and therefore, it is considered unlikely that the building supports a bat roost.

The results of the dusk emergence and dawn re-entry surveys are summarised in the following tables:

Table 3: Summary of Conditions During Dusk Emergence and Dawn Re-entry Surveys

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	Survey 1	Survey 2	Survey 3
Date	7/8/2022	28/08/2022	29/09/2022
Sunset/Sunrise	06:23	06:45	19:09
Start Time	04:53	05:17	18:39
Finish Time	06:38	07:00	20:39
Cloud Cover	2/8 oktas	0/8 oktas	0
Precipitation	None	None	None
Wind ¹²	0	1	0
Start Temperature	15°C	16°C	12°C

Table 4: Summary of Dusk Emergence and Dawn Re-entry Surveys Results

Survey 1: Dusk Emergence	Survey 2: Dawn Re-entry	Survey 3: Dawn Re-entry
No bats were recorded returning to roost within the building.	No bats were recorded returning to roost within the building.	No bats were recorded emerging from the building.
Commuting/Foraging Routes	Commuting/Foraging Routes	Commuting/Foraging Routes
Common pipistrelle bats were recorded foraging around the woodland directly to the south of the site.	Common pipistrelle bats were recorded foraging around the woodland directly to the south of the site.	No distinct commuting/foraging routes were observed.
Bat Activity ¹³	Bat Activity	Bat Activity
Moderate levels of activity of common pipistrelle bats was recorded and low levels of soprano pipistrelle and noctules.	Low levels of soprano pipistrelles and common pipistrelles were recorded. There was a single noctule pass flying high over the site, and a single narrow band Myotis call.	Low levels of three species were recorded: common pipistrelle, soprano pipistrelle and noctule bats.

Trees

All of the trees within the survey area were assessed for their suitability to support roosting bats. The majority of scattered trees were young to semi-mature in age, with two more mature trees present. None of the trees had potential roost features (PRFs) and are considered to have negligible potential to support roosting bats. Although four of the trees (Trees 8, 9, 10 and 11) had ivy climbing up their trunks, the ivy stems were less than 5cm in diameter and fairly immature which would not provide ample roosting space/ protective cover for bats to roost between the ivy stem and trunk. Furthermore, these trees lie outside of the ownership boundary and will not be directly affected by the proposed development.

¹² Estimated on site using the Beaufort scale.

¹³ Activity thresholds have been quantified using personal judgement according to past experience of surveying similar sites.

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All trees within 15m of the development footprint were assessed for bat roosting potential. The table below presents the measurements taken:

Tree No	Species	Crown Spread (m)	Stem Diameter (cm)	Root Protection Area (m)	Bat Roosting Potential
1	Ash	3.80	36/33/20/23/26	7.40	Low
2	Hornbeam	4.80	36	4.32	Negligible
3	Cherry	3.58	82	9.84	Negligible
4	Hornbeam	3.4	44	5.28	Negligible
5	Non-Native Tree Ornamental Tree	3.35	51	6.12	Negligible
6	Strawberry Tree (<i>Arbutus unedo</i>)	4.45	58	6.96	Negligible
7	Cherry	2.52	36	4.32	Negligible
8	Ash	4.45	28/22/21/23	5.67	Low
9	Ash	3.30	30	3.60	Low
10	Hornbeam	2.65	20	2.40	Low
11	Ash	3.40	46	5.52	Low
12	Ash	3.85	40	4.80	Low
13	Ash	1.84	25	3.00	Negligible
14	Hornbeam	3.15	40	4.80	Negligible
15	Hornbeam	2.25	28	3.36	Negligible
16	Hornbeam	1.05	14	1.68	Negligible
17	Hornbeam	1.85	25	3.00	Negligible
18	Ash	3.85	20/18/20	3.35	Negligible



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Photo 19: Trees 3 and 4 	Photo 20: Tree 5 
Photo 21: Tree 6 	Photo 22: Tree 7 

Photo 23: Tree 8 	Photo 24: Tree 9 
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Photo 25: Tree 10	Photo 26: Tree 11
 A photograph of a tall, slender tree with dense green foliage, standing in a wooded area. The ground is covered with fallen brown leaves, suggesting an autumn setting. The tree is the central focus, with other trees and a fence visible in the background.	 A photograph of a tall, slender tree with dense green foliage, similar to Tree 10. It is also in a wooded area with fallen leaves on the ground. The tree is the central focus, with other trees and a fence visible in the background.
Photo 27: Tree 12	Photo 28: Tree 13
 A photograph of a tall, slender tree with dense green foliage, similar to the previous trees. It is in a wooded area with fallen leaves on the ground. The tree is the central focus, with other trees and a fence visible in the background.	 A photograph of a tall, slender tree with dense green foliage, similar to the previous trees. It is in a wooded area with fallen leaves on the ground. The tree is the central focus, with other trees and a fence visible in the background.

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Photo 29: Tree 14	Photo 30: Tree 15 (centre) Tree 17 (right)
 A photograph of a tree trunk with a light-colored bark, showing some vertical lenticels. The tree is surrounded by other trees and a fence in the background.	 A photograph showing two trees. The tree in the center has a light-colored trunk, and the tree on the right has a darker trunk. Both are surrounded by other trees and a fence.
Photo 31: Tree 16	Tree 32: Tree 18
 A photograph of a tree trunk with a light-colored bark, showing some vertical lenticels. The tree is surrounded by other trees and a fence in the background.	 A photograph of a tree trunk with a light-colored bark, showing some vertical lenticels. The tree is surrounded by other trees and a fence in the background.

Important Bat Commuting Routes and Foraging Areas

The woodland to the south of the building was well used by commuting/foraging common pipistrelle bats during one of the surveys. Otherwise only occasional foraging took within the site during the surveys.

Foraging/ Commuting Habitat

The site as a whole is considered to provide low to moderate foraging habitat for bats. Although the site is somewhat urbanised, the scattered trees, scrub and adjacent broadleaved woodland provide foraging habitat for bats, which is well connected by woodland edge and hedgerow to areas of woodland and the River Thames in the wider area. The intersecting streets are artificially lit by streetlights which may deter light-sensitive species such as long-eared bats.

3.4.3. Badgers

Desk Study Results

The data search returned 14 badger records within 1km of the site (GIGL data, 2016) dated between 1999 and 2015. No further details were provided as these records are sensitive and confidential.

Field Survey Results

No evidence or signs of badger was recorded on site. A 50m radius of the woodland to the south of the site was also searched for evidence of badger however, no evidence was recorded. However, the adjacent woodland to the south is entirely suitable for resident and foraging/ commuting badger. It is also possible that the site could occasionally be used by foraging and commuting badger.

3.4.4. Reptiles

Desk Study Results

The data search returned two records of common lizard (*Zootoca vivipara*) both recorded in 2010, 626m to the north of the site.

Field Survey Results

The habitat on site is generally unsuitable for reptiles however, the hedgerows and dense scrub may provide some protective cover and habitat for a small population of reptiles. However, these habitats will not be directly affected by the proposed development and therefore no adverse impacts to reptiles are envisaged to occur. Reptiles are not mentioned further in this report.

3.4.5. Invertebrates and Other Species

Desk Study Results

GIGL provided a large number of records of invertebrates including moths, butterflies, grasshoppers, spiders, dragonflies, damselflies, beetles, diptera and hymenoptera within 1km of the site. No records are from the sites itself.

GIGL also provided 37 records of hedgehog. The nearest record, submitted in 2000, lies 223m to the north of the site. The most recent record, submitted in 2002, lies 518m to the north of the site.

Field Survey Results

The only species recorded on site were speckled wood (*Pararge aegeria*) and small tortoiseshell (*Aglais urticae*). The trees, ornamental shrubs and dense scrub are likely to provide invertebrates with suitable habitat and food sources. The hedgerows and amenity grassland may provide suitable habitat but are

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unlikely to provide significant food sources for nectar-consuming invertebrates as they are so well managed and regularly mown/ flailed that they are unlikely to produce large amounts of flowers.

The dense scrub, hedgerows and even scattered scrub habitats may support hedgehog in both the summer and winter months. The scattered scrub which requires clearance prior to works may support hedgehog.

During the dusk emergence survey (6th June 2019) a stag beetle was observed foraging near the southern side of the building climbing within the flower beds beside the southern elevation doorway.

4. Ecological Evaluation, Legislation and Impact Assessment

The ecological value of the *in-situ* habitats and the potential/ actual presence of protected species are discussed in this section, along with a summary of relevant legislation and planning policies relating to habitats and species. Potential impacts on protected sites, *in-situ* habitats and protected or notable species arising from the proposed development, are identified including both direct and indirect impacts, and those associated with construction and operational stages.

4.1. Statutory Designated Sites

Legislation and policy relating to protected sites is summarised in Appendix 3.

4.1.1. Richmond Park SAC/ SSSI/ NNR

Assessment of Ecological Value

Richmond Park SAC & SSSI is located approximately 280m to the south-east of the site proposed for development, at its closest point. The site is designated for its diversity of habitats and beetle fauna, most notably its population of stag beetle.

Assessment of Potential Development Impacts

No direct impact to Richmond Park will occur as a result of the development. The amenity grassland, scattered shrub and two non-native scattered trees which will be lost to the development are unsuitable habitat for stag beetle, the primary reason for which Richmond Park is designated as a SAC. Therefore, no impact to Richmond Park or its designating features are envisaged to occur. The proposed development is therefore not anticipated to have 'significant effects' on the Richmond Park SAC. A Habitats Regulations Assessment's (HRA) is therefore not considered to be necessary.

4.1.2. Ham Lands LNR and Ham Common LNR

Assessment of Ecological Value

Ham Lands LNR lies approximately 1.5km to the south-west of the site proposed for development. It is designated for its floristic diversity as well as the many butterfly and bird species it supports.

Ham Common LNR lies approximately 1.8km to the south of the site proposed for development. It is designated for its woodland with wet hollows and acid grassland habitats as well as the presence of purple hairstreak butterfly and diversity of birds and owls.

Assessment of Potential Development Impacts

No direct impacts to Ham Lands LNR and Ham Common LNR will occur as a result of the development. Given that the development will be restricted to the site boundary and will not result in significant land-take of habitats known to support invertebrates such as the purple hairstreak butterfly, for which Ham

Common LNR is partially designated. Also, the distance between the sites and lack of ecological connectivity due to the intersecting land, comprising urban conurbations, is highly unlikely to result in indirect adverse impacts to Ham Lands LNR and Ham Common LNR.

4.2. Non-Statutory Designated Sites

Legislation and policy relating to protected sites is summarised in Appendix 3.

4.2.1. Richmond Park and Associated Areas Site of Metropolitan Importance (SINC)

Assessment of Ecological Value

This site lies adjacent to the southern boundary of the site proposed for development. The site is important for invertebrates, especially beetles, and also support a wide range of fungi and hole-nesting birds. The stag beetle is also common here. Acid grassland is the most extensive habitat on site and the plantation woodland supports woodcock and hobby.

Assessment of Potential Development Impacts

Direct impacts to the woodland or the species within the site are not likely however measures will need to be adopted to ensure indirect impacts do not occur to stag beetles (see section 5.0 below). The root protection areas of the trees lying in close proximity to the site (Trees 8-18) do not lie with the development footprint. Tree 14's root protection area slightly overlaps with the development footprint in Plan 4 however, the roots are obstructed by existing boundary walls and fences (See Photo 45) therefore, the development is unlikely to have an effect on the root protection area of Tree 14. Nevertheless, as a precautionary measure protective fencing (see Appendix 7) will be installed along the woodland edge to ensure no damage to the roots are incurred through general construction activities. See section 5.

4.2.2. Terrace Field & Terrace Garden Site of Local Importance (SINC)

Assessment of Ecological Value

This site lies adjacent to the northern and eastern boundaries of the site proposed for development. Terrace Field is designated for its moderate floristic diversity however a very rare spider, *Philodromus praedatus*, has been recorded on site, a species characteristically found on oak trees within wood pasture. Terrace Gardens supports an area of amenity grassland and mature planted trees.

Assessment of Potential Development Impacts

No direct impacts to Terrace Field & Terrace Garden are envisaged to occur as the development will not encroach on beyond the ownership boundary. A semi-mature-mature oak is present on site which is known to support the very rare spider, *Philodromus praedatus*, recorded in Terrace Field & Terrace Garden. However, this oak will be retained as part of the development.

4.3. Assessment of Ecological Value of On-site Habitats NERC S41, LBAP and SINC Habitats

The habitats, features and species of the site have been provisionally evaluated and graded in accordance with the categories set out in Appendix 2.

None of the habitats on the site are currently considered to be of international, national, regional, district, high local or local ecological value.

None of the habitats of the site qualify as 'Priority Habitats' of the UK BAP (Biodiversity Reporting & Information Group, 2007) or listed in Section 41 as 'habitats of principal importance for conservation of biological diversity in England' (NERC Act, 2006). In addition, none of the habitats on site are priority habitats on the Richmond LBAP.

4.4. Assessment of Ecological Value of On-site Habitats Which Do Not Qualify as NERC S41, LBAP and SINC Habitats

4.4.1. Scattered Trees

Assessment of Ecological Value

Trees 5 and 6 will be removed as part of the development. Both of these trees are ornamental non-native trees and are considered to have no more than site value for wildlife such as nesting birds and foraging bats.

Tree 7 will be retained as part of the development. This tree is considered to have no more than site value for wildlife such as nesting and foraging birds and foraging bats.

The remaining scattered trees on site (e.g. Trees 1 – 4 and remaining 13 trees) are also considered to have no more than site value for wildlife such as nesting birds, foraging bats and invertebrates.

Assessment of Potential Development Impacts

The clearance of the trees within the site scheduled for removal is unlikely to result in impacts outside of the context of the site.

As a precautionary measure protective fencing (see Appendix 7) will be installed along the woodland edge to the south, and around other trees on site proposed for retention to ensure no damage to the roots are incurred through general construction activities. Detailed recommendations provided in section 5.

4.4.2. Amenity Grassland

Assessment of Ecological Value

The amenity grassland on site is considered to have no more than site value for wildlife. The short sward height and low floristic richness is unlikely to provide protective cover or food sources for protected/ priority species.

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Assessment of Potential Development Impacts

The clearance of the amenity grassland to facilitate the creation of extra car parking spaces is unlikely to have an impact outside of the local context of the site.

4.4.3. Ornamental

Assessment of Ecological Value

A small area of introduced shrubs such as Rhododendron will be cleared as part of the development. This area is considered to have no more than site value for wildlife such as hedgehog and scrub-nesting birds.

Assessment of Potential Development Impacts

Removal of this small area of ornamental shrubs is unlikely to result in impacts outside of the context of the site.

4.4.4. Dense Scrub & Hedgerows

These habitats will not be affected by the proposed development as they lie outside of the development footprint and will be retained in-situ.

4.5. Assessment of Ecological Value of Off-site Habitats NERC S41, LBAP and SINC Habitats

The woodland adjacent to the southern boundary of the site is considered to have district value for wildlife as it lies within the boundary of Richmond Park and Associated Areas Site of Metropolitan Importance (SINC). An assessment of development impacts have been previously mentioned in section 4.2.1 above.

4.6. Protected and Notable Species

4.6.1. Birds

Assessment of Ecological Value of Site for Birds

The trees, scrub, ornamental shrubs, hedgerow and adjacent woodland (off-site) are suitable for common tree and scrub nesting birds as well as those recorded in the wider area (GIGL data, 2016) such as song thrush (S41; UKBAP; LBAP: Red List), linnet (UKBAP; Red List), dunnock (S41; UKBAP; Amber List), Mistle thrush (Amber List) and spotted flycatcher (S41; UKBAP; Red List). The building on site has potential to support house martin (Amber list). Woodcock (Amber List) and Hobby (Schedule 1) are also mentioned in the citation for Richmond Park and Associated Areas Site of Metropolitan Importance, which lies adjacent to the southern boundary of the site. However, no evidence of nesting within the trees or building was observed during the survey.

Legislation

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All wild British birds (while nesting, building nests and sitting on eggs), their nests and eggs (with certain limited exceptions) are protected by law under Section 1 of the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. Included in this protection are all nests (at whatever stage of construction or use) and all dependent young until the nest is abandoned and the young have fledged and become independent. Particularly rare species such as barn owl are listed on Schedule 1. This gives them extra protection to include protection from disturbance whilst nest building, whilst near a nest with eggs or young, or from disturbing the dependant young of such a bird. Following recent revisions, 59 bird species are also listed on the UK BAP.

Impact Assessment of Proposed Development on Birds

Much of the site will be retained as it currently exists and therefore the likelihood of adverse impacts arising to nesting birds is low. However, the clearance of the single shrub to facilitate expansion of the car park may result in disturbance or destruction of an active nest and therefore carries the risk of committing an offence. Appropriate measures to avoid committing an offence are provided in section 5.

4.6.2. Bats

Assessment of Ecological Value of Site for Bats

Potential Tree Roosts

All of the trees surveyed within site and those within the adjacent off-site woodland are considered to have negligible or low potential to support roosting bats due to a lack of potential roosting features.

Potential Building Roosts

The preliminary roost inspection found no evidence of bats roosting within the building. However, the building was assessed as having high suitability for supporting roosting bats.

Dusk Emergence and Dawn Re-entry Surveys

No evidence of roosting bats were recorded during the preliminary roost inspections, dusk emergence or dawn re-entry surveys however, considering high potential of building, roosting cannot be ruled out completely, therefore precautionary measures recommended.

Potential Hibernation Roosts

It is possible that the building could be used by hibernating bats, but this is considered unlikely, due to the following factors:

No direct evidence of bats found during the preliminary roost inspection and subsequent surveys;

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The internal and external stonework of the building are well-mortared lacking deep penetrating crevices suitable for entry by bats;

The close-fitting nature of the roof timbers;

The underground cellar is sealed off; and

Residential loft spaces are unlikely to have suitable conditions as their temperature is regulated by the residents below. The loft space is therefore likely to be subject to high temperature and humidity fluctuations which are generally thought to be unsuitable for bat hibernation.

Potential Foraging and Commuting Habitat

The site as a whole is considered to provide moderate - high quality foraging habitat for bats. Although the site is somewhat urbanised, the scattered trees, scrub and adjacent broadleaved woodland provide foraging habitat for bats, which is well connected by woodland edge and hedgerow to areas of woodland and the River Thames in the wider area. The intersecting streets are artificially lit by streetlights which may deter light-sensitive species such as long-eared bats, but not species such as pipistrelle or noctule bats.

Legislation

All species of bats and their roosting sites are protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats etc.) Regulations 1994, updated and consolidated by the Conservation of Habitats and Species Regulations 2010. All species of UK bats are designated as 'European protected species'. Seven species of bat (soprano pipistrelle (*Pipistrellus pygmaeus*), barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteini*), noctule (*Nyctalus noctula*), brown long-eared (*Plecotus aurita*), lesser horseshoe (*Rhinolophus hipposideros*) and greater horseshoe bats) are listed under the Natural Environment and Rural Communities (NERC) Act 2006 as being of principal importance for the purpose of maintaining and enhancing biodiversity in England.

All bat species occurring in Richmond are also included in the Richmond LBAP, with suitable habitat creation for these species a priority.

Impact Assessment of Proposed Development on Bats

Bat Roosting

Although the building was originally assessed as having high suitability to support bats there were generally low levels of activity and no evidence was recorded during the subsequent surveys. The surveys therefore concluded that bats are unlikely to be using the building for roosting, though their presence cannot be ruled out completely.

Loss of Commuting and Foraging Habitat or Severance of Flight Lines

No linear features (hedgerows, treelines) will be affected by the works so no significant fragmentation or isolation is anticipated. The development is considered unlikely to have a significant negative impact on bat foraging and commuting routes due to the small scale of the development.

4.6.3. Badgers

Assessment of Ecological Value of Site for Badgers

Although no evidence of badgers was recorded on site, there is considered to be some limited potential for them to venture onto the site from the surrounding landscape to forage sporadically.

Legislation

Badgers are protected in England under the Protection of Badgers Act 1992. Protection applies both to the animal itself and to its nesting burrows (setts), and current interpretation of the Act also confers some protection to key foraging areas.

Impact Assessment of Proposed Development on Badgers

No evidence or signs of badger was recorded on site. A 50m radius of the woodland to the south of the site was also searched for evidence of badger however, no evidence or signs was recorded. No impacts to resident badger are envisaged to occur, however measures to ensure badgers are not adversely impacted during the development are set out in section 5.

4.6.4. Hedgehog

Assessment of Ecological Value of Site for Hedgehogs

The dense scrub, hedgerows and even scattered scrub habitats may support hedgehog in both the summer and winter months.

Legislation

Hedgehogs are afforded partial protection under the Wildlife and Countryside Act (1981) and are listed as priority species under the Natural Environment and Rural Communities (NERC) Act 2006 as being of principal importance for the purpose of maintaining and enhancing biodiversity in England.

Impact Assessment of Proposed Development on Hedgehogs

The proposed works involve the clearance of the scattered scrub to facilitate the expansion of the car park. The impact on potential hedgehog habitat on site is considered to be relatively low and permanent. Mitigation measures are recommended to ensure hedgehog are not accidentally injured or killed during clearance works.

4.6.5. Invertebrates – Stag Beetles

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Assessment of Ecological Value of Site for Stag Beetles

A stag beetle was recorded on site during 2019 and due to the location of the site to Richmond which hosts a large population of stag beetles, it is likely the site is used as a wildlife corridor. Despite its population decrease in the last 40 years, the stag beetle is still locally common in a number of 'hotspots' such as the New Forest, the Thames Valley and London. The primary reasons for its decline are the lack of deadwood and the impacts of traffic and habitat fragmentation.

Legislation

Stag Beetles are afforded partial protection under the Wildlife and Countryside Act (1981) it protects the stag beetle from being sold outside the UK.

Impact Assessment of Proposed Development on Stag Beetles

The proposed works involve the clearance of the scattered scrub to facilitate the expansion of the car park. However, the clearance of Trees 5 and 6 (possibly 7) is unlikely to impact stag beetle larvae as they require dead wood habitat. The impact on potential stag beetle habitat on site is considered to be relatively low. Mitigation measures are recommended to ensure stag beetles are not accidentally injured or killed during clearance works.

5. Required Actions

The following provisional recommendations have been developed based on the development proposals available at the time of writing. The implementation of these recommendations will help to avoid or minimise adverse impacts to the environment and protected species.

5.1.1. Licensing Requirements

The survey results indicate that the building is not currently being used as a roost by bats and so a European Protected Species (EPS) Licence will not be required. However, as the building has high potential for bats a detailed precautionary method statement is required.

5.2. Precautionary Measures to Minimise the Potential for Disturbing, Injuring or Killing Bats

5.2.1. Timing of Works

Works to the building should avoid taking place during the core months between May to August and ideally works to the roof structure, fascias, and bargeboards etc. should be undertaken from 1st October to 31st March at a time when there is least likelihood of bats being present. The October to March timescale would minimize potential for disturbance for bats and eliminate the risk of causing accidental harm to nesting birds.

5.2.2. Site Induction and Toolbox Talk

Prior to the start of works, a suitably qualified bat ecologist will deliver a 'tool-box talk' to all contractors undertaking works that could affect bats. All site workers will be made aware of the role of the ecologist and briefed on the legal status of bats¹⁴, the likely places to find them, the working practices required to minimise and avoid harming or disturbing bats (e.g. the procedure required for removing tiles etc.), and the action to be taken if bats are encountered during the works.

5.2.3. Construction Protocol

Site workers will check for the possible presence of bats on the undersides of roofing tiles and associated structures (ridge tiles, fascias, and barge boards etc.) as they are lifted off, especially at the ridge and roof edges before disposing of them or storing them prior to disposal. This is especially important at the outset of the works, since once the works have started, the disturbance is likely to drive any bats which are present away voluntarily. If bats are found during the works all works will cease and a suitably qualified licenced ecologist contacted for advice.

5.2.4. Ecological On-site Supervision of Works/Soft Strip

Depending on the timescale of when works are undertaken it may be necessary for a licensed bat worker to be in attendance when parts of the roof and other external features are dismantled. They will supervise

¹⁴ Emphasis will be given that causing harm or distress to a bat through knowing disregard for bat welfare or through recklessness is a criminal offence.

a 'soft strip' during which all features offering known or likely roosting opportunities will be exposed and removed. This will include (but not be limited to) the roof tiles and associated structures e.g., bargeboards, roof tiles, ridge tiles¹⁵, timber cladding, lead flashing, rafters, timber trusses, roof lining, and other openings, lead flashings around chimneys, the first three courses of tiles up from the eaves and first three tiles down from the ridge tiles and tiles within 1m of the gable ends. The tiles and any associated timbers must be lifted off vertically (and not rolled or sprung), and checked on their underside to ensure that no bats are clinging to the underside. This will minimise the chance of bats being killed/injured.

Any removal work will be undertaken using hand tools, (i.e. picks, crowbars, slate rippers, bow saws etc.). These features will be carefully removed by hand and contractors will check for the possible presence of bats on the undersides of these features before they are lifted off, prior to discarding/storing them. During the soft strip process, any cracks or crevices that have the potential to be used by bats will be inspected by a licensed bat worker using a high-powered torch to ensure they are not in use. Cavities will be carefully prised open using a crowbar.

The removal of such features will be observed and supervised at close quarters by a licensed bat handler from an appropriate viewing position to be provided by the demolition contractor (e.g. scaffolding or lifting platform).

If work takes place during the winter period, works will avoid encountering torpid bats in roof structures by only working during periods when temperatures have not dropped below freezing on four consecutive days and nights. However, if any torpid bats are discovered, they will be taken temporarily into care and fed until such time when conditions become suitable for release. The bat would then be released at dusk near the building.

The licensed bat handler will remain available on an 'on-call' basis during all subsequent stages of the works to deal with any unexpected encounters with bats or nesting birds.

5.2.5. Bat Discovery Action Plan

If any unexpected bats are observed, then all works will stop near the bats and will not recommence until advice from Natural England or a licensed ecologist has been sought. If bats are encountered during supervised works, the licensed bat handler will capture the bat/s with gloved hands or hand-held net, conduct a health check and then place it in a drawstring cloth bag. Removed bats will be temporarily transferred to a day holding facility (a well-insulated specially designed bat box) and will then be transferred into a species-specific bat box that will be fixed at a suitable location on or very near to the site. This will allow the bat/s to settle in a safe place for the remainder of the day, and to emerge safely in the evening. Any injured bats or bats requiring supplementary feeding would be immediately taken into care.

5.3. Avoidance, Mitigation, Compensation and Enhancement Measures

¹⁵ It is generally considered best to commence the roof strip with the ridge tiles.

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5.3.1. Ecological Enhancement for Bats

The National Planning Framework (2021) stipulates that development projects minimise ecological damage and contain elements of ecological enhancement. Ecological enhancements measures could be provided within the proposal and could include the retention of any unused areas of roof void in a suitable condition for use by roosting bats with suitable access points etc. Two fascias and soffits could be left with small gaps beneath to allow access by bats behind them¹⁶ on each of the external elevations of the building, and/or purpose-built bat roosting boxes could be installed, either on the exterior of the building or incorporated directly into the structure of the walls. Alternatively, in-wall bat boxes could be installed within the building.

In addition, consideration¹⁷ will be given to using landscaping and garden design to provide habitat suitable for bats by encouraging night flying invertebrates. Plant species that provide a rich source of nectar should be used. Suitable species include flowering herbs such as lavender (*Lavendula* spp.), violets (*Viola* spp.); or shrubs such as flowering currant (*Ribes sanguineum*), privet (*Ligustrum vulgare*), forsythia (*Forsythia* spp.), dogwood (*Cornus sanguinea*), berberis (*Berberis* spp.) and ceanothus (*Ceanothus* spp.).

5.3.2. Birds and Hedgehog – Clearance of Trees and Ornamental Shrubs

Tree clearance will, wherever possible, be undertaken from September to February outside of the bird breeding season (March to August inclusive). Alternatively, any works undertaken from March to August should be subject to a check for nesting birds by a suitably qualified ecologist immediately prior to removal of such habitats. If any active nests are found these will be protected, along with an appropriate buffer zone of 5m, until the nesting is complete, and the young have fledged.

In order to ensure that no hedgehogs are harmed during the removal of the shrub adjacent to the car park, a two-stage approach should be implemented. The shrub should initially be coppiced during the winter months to a height of 1m, using hand tools to minimise ground disturbance. The shrub should then be completely removed during the spring/summer months (March-September), provided no nesting birds are present and following a hand search for hedgehogs resting up during the day by a suitably qualified ecologist.

5.3.3. Badger

In line with good practice, any open trenches and excavations associated with the development will either be closed at night, or a means of escape provided (e.g. plank at no greater angle than 45°) to help any badgers or other trapped animals escape.

¹⁶ This approach will only be acceptable if breathable membrane will not be installed within the building or the fascia, soffits etc. or the fascias, soffits etc. will be installed in a way where there is no potential for bats to gain access to the breathable membrane.

¹⁷ Landscaping provision is considered an enhancement that would be desirable but the mitigation scheme will still be acceptable if this is not implemented. As a result, it is not considered appropriate to use enforceable language stating that this will definitely be implemented.

Patterns of badger activity and site use can be subject to sudden and dynamic changes over very short time periods. A badger survey should, therefore, be carried out no more than two months before the commencement of any future development in order to establish that no new setts have been created within the site, and also the status of any sett (or setts) which may occur off-site but within 30m of any proposed earthworks.

If there is a significant delay to development of the site (i.e. more than 12 months) an updated badger survey should be undertaken to determine if any new active setts have been created within the site.

5.3.4. Ecological Enhancements for Stag Beetle

Any dead wood on site will be retained for habitat protection and creation in the form of logs and stumps and these will be left in the shade so as to avoid desiccation. If there are windblown trees on the site then these will also be retained. The dead wood should be lying on or close to the ground and a clearly marked buffer zone will be managed around the dead wood so that soils and vegetation are protected from disturbance. If there is no dead wood on site then this will need to be provided for by creating 'loggeries' or breeding boxes from natural wood (avoid conifers and treated timber), which need to be situated on woodland edges with a degree of shade (see Appendix 7).

5.3.5. Protective Barriers for Trees

Trees proposed for retention close to the development areas will be securely fenced-off to prevent accidental damage, prior to the commencement of construction work and treated in accordance with British Standard BS5837 (2012) *Trees in Relation to Design, Demolition and Construction – Recommendations*. Protective fencing will follow the specification as shown in Appendix 6.

5.4. Compensation and Enhancement Measures

5.4.1. Bats

External Roosting Opportunities (Fascias and Bargeboards etc.)

The new exterior fascias and bargeboards around the building will be set off the face of the render/masonry to provide 'crawling bat access' spaces underneath.

It is essential that the top of the wall beneath the bargeboards/fascia's will be sealed to prevent bats from gaining access into the roof structure and coming into contact with breathable roof membranes.

The gaps behind the fascias, soffits and barge boards etc will be positioned away from windows, doors and security lighting and will be present on all elevations of the building. Where soffits are to be used there will be a small gap between the wall and the soffit board (see Appendix 11). Ideally, any fascias, soffits and

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bargeboards will be of timber construction rather than uPVC plastic¹⁸. The new timber fascias, soffits and bargeboards will be tanalised timber and pre-treated with non-toxic¹⁹, water-based 'bat friendly' formulations and comply with the Natural England list approved for use in bat roosts²⁰.

In-Wall Bat Boxes

Two in-wall bat boxes will be provided within the development.

5.4.2. Nesting Birds

To compensate for the loss of nesting habitat for, it is proposed that two standard 35mm hole nest boxes are erected on existing mature trees to the north of the site. The nest boxes must be installed a minimum of 3m above ground and preferably away from branches to avoid predation, and installed on the north-eastern face of the tree, to avoid prevailing wet weather conditions (see Appendix 9).

5.4.3. Landscaping with Native Species

Any areas of new landscaping will aim to use at least 50% native shrubs and trees which are of UK provenance. Berry and nut producing species should also be used which will increase foraging opportunities for numerous animal species. Shrub species recommended include: common hawthorn, blackthorn, hazel, rowan, bird cherry and holly.

This will aim to provide compensatory nesting habitat, as well as compensatory foraging habitat, for invertebrates and birds.

5.4.4. Avoidance of Use of Herbicides, Pesticides and Artificial Fertilizers

The use of herbicides, pesticides and artificial fertilisers in the landscaped areas will generally be avoided, although pernicious weeds may need to be spot-treated with herbicide.

5.4.5. Avoidance of Use of Peat-based Products

Peat-based products will not be used in the landscaping of the site.

¹⁸ If uPVC plastic is used this should be clad internally with timber (this could be constructed on site or pre-fabricated e.g. <http://bit.ly/2fw3nq>) to provide a rougher surface. uPVC fascias are generally considered to be too smooth to be used by roosting bats.

¹⁹ Products that are vacuum impregnated - wood pre-treated by an organic solvent process can contain chemicals that are extremely toxic to bats and should not be used.

²⁰ <http://publications.naturalengland.org.uk/file/4802540>

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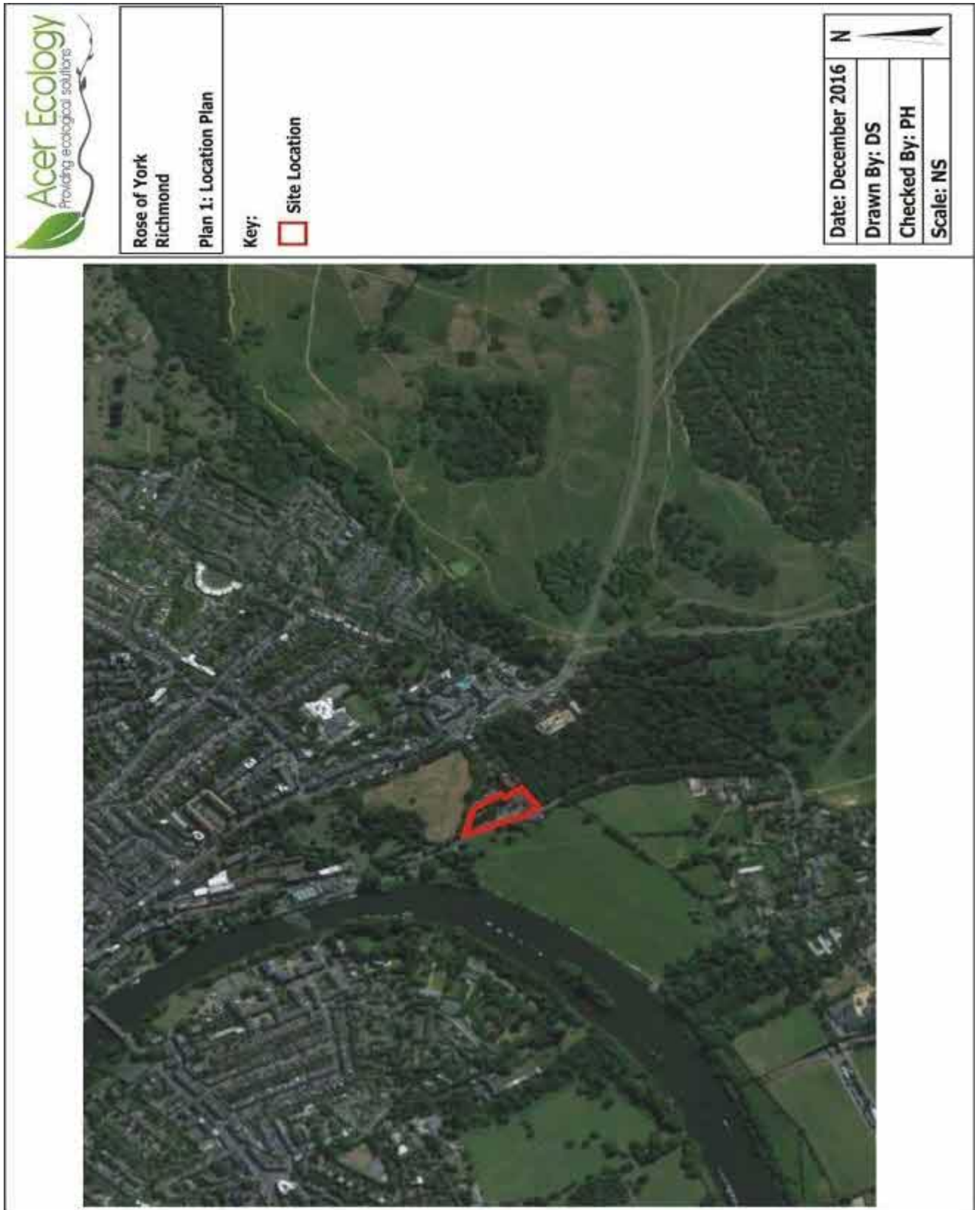
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Plan 1: Location Plan



Plan 2: Development Proposals

PLANNING SET

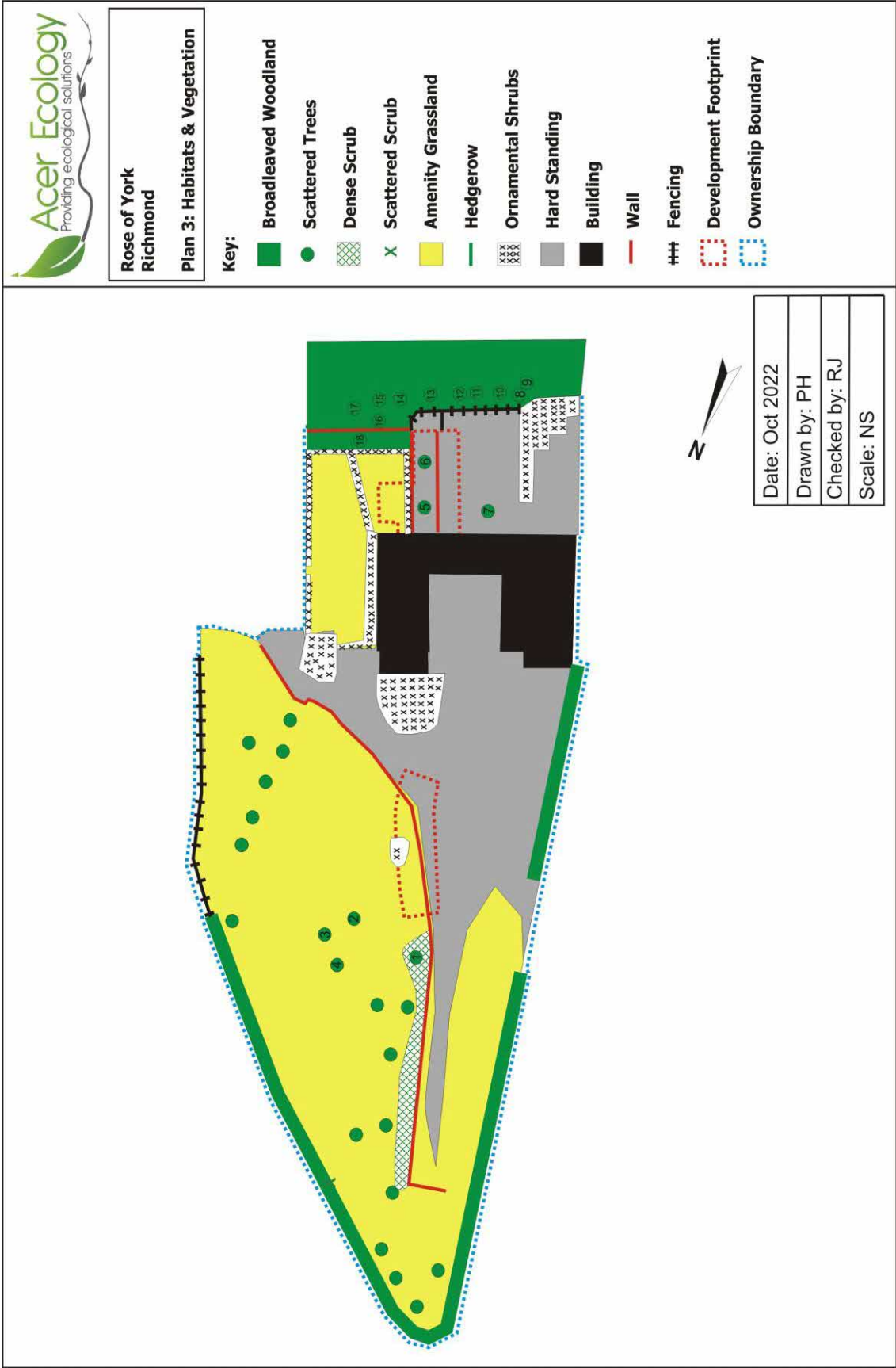
PLANNING SET

THE PLANNING SET IS TO BE USED FOR THE PURPOSES OF CONSULTATION ONLY. IT IS NOT A CONTRACT DOCUMENT. THE CLIENT ACCEPTS RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION PROVIDED AND FOR THE CONSEQUENCES OF ANY DECISIONS MADE ON THE BASIS OF THIS INFORMATION.

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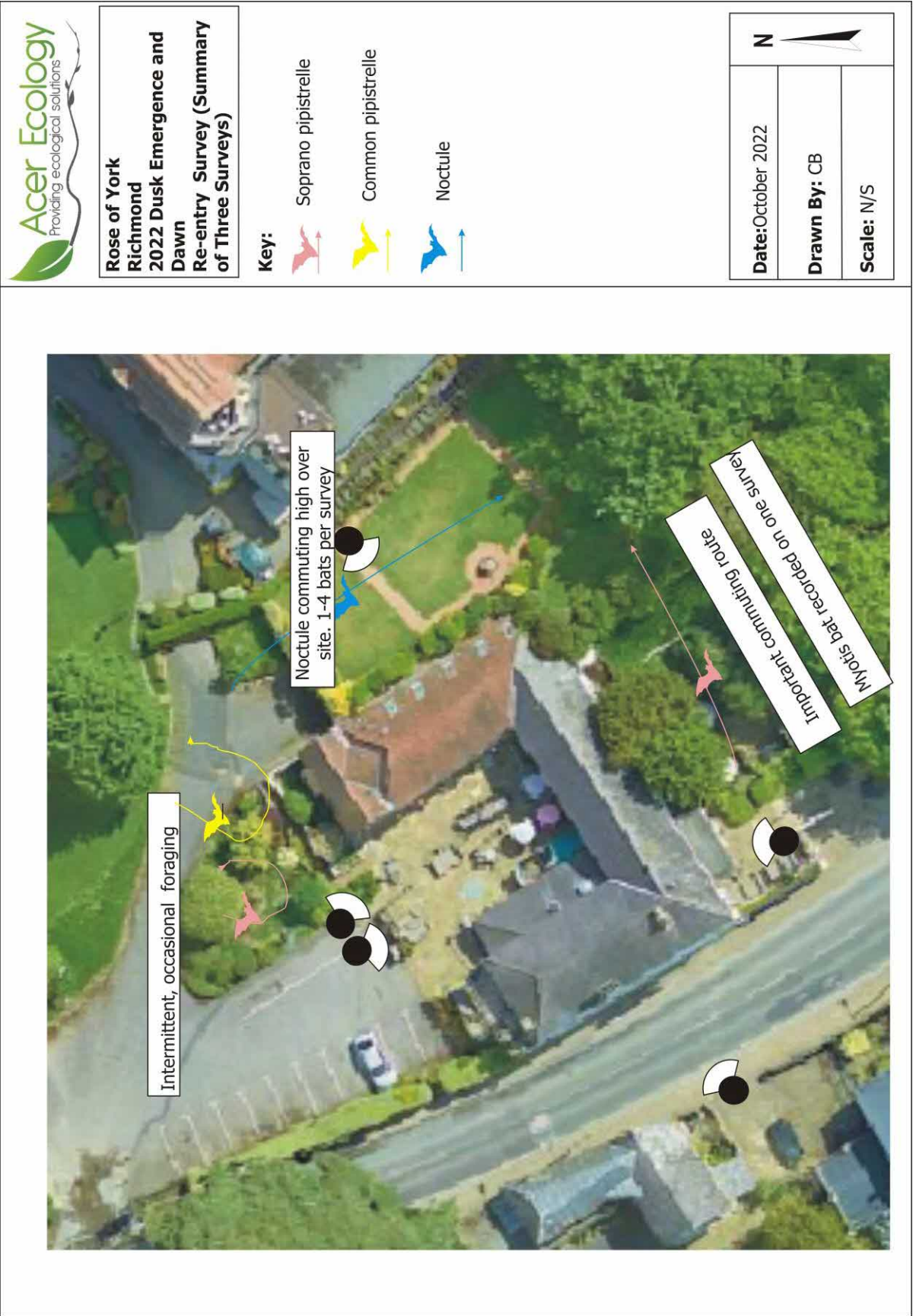
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Plan 3: Habitats and Vegetation



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Plan 4: Summary of Dusk Emergence and Dawn Re-entry Surveys



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Appendix 1: Species Recorded

All species recorded by Acer Ecology, 2016 or 2022

Species	Common Name	W	LM	CG	LDA	PMG	PIL	TF	Status
Trees and Shrubs									
<i>Acer campestre</i>	Field maple	W							
<i>Acer sp.</i>	Acer sp.								
<i>Arbutus unedo</i>	Strawberry Tree								Alien
<i>Betula sp.</i>	Birch								
<i>Carpinus betulus</i>	Hornbeam								
<i>Crataegus monogyna</i>	Common hawthorn								
<i>Fagus sylvatica</i>	Beech								
<i>Fraxinus excelsior</i>	Ash								
<i>Prunus avium</i>	Wild cherry								
<i>Quercus sp.</i>	Oak								
<i>Rhododendron ponticum</i>	Rhododendron								Alien
<i>Sambucus nigra</i>	Elder								
<i>Taxus baccata</i>	Yew	W							
Herbaceous Plants									
<i>Achillea millefolium</i>	Yarrow								
<i>Bellis perennis</i>	Daisy								
<i>Festuca rubra</i>	Red fescue								
<i>Hedera helix</i>	Ivy								
<i>Holcus lanatus</i>	Yorkshire fog								
<i>Lolium perenne</i>	Perennial rye-grass								
<i>Plantago lanceolata</i>	Ribwort plantain								
<i>Potentilla reptans</i>	Creeping cinquefoil								
<i>Ficaria verna</i>	Lesser celandine								
<i>Ranunculus repens</i>	Creeping buttercup								
<i>Rumex acetosa</i>	Common sorrel						PIL		

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Appendix 2: Definitions of Site Value

International Value

Internationally designated or proposed sites such as Ramsar Sites, Special Protection Areas, Biosphere Reserves and Special Areas of Conservation, or non-designated sites meeting criteria for international designation. Sites supporting populations of internationally important species or habitats.

National Value

Nationally designated sites such as Sites of Special Scientific Interest (SSSIs), or non-designated sites meeting SSSI selection criteria (NCC 1989), National Nature Reserves (NNRs) or Nature Conservancy Review (NCR) Grade 1 sites, viable areas of key habitats within the UK Biodiversity Action Plan. Sites supporting viable breeding populations of Red Data Book (RDB) species (excluding scarce species), or supplying critical elements of their habitat requirements.

Regional Value

Sites containing viable areas of threatened habitats listed in a regional Biodiversity Action Plan, comfortably exceeding Site of Importance for Nature Conservation (SINC) criteria, but not meeting SSSI selection criteria. Sites supporting regionally significant areas of BAP habitats or large and viable populations Nationally Scarce species, or those included in the Regional Biodiversity Action Plan on account of their rarity, or supplying critical elements of their habitat requirements.

County Value / District Value

Site identified as a Site of Importance to Nature Conservation (SINC) at the district level; meeting SWWSP 2004 published designation criteria, but falling short of SSSI designation criteria, whether designated as a SINC or not. Ancient woodlands and sites supporting regionally significant areas of UK BAP habitat. Large scale examples of BAP habitats or areas supporting small populations of protected, UK BAP/ LBAP or threatened species (other than badger).

High Local

Habitats which just fail to meet Regional value criteria, but which appreciably enrich the ecological resource of the locality. Sites supporting species which are notable or uncommon in the county; or species which are uncommon, local or habitat-restricted nationally, and which might not otherwise be present in the area. Moderate scale examples of BAP habitats or areas supporting small populations of protected, UK BAP/ LBAP or threatened species.

Local Value

Old hedges, woodlands, ponds, significant areas of species-rich grassland, small scale examples of BAP habitats or areas supporting small populations of protected, UK BAP/ LBAP or threatened species. Undesignated sites or features which appreciably enrich the habitat resource in the context of their immediate surroundings, parish or neighbourhood (e.g. a species-rich hedgerow). Rare or uncommon species may occur but are not restricted to the site or critically dependent upon it for their survival in the area.

Site value (within the immediate zone of influence)

Low-grade and widespread habitats. Woodland plantations, structured planting, small areas of species-rich grassland and other species-rich habitats not included in the UK or Local BAP.

Negligible

No apparent nature conservation value.

Appendix 3: Legislation and Policy Relating to Statutory and Non-Statutory Designated Sites

SACs

SACs are strictly protected sites designated under the EC Habitats Directive. Article 3 of the Habitats Directive requires the establishment of a European network of important high-quality conservation sites that will make a significant contribution to conserving the 189 habitat types and 788 species identified in Annexes I and II of the Directive (as amended). The listed habitat types and species are those considered to be most in need of conservation at a European level (excluding birds). Of the Annex I habitat types, 78 are believed to occur in the UK. Of the Annex II species, 43 are native to, and normally resident in, the UK.

Development proposals within 10km of an SAC must be subject to Habitats Regulations Assessment's (HRA). If the LPA determine that a significant effect is likely then it will be necessary to undertake an Appropriate Assessment²¹.

SSSIs

SSSIs are important as they support plants and animals that find it difficult to survive elsewhere in the countryside, and they represent the country's best wildlife and geological sites. SSSIs are legally protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006, and are of national (second tier) biodiversity significance and form the essential building blocks of the United Kingdom's protected areas for nature conservation. Many are also designated as Natura sites i.e. internationally (first tier) designated sites. It is an offence for any person to intentionally or recklessly damage the protected natural features of a SSSI.

LNRs

Under the National Parks and Access to the Countryside Act 1949, LNRs may be declared by local authorities after consultation with the relevant statutory nature conservation agency. LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature.

SINCs

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

Sites of Metropolitan Importance

Sites of Metropolitan Importance for Nature Conservation are those sites which contain the best examples of London's habitats, sites which contain particularly rare species, rare assemblages of

²¹ For more information, consult 'Assessing Projects Under the Habitats Directive' David Tyldesley (2011) for CCW

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species or important populations of species, or sites which are of particular significance within otherwise heavily built-up areas of London.

They are of the highest priority for protection. The identification and protection of Metropolitan Sites is necessary, not only to support a 4 London Wildlife Trust. Registered in England and Wales No. 2401237 LB Bexley SINC Review London Wildlife Trust December 2013 significant proportion of London's wildlife, but also to provide opportunities for people to have contact with the natural environment.

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

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

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

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

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

Sites of Borough Importance

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

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Since 1988 borough sites have been divided, on the basis of their quality, into two grades, but it must be stressed that they are all important on a borough-wide view.

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

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

Sites of Local Importance

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

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

Protection in Planning Policies

The Authority recommends that the Sites of Importance for Nature Conservation all be afforded protection in London's Unitary Development Plans, against proposals that may harm their value. The detailed policy wording should take planning guidance into account.

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Appendix 4: Guidelines for Assessing the Potential Suitability of a Proposed Development Site for Bats²²

Suitability	Description of Roosting Habitat	Commuting and Foraging Habitat
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting and foraging bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection appropriate conditions²³ and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity) or hibernation²⁴.</p> <p>A tree of sufficient size and age to contain PRFs but with none seen from the ground²⁵.</p>	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only) the assessments in this table are made irrespective of conservation status, which is established after presence is confirmed.	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	<p>Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

²² Table 4.1 in Collins (2016)

²³ For example, in terms of temperature, humidity, height above ground levels, light levels or levels of disturbance.

²⁴ Evidence from the Netherlands, shows mass swarming events of common pipistrelle bats in the autumn followed by mass hibernation in a diverse range of building types in urban environments (Korsten *et al.*, 2015). This phenomenon requires some research in the UK but ecologists should be aware of the potential for large numbers of this species to be present during the autumn and winter in large buildings in highly urbanised environments.

²⁵ This system of categorisation aligns with BS 8596:2015 Surveying for bats in trees and woodland (BSI, 2015).

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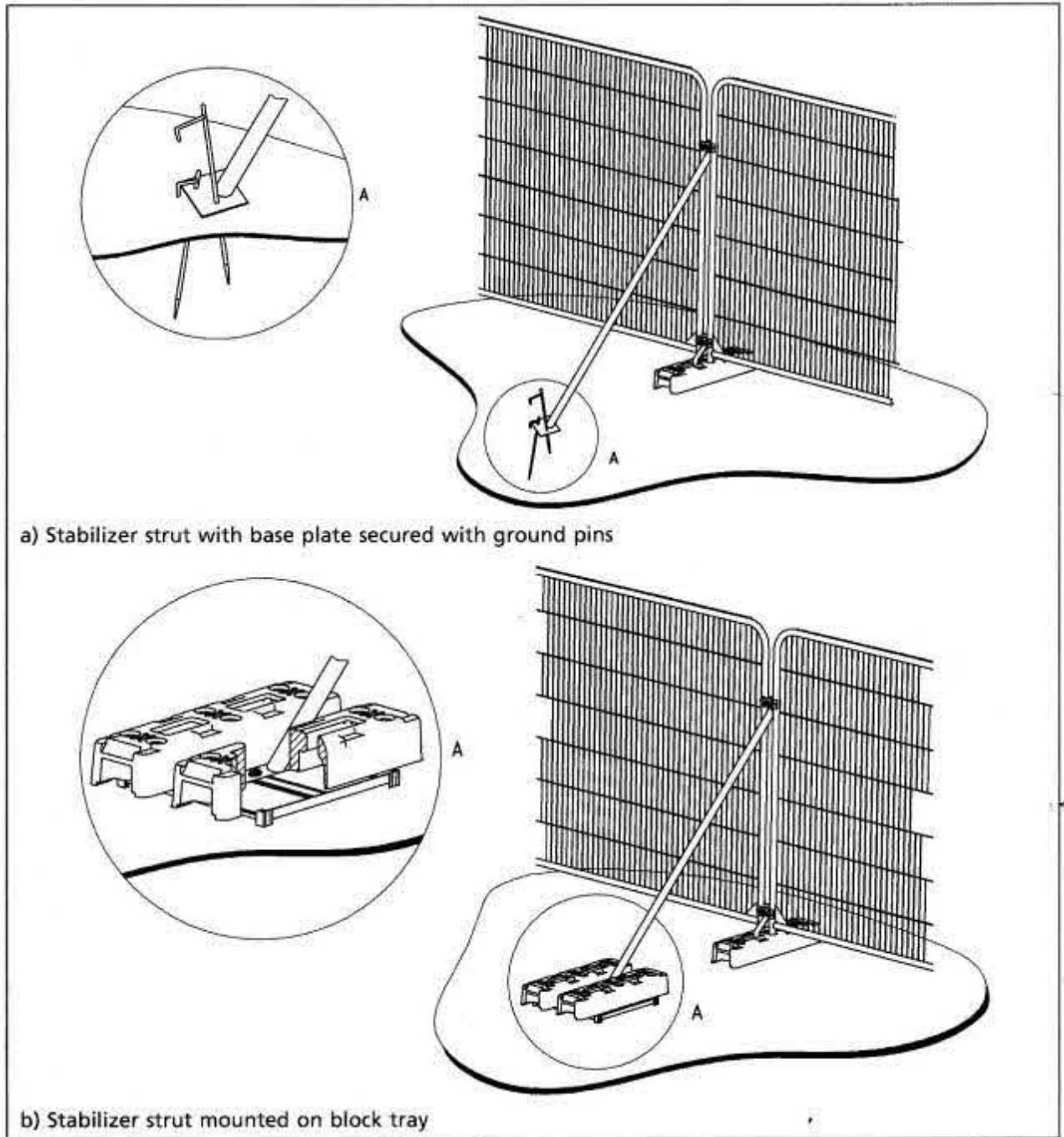
Appendix 5: Minimum Number of Dusk/Dawn Surveys Required (Collins 2016)²⁶

High Roost Suitability	Moderate Roost Suitability	Low Roost Suitability
Three separate survey visits. At least one dusk emergence and a separate dawn re-entry survey. The third visit could be either dusk or dawn. Surveys should be undertaken from May to September with at least two of the surveys from May to August.	Two separate survey visits. One dusk emergence and a separate dawn re-entry survey ²⁷ . Surveys should be undertaken from May to September with at least one of the survey between May and August.	One survey visit. One dusk emergence or dawn re-entry survey (Survey period is from May to August).

²⁶ Adapted from tables 7.1 and 7.3 of the Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016).

²⁷ Multiple survey should be spread out to sample as much of the survey period as possible; It is recommended that surveys are spaced at least two weeks apart, preferably more. A dawn survey immediately after a dusk survey is considered only one visit.

Appendix 6: Protective Fencing for Retained Trees



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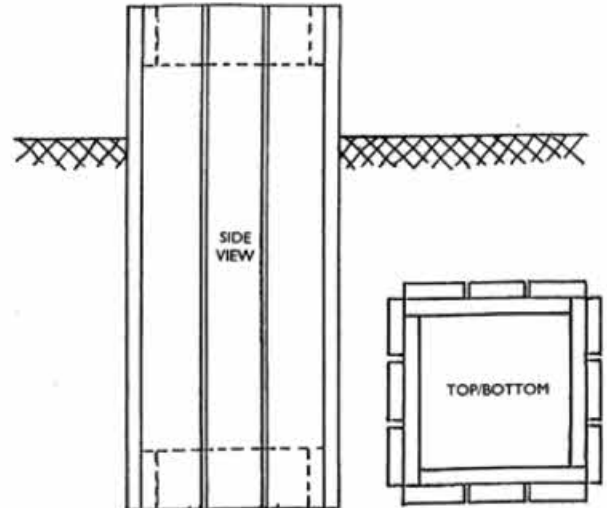
Appendix 7: Stag Beetle Mitigation

Loggeries and boxes



Loggerie

Large logs (10-50cm diameter) of hardwood (e.g. oak, beech, sycamore, ash) with bark still attached sunk c60cm into the ground, in partially shaded areas.



Artificial breeding box

Made of hardwood timber, 2cm thick, a box 49 X 21.5 X 21.5cm open at each end, covered on the four sides with 61 X 7 X 2cm slats, leaving <1cm gaps between (to allow access to beetles and larvae) to make total length of 61cm.

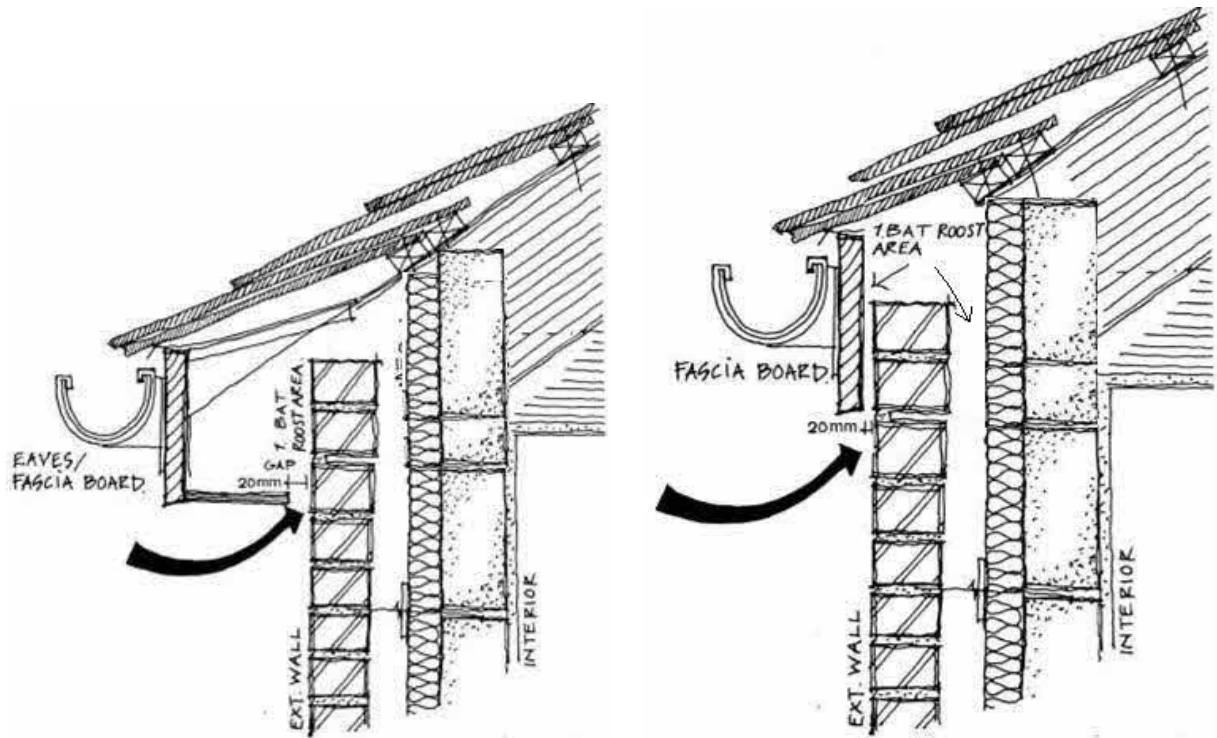
One end covered with fine wire mesh to enable drainage, the other open. Filled with damp hardwood sawdust and fine woodchips, sunk 45cm into the ground with open end standing c7cm above soil level.

As developed by Colin Hawes of the Suffolk Naturalists' Society.

<http://www.wildlondon.org.uk/sites/default/files/files/Full%20stag%20beetle%20advice%20note.pdf>

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Appendix 8: Soffit / Fascia Board Access at Eaves (Closed with no access into Roof Space)



Closed without access into roof space

Closed without access into roof space

Notes: Diagrams shown with cavity wall. The building has solid stone walls.

Bat access gaps should be located away from windows, doors and other light sources.

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Appendix 9: Closed and Open Fronted Nest Boxes

Schwegler Bird Home 1MR



This nest box is for installation on external walls of buildings (including sheds and garages) and is suitable for a range of bird species. With a 32mm hole it allows entry to species such as coal tit, blue tit, great tit, redstart, nuthatch, house sparrow, tree sparrow and other species.

The recommended height is between 1.5m and 5m above ground with a south-east to south-west orientation.

Cleaning after the breeding season (wait until October) is advised to provide a clean nest for the following year, or utilisation by non-migratory birds for winter roosting.

Schwegler 2H Half Box



These should never be hung on trees or bushes as this could allow small predators to access the interior and predate nesting birds.

This nest box should always be installed on the external walls of houses, barns, garden sheds etc. It is designed to be hung so that the entrance is to one side (90° angle to wall).

Correctly positioned it can attract species such as black redstart, pied wagtail, grey spotted flycatcher, and occasionally robin and wren.

The front panel is easily removed to facilitate cleaning.