APPENDIX 2.3
PRELIMINARY ECOLOGICAL APPRAISAL

Preliminary Ecological Appraisal

Land at Richmond upon Thames College

Presented to **Clarion Housing Group**

Issued: April 2021

Delta-Simons Project No.18-0573.03

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Report Details

Client	Clarion Housing Group
Report Title	Preliminary Ecological Appraisal
Site Address	Richmond Upon Thames College, Egerton Road, Twickenham, TW2 7SJ
Project No.	18-0573.03
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Quality Assurance

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Executive Summary

Scope of Works	Delta-Simons Environmental Consultants Ltd was instructed by Clarion Housing Group ('the Client') to undertake a Preliminary Ecological Appraisal (PEA) and Bat Roost Potential (BRP) Survey of an area of land situated at Richmond upon Thames College, Twickenham, in Middlesex (the Site'). The PEA comprised a Phase 1 Habitat Survey and protected species assessment and BRP, which were completed on 25th February 2021 for the majority of the site, with additional areas that could not be accessed at this time being surveyed on 13th April 2021. The survey was undertaken to inform a planning application for the Site.
Current Site Status	The Site is a disused college comprising college buildings and hard and soft landscaping. Car parking and the main entrance to the Site are accessed from the south-west.
Proposed Development	The Site is proposed for demolition of existing college buildings, removal of hard-surfacing, site clearance and groundworks together with the redevelopment of the Site to provide 212 residential units across a collection of buildings up to 5 storeys in height; together with associated parking for 110 vehicles, cycle parking, open space and landscaping. The Site forms the residential zone of a wider redevelopment of the whole site, which was granted planning permission 2016 (DC/JEF/15/3038/OUT/OUT). The wider development includes a new secondary school, new main college building, STEM building and a technical hub.
Results: **Habitats on-Site**	The following habitats are found on the Site: ▲ Scattered coniferous trees; ▲ Scattered broadleaved trees; ▲ Introduced shrubs; ▲ Intact species poor hedgerow; ▲ Dense scrub; ▲ Fence; ▲ Buildings; ▲ Amenity grassland; ▲ Wall; and ▲ Hardstanding
Habitats Adjoining the Site	North of the Site was the newly built Richmond upon Thames College and residential properties fronting Egerton Road. To the east lay Egerton Road and residential properties, whilst to the south lay residential properties and their gardens. To the west of the Site is an area of amenity space and blocks of flats beyond.
Potential for Protected/Notable Species	The trees, scrub and introduced shrubs at the Site were suitable for nesting birds. Six trees on Site had low BRP, six buildings had moderate BRP and two building had low BRP. The introduced shrubs, scrub and grassland were also suitable to support hedgehogs. Cotoneaster and pink snowberry, which are invasive species were also present on Site.
Requirement for Further Surveys	The main building complex in the east of the Site (Buildings 1, 2, 3, 5 and 6) alongside Building 9 were assessed as having moderate BRP and require two nocturnal bat surveys. Buildings 7 and 8 were assessed as having low BRP and require one

	nocturnal bat survey. Surveys should take place between May – August (inclusive), with at least two weeks between survey visits.
Construction and Operational Phase Recommendations and Enhancement Measures	<u>Nesting Birds</u> ▲ Clearance of the trees, introduced shrubs and scrub should be performed either before early March or after late August in order to avoid the main bird nesting season. Conflict with the development can be avoided by clearing the Site of any suitable nesting habitat outside of the breeding period in advance of any proposed works. ▲ If, however, clearance works are deemed necessary during the nesting period an experienced ecologist will be required to check the Site habitats and bird boxes, immediately prior to works commencing to confirm that no nesting birds will be affected by the proposed works. ▲ Demolition of the buildings should only be carried out following a check that no active nests are present on flat roofs. <u>Bats</u> ▲ A precautionary approach should be taken to the felling of any trees with low BRP. This could include a single dawn survey completed during the active bat season (April-October, inclusive) on the morning prior to the works, or alternatively, an aerial inspection of the potential roost features immediately prior to works commencing; and ▲ The detailed lighting design on Site should be functional and directional and in line with current guidance. <u>Hedgehogs</u> ▲ As is general good practice for Sites where hedgehogs may occur, it is recommended that no excavations or trenches are left uncovered overnight during the development works to prevent the species from becoming trapped. Alternatively, ramps can be provided to enable them to climb out of trenches or excavations <u>Cotoneaster and Pink Snowberry</u> ▲ Precautionary measures must be applied during Site clearance works in order to ensure these species are prevented from spreading off-Site **Site Protection** All works on Site should follow an appropriate working methodology to avoid inadvertent damage to any habitats and associated fauna retained on, or surrounding, the Site. Any retained trees on, or adjacent to the Site should be adequately protected during the works in accordance with BS5837:2012. **Site Enhancements** A list of recommendations to enhance the biodiversity of the Site are found in Section 6.0 of this Report.
This Preliminary Ecological Appraisal and Bat Roost Potential Survey Executive Summary is intended as a summary of the assessment of the Site based on information received by Delta-Simons at the time of production. This Executive Summary should be read in conjunction with the full Report.	

Table of Contents

Tables

Figures

Appendices

1.0 Introduction

1.1 Purpose and Scope of the Survey

Delta-Simons Environmental Consultants Ltd was instructed by Clarion Housing Group ('the Client') to undertake a Preliminary Ecological Appraisal (PEA) and Bat Roost Potential (BRP) Survey of an area of land situated at Richmond upon Thames College, Twickenham, in Middlesex (hereafter referred to as the "Site"). In addition, public land immediately surrounding the Site was surveyed, where access allowed. The survey was undertaken to inform a planning application for redevelopment at the Site.

The aims of the PEA were to:

- Identify habitat types on the Site using the standard methodology devised by the Joint Nature Conservation Committee (JNCC, 2010);
- Identify areas of potential for protected species/species of conservation concern within the Site;
- Identify areas of potential for protected species/species of conservation concern immediately outside the Site;
- Identify any invasive plant species included within Schedule 9 of the Wildlife and Countryside Act (WCA) 1981 (as amended);
- Prepare a Phase 1 Habitat Plan of the Site; and
- Propose recommendations for further surveys, where appropriate.

The Site location and the survey area are shown in Figure 1.

1.2 Site Description

The Site is centred at Ordnance Survey (OS) grid reference TQ 15519 73713, to the north of Twickenham in south-west London. The Site covers an area of 1.9 hectares (ha) and comprises a college with associated buildings and hard and soft landscaping.

The north of the Site is bordered by a new college facility and residential properties fronting Egerton Road. The eastern boundary is defined by a linear group of deciduous and coniferous trees adjacent to Egerton Road. The southern boundary is bordered by residential housing fronting Craneford Way, and the western boundary is adjacent to residential and commercial properties with associated amenity land. The Site layout and area surveyed is shown in Figure 2.

1.3 Proposed Development

The Site is proposed for demolition of existing college buildings, removal of hard-surfacing, site clearance and groundworks together with the redevelopment of the site to provide 212 residential units across a collection of buildings up to 5 storeys in height; together with associated parking for 110 vehicles, cycle parking, open space and landscaping.

The Site forms the residential zone of a wider redevelopment of the whole site, which was granted planning permission 2016 (DC/JEF/15/3038/OUT/OUT). The wider development includes a new secondary school, new main college building, STEM building and a technical hub.

2.0 Legislation & Policy Summary

Specific habitats and species of relevance to the Site receive legal protection in the United Kingdom under various pieces of legislation, including:

- National Planning Policy Framework (NPPF, 2019);
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Wildlife and Countryside Act (WCA) 1981 (as amended);
- The Countryside and Rights of Way (CRoW) Act 2000;
- The Natural Environment and Rural Communities Act (NERC) 2006;
- The Hedgerow Regulations 1997; and
- The Protection of Badgers Act 1992.

Where relevant, this appraisal takes account of the legislative protection afforded to specific habitats and species. The legislation surrounding each faunal or floral species or group is provided in Appendix A and references are included in Appendix B.

3.0 Methodology

The PEA has been undertaken to the following current guidance: CIEEM (2017), Guidelines for Preliminary Ecological Appraisal; and BS 42020: 2013 Biodiversity. Code of Practice for Planning and Development.

3.1 Desk Study

Data Search

A data search was undertaken to identify statutory and non-statutory designated sites and records of protected and notable species.

In March 2021, available records of protected and notable species were collated from the local record centre, Greenspace Information for Greater London (GIGL), along with the non-statutory designated sites within a 2 km radius of the Site centre. A search for international statutory designated sites for nature conservation within 6 km of the Site was undertaken, together with a search for national statutory designated sites for nature conservation within 2 km of the Site centre, using the Multi-Agency Geographic Information for the Countryside (MAGIC) website.

In addition, free and publicly accessible Ordnance survey maps and aerial photographs were searched for waterbodies on, or within, 500 m of the Site boundary. This information has been used to assess the Site for its potential for amphibians, the results of which are found in Section 4.3.

Review of Previous Reports

Where available, information was gathered on any previous ecological surveys that have been conducted at the Site. The following survey reports were reviewed:

- Richmond Education and Enterprise Campus Development Environmental Statement, June 2015 (Outline application DC/JEF/15/3038/OUT/OUT); and
- Ecological Enhancement Report (Rev. 12), The terra firma Consultancy (submitted to discharge planning condition U07943 of DC/JEF/15/3038/OUT/OUT).

3.2 Survey

The habitats on the Site were surveyed on 25th February and 13th April 2021 by Delta-Simons ecologists. Since access was not permitted to the surrounding land, it was visually assessed from the Site boundary.

The following was undertaken during the survey:

- Habitats were classified and mapped using the standard JNCC Phase 1 habitat classification and methodology (JNCC, 2010). Dominant plant species were recorded in each different habitat. The plant species nomenclature followed that of Stace (2010);
- Terrestrial habitats on-Site were surveyed for the presence of, or potential for the following protected or notable species:
  - Birds: All species with special reference to key species (such as those on Schedule 1 of the WCA, 1981 (as amended), England Biodiversity Priority Species (EBP) (previously UK Biodiversity Action Plan (UKBAP) species) and Birds of Conservation Concern (BoCC) (Eaton et al., 2015);
  - Amphibians: Great Crested Newt (GCN) *Triturus cristatus*;
  - Reptiles: common lizard *Zootoca vivipara*, adder *Vipera berus*, slow worm *Anguis fragilis* and barred grass snake *Natrix helvetica*; and
  - Mammals: bat (all species) and badger *Meles meles*; and
- Widespread terrestrial invasive species listed on Schedule 9 of the WCA 1981 (as amended) were recorded. These are Japanese knotweed, *Fallopia japonica* giant knotweed *Fallopia sachalinensis* hybrid knotweed,

Fallopia baldschuanica, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera*.

3.2.1 Birds

Visual and/or audible identification was made of any birds on the Site or flying over the Site during the survey period. Suitable habitat was, where possible, inspected and any evidence of old nesting activity was recorded.

3.2.2 Amphibians

The terrestrial habitats at the Site were assessed for their potential to support amphibian species and a desk search was undertaken (see Section 3.1).

3.2.3 Reptiles

Suitable habitats for reptiles were identified within areas on-Site. Since reptiles are currently hibernating, natural and artificial refugia (logs, large debris etc.) were not checked beneath for the presence of reptiles.

3.2.4 Bats

An assessment of BRP of structures and trees on the Site was completed by Kiran Johal (Natural England Bat Survey Licence 2019-43854-CLS-CLS), with reference to the guidelines specified within Natural England's Bat Mitigation Guidelines (2004), and the Collins (2016) Good Practice Guidelines. The survey method enabled each building and tree to be categorised in relation to its value for roosting bats. In addition, the suitability of the on-Site habitats to support foraging and commuting bats was also assessed (see Appendix C).

The exterior of the buildings on the Site were visually assessed for potential bat access points and evidence of bat activity. Features such as small gaps/crevices beneath eaves or within the brick work which had potential as bat access points into the building, were sought. Evidence that these potential access points were actively used by bats included staining within gaps and bat droppings or urine staining under gaps. Indicators that potential access points were likely to be unused by bats included the presence of cobwebs and general detritus within the apertures. Where accessible, the interior of the buildings were assessed for potential roost features and evidence of bat activity.

Trees at the Site were inspected from ground level using binoculars, where necessary, to search for any potential roost features such as woodpecker holes, rot holes lifted bark or ivy *Hedera helix* covering.

3.2.5 Badgers

The Site was inspected for signs of badger activity, including sett entrances, latrines, footprints, runs through vegetation, guard hairs caught on fences and snuffle holes, and its suitability to support this species assessed.

3.2.6 Other Protected or Notable Species

Where applicable, during the survey, evidence was recorded of any other protected or notable species, including England Biodiversity Priority (EBP) species. Habitats with the potential to support additional protected or notable species were also recorded, if present, during the survey.

3.2.7 Invasive Species

The occurrence of any invasive plant species on the Site was identified in terms of species and stand size.

3.2.8 Hedgerows

An assessment of any hedgerows at the Site, which will be adversely affected by the proposed development, was undertaken using the standard hedgerow survey methodology outlined in the Hedgerow Regulations 1997. The purpose of the assessment was to ascertain whether the hedgerows are classified as 'nationally important' and, therefore, protected under the Hedgerow Regulations 1997. The assessment involves a scoring system which relies on particular features, number of woody and floral species present within the hedgerow habitat, and the age of the hedgerow.

3.2.9 Limitations to the Survey

The northern extent of B3 could not be viewed externally since it lay adjacent to the Site boundary.

The initial survey was undertaken during the sub-optimal time of year for identifying plant species on the Site. However, at this Site the majority of the ground was hardstanding and introduced shrubs and, therefore, potential misidentification of habitats and their value is not considered to be a significant constraint.

The baseline conditions described in this Report were accurate at the time at which the surveys were undertaken. Should at least two years pass by, or conditions on-Site change prior to the commencement of works, an update survey should be undertaken.

4.0 Results

4.1 Desk Study

The pertinent information from the data search is set out below for designated sites, whilst species are discussed in the relevant species sections. Full results of the GIGL data search are available to the Client on request.

Designated Sites

The results of the MAGIC data search and the GIGL desk search indicate that there are two international statutory designated sites within 6 km of the Site, one national statutory designated site within 2 km of the Site centre and 20 non-statutory designated sites from within 2 km of the Site centre. Tables 1, 2 and 3 below set out the designated sites identified.

Table 1: International Statutory Designated sites within 6 km of the Site

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Richmond Park	Special Area of Conservation (SAC) and National Nature Reserve (NNR)	2.7 km south-east	Designated for the following Annex II species: ▲ Stag beetle *Lucanus cervus* - Richmond Park has a large number of ancient trees with decaying timber. It is at the heart of the south London centre of distribution for stag beetle, and is a site of national importance for the conservation of the fauna of invertebrates associated with the decaying timber of ancient trees.
South West London Waterbodies	Ramsar Site and Special Protection Area (SPA)	4.2 km south-west	Comprises a number of reservoirs and former gravel pits in the Thames Valley adjacent to Heathrow Airport between Windsor and Hampton Court which support internationally important numbers of Gadwall Anas strepera and Shoveler Anas clypeata (Criterion 6). The site qualifies under article 4.2 of the Directive (79/409/EEC) as and SPA as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed on Annex 1), in any season: ▲ Gadwall *Anas strepera* - 2.4 % population of NW Europe ▲ Shoveler *Anas clypeata* - 2.1 % population of NW/Central Europe

Table 2: National Statutory Designated sites within 2 km of the Site centre

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
Ham Lands	Local Nature Reserve (LNR)	1.1 km south-east	An extensive area of grassland and scrub with abundant wildlife.

Table 3: Non-Statutory Designated sites within 2 km of the Site centre

Site Name	Designation	Distance and Direction from Site Boundary	Designation Criteria Summary
RiL10 Twickenham Junction Rough	Site of Importance for Nature Conservation (SINC)	178 m south	An island of wildlife habitat surrounded by railway lines.
RiBII04 Duke of Northumberland's River south of Kneller Road	SINC	200 m west	A straight and shallow section of the river with abundant fish.
HoBII07 River Crane at St Margarets	SINC	324 m east	A section the river, lined with trees, that runs through allotments.
RiBII18 River Crane at St Margaret's (Richmond side)	SINC	324 m east	A short section of the River Crane, just above its tidal limit, spanning the borough boundary between Richmond and Hounslow.
RiBI04 Duke of Northumberland's River north of Kneller Road	SINC	365 m north-west	A section of the Duke of Northumberland's River with an outstanding variety of aquatic plants.
M076 Crane Corridor	SINC	421 m south-west	This corridor of open space around the River Crane combines an excellent variety of wetland habitats, including ponds and lakes, and includes some historic buildings.
HoBI06 Mogden Sewage Works	SINC	853 m north	A large sewage works, providing a good range of habitats for birds.
M083 Ham Lands	SINC	1.1 km south-east	An attractive area of scrub and grassland beside the River Thames, well known for its remarkably diverse plant life.
RiL02 Marble Hill Park and Orleans House Gardens	SINC	1.1 km east	Landscaped grounds of two 18th century houses, with meadows, woodland and some fine old trees.

RiBII05 Strawberry Hill Golf Course	SINC	1.2 km south	A small golf course with areas of woodland, scrub and acid grassland and a patch of heather.
M031 River Thames and tidal tributaries	SINC	1.2 km east	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 site is of particular importance for wildfowl and wading birds. The Thames is extremely important for fish, with over 100 species now present. Many of the tidal creeks are important fish nurseries, including for several nationally uncommon species.
RiL22 Twickenham Cemetery	SINC	1.4 km south-west	A cemetery, with an abundance of wildflowers and plenty of trees.
RiBII12 Petersham Lodge Wood and Ham House Meadows	SINC	1.5 km east	Petersham Lodge Wood and Ham House Meadows
RiBII03 Fulwell and Twickenham Golf Courses	SINC	1.7 km south-west	These golf courses contain some fine acid grassland, with a few clumps of heather - a rare plant in London.
RiBII16 Hounslow, Feltham and Whitton junctions	SINC	1.7 km west	A triangle of railsides with a good range of wildlife habitats, including scrub and grassland.
RiBII10 The Copse, Holly Hedge Field and Ham Avenues	SINC	1.8 m south	A flowery meadow, a stand of ancient oaks Quercus sp. and an historic avenue of lime Tilia sp. trees combine to provide habitat for a wealth of animals and plants.
HoBII13 Hounslow Loop Railsides	SINC	1.8 km north-west	Railsides with a mix of grassland, scrub and tall herbs, forming an important green corridor.
HoBI15 Duke of Northumberland's River at Woodlands	SINC	Location unknown	A narrow section of river with abundant aquatic vegetation.
RiL24 Teddington Cemetery	SINC	Location unknown	A Victorian cemetery with plenty of mature trees.
RiL25 Moor Mead Recreation Ground	SINC	Location unknown	Village green beside the River Crane in Twickenham.

The Site falls into an Impact Risk Zone (IRZ) associated with Syon Park Site of Special Scientific Interest (SSSI) located 2.8 km north-east of the Site boundary and Richmond Park SAC, for which the Local Planning Authority (LPA) should consult Natural England (NE) for certain types of development. The current proposals for the Site do not meet the criteria for the IRZ and as such it is not considered further within this Report.

Review of Previous Reports

The wider Richmond College site benefits from outline planning consent, which was supported by an Environmental Impact Assessment (EIA). This included a chapter on Ecology and Nature Conservation supported by baseline ecological reports, including an Extended Phase 1 Habitat Survey, Breeding Bird Survey, Bat Survey and Invertebrate Survey. These baseline surveys were undertaken in 2014 and as such are no longer considered to represent the Sites current status. However, pertinent information considered relevant to the current Site boundary is summarised below:

- The College grounds were considered to be relatively inhospitable for bats, with buildings and hard standing dominating the site, which were well illuminated after dark. The exception to this was the presence of undeveloped peripheral habitats close to the southern boundary which were unlit and supported a number of trees and sheltered grassland areas. None of the mature trees within the site were found to have significant roosting potential. Buildings at the site supported a small number of external features that had potential to support crevice dwelling bats, however, no bats were recorded emerging from any of the buildings during the roost emergence survey. Negligible bat activity was recorded within the College grounds, although a potential nearby roost was identified due to the timings of bat activity occurring.
- Lighting during demolition, construction and the operational phase of the development was expected to follow current best practice.
- Design principals included:
  - Provision of open space in the residential development along Egerton Road to protect mature trees;
  - Planting of additional native tree species along the site boundaries, to fill gaps along the A316 boundary and Marsh Farm Lane, to improve connectivity and provide commuting and foraging areas for bats and nesting sites for birds;
  - Linear tree planting within the college, schools and residential development zones to provide commuting routes for bats and nesting sites for birds;
  - Planting of native species-rich hedgerows to provide NERC Act/BAP habitat to improve connectivity and provide habitat for breeding birds;
  - Provision of bird nesting opportunities in suitable locations on the site through the installation of 15 bird boxes;
  - Provision of bat roosting opportunities in suitable locations on the site through the installation of 6 bat boxes, incorporated into the fabric of the new buildings. These will be located close to commuting routes or feeding areas and away from light sources; and
  - Retention of felled trees for provision of additional deadwood habitat or a loggery along the southern boundary of the site for stag beetle and other invertebrates, contributing to the objectives of the London and London Borough of Richmond upon Thames Species Action Plans.

In order to discharge planning condition U07943 of the outline consent (DC/JEF/15/3038/OUT/OUT) for the Schools Development Zone (to the north of the current Site), an Ecological Enhancement Report was prepared by The terra firma Consultancy. This report details the ecological enhancement measures proposed for the phase of works in accordance with the submitted EIA and the wider development scheme design code. This includes tree and hedgerow planting, as well as the provision of nine bird nest sites (provided through the installation of three triple chamber sparrow nest boxes) and two bat boxes, as well as other general landscape enhancements.

4.2 Survey

4.2.1 Habitats on Site

Figure 2 shows the extent of habitat types and boundary features. Descriptions of the habitat types and dominant plant species found at the Site are provided below. Habitat descriptions are by broad habitat type, as listed in the Phase 1 Habitat Survey Manual (JNCC, 2010). Target Notes (TNs) are listed under Appendix D whilst photographs of the Site survey are located in Appendix E.

Habitats recorded on Site are:

Scattered Coniferous Trees

Four Lawson's cypress *Chamaecyparis lawsoniana* trees were present within the eastern extent of the Site, to the east of B3 (Photograph 1). This species was also present adjacent to the western Site boundary.

Scattered Broadleaved Trees

Scattered broadleaved trees were present throughout the Site including a row of trees at the Site entrance to the east and bordering the southern Site boundary. Several trees were present in the south-western corner of the Site, and individual trees were present within courtyards between different sections of the buildings. The majority of the trees on-Site were semi-mature, and the species comprised cherry *Prunus* sp., purple-leaved plum *Prunus pissardii 'Nigra'*, alder *Alnus glutinosa*, sycamore *Acer pseudoplatanus*, apple *Malus* sp., silver birch *Betula pendula*, elder *Sambucus nigra*, ash *Fraxinus excelsior* and hornbeam *Carpinus betulus*.

Introduced Shrubs

Introduced shrub beds were present at the eastern Site boundary, and along the eastern aspect of B3 where they comprised *Pyracantha sp.*, *Crocus* sp., daffodils *Narcissus* sp., bay laurel *Laurus nobilis* and other ornamental species. Introduced shrubs were also present to the west of B3 surrounding the scattered trees where they contained both cotoneaster *Cotoneaster* sp. and pink snowberry *Symphoricarpos* sp. (TN1, photograph 2). A stand of cotoneaster was also present to the south of B2 (TN1). Further introduced shrubs were present along the southern Site boundary where they were dominated by cherry laurel *Prunus laurocerasus*, as well as within a courtyard to the north of B2. Introduced shrubs are also present within the courtyard between B2 and B3, also dominated by cherry laurel. A small stand of potential cotoneaster (TN1) was identified in this courtyard, adjacent to a small pond.

Intact Species Poor Hedgerow

A cherry laurel hedgerow approximately 5 m in height bordered the western aspect of the gardens surrounding B5 in the south-eastern corner of the Site.

Dense Scrub

A small patch of scrub dominated by bramble *Rubus fruticosus* agg. with occasionally occurring ivy was present in south-western corner of the Site.

Fence

A wooden panel fence separated the western extent from the rest of the Site, whilst a metal rail fence bounded the eastern Site boundary. Fences associated with the neighbouring residential properties characterised the southern Site boundary.

Buildings

Nine buildings were present on Site. Building (B) 1, B2 and B3 were interconnected whilst the rest of the buildings were freestanding. Details of the buildings are as follows:

- Building 1 was the westernmost building. It had textured concrete wall, with a flat felt roof and featured polyvinyl chloride (PVC) window frames on the western aspect;
- Building 2 was a single storey building connected to the eastern aspect of B1 and of the same construction;
- Building 3 was the main college building. It was brick-built with multiple storeys in various sections. It featured a flat roof; the construction of the roof could not be determined due to the height of the building. Several courtyards were present within the building, which could not be accessed;
- Building 4 was a single storey building constructed from textured pebble dash panels and had a flat roof;
- Building 5 was a residential property in the eastern corner of the college grounds. It featured two storeys and was brick-built with a hipped clay-pantile roof;

- Building 6 was a college building to the west of B3. The southern extent of B6 featured open sheds and shelter which were formerly used for permaculture, these were constructed from plywood panels and metal sheeting, with gently sloping corrugated metal roofs, and from breezeblock with flat felt roofs. The remainder of the building was brick-built, with the western extent being single storey with a half-pitched tile roof and the southern extent featuring a flat roof and two-storeys with wooden cladding on the second storey. The remainder of the building was brick-built, single storey and featured a flat roof. To the north of B6 was a covered outdoor seating area with a curved transparent roof;
- Building 7 was an outbuilding featuring corrugated metal sheet and wooden clad walls. It was in a poor state of repair and had a flat ivy clad roof;
- Building 8 was a multi-storey, modern building formerly used by the college. It was predominantly brick built, with occasional metal cladding and soffits. The building had a flat roof, however the construction of this could not be determined owing to the height of the building;
- Building 9 was a multiple-pitched roof structure, constructed of brick with a predominantly felt-lined metal roof. In some areas, the roof comprised clay-pantiles; and
- The remaining buildings comprised storage sheds and substation.

Amenity Grassland

Amenity grassland was present at the south-western Site entrance, and in the eastern extent of the Site, as well as within one of the courtyards bound by B3, and to the north and south of B2. It was dominated by perennial ryegrass *Lolium perenne* with occasionally occurring creeping buttercup *Ranunculus repens*, yarrow *Achillea millefolium* and bristly oxtongue *Helminthotheca echioides*.

Standing Water

Within the courtyard between B2 and B3 there was a small, lined pond (Photograph 33, TN23) which was almost entirely grown over by the surrounding terrestrial vegetation.

Wall

Brick walls were present at the Site entrance at the eastern boundary, and within the B3 courtyard. A 2.5 m high brick wall was present between B6 and B5, featuring a door which lead to a covered outdoor seating area.

Hardstanding

The area surrounding the college buildings comprised concrete paving slabs, whilst the car parking area in the eastern extent of the Site comprised tarmacadam.

4.2.2 Habitats Immediately Surrounding the Site

North of the Site was the newly built Richmond upon Thames College campus buildings. To the east lay Egerton Road with residential properties beyond, whilst the south the Site was bordered by further residential properties and their gardens affronting Craneford Way. Beyond this lay Craneford Way playing fields and the River Crane, approximately 180 m south of the Site. To the west of the Site lay an area of amenity space with a block of flats and sports stadium beyond.

4.3 Notable and Protected Species Assessment Relevant to the Site

Birds

The data search included records of 19 bird species listed on the Red List of BoCC, and seven species listed on Schedule 1 of the WCA (1981, as amended). Of these song thrush *Turdus philomelos*, starling *Sturnus vulgaris*, tree sparrow *Passer montanus* and house sparrow *Passer domesticus* (all Red List BoCC species) may use the habitats on Site.

Habitats featured on the Site suitable for nesting birds, include the scattered trees, dense scrub and introduced shrubs. Pigeon *Columba livia* activity was noted beneath the covered outdoor seating area between B3 and B6, however no nests were observed, such that it was anticipated that they were roosting. The flat roofs of buildings 1, 2, 3, 4, 6, 7 and 8 provide nesting opportunities for a range of birds (including gulls *Larus* sp.).

A robin *Erithacus rubecula* was seen entering B9 through a gap around a soffit board (Photograph 32) carrying nesting material during the survey on 13th April 2021. A bird box (TN28) was present on the side of the shed within the courtyard between B2 and B3.

No birds listed on Schedule 1 of the WCA (1981) as amended or those listed on the Red List of BoCC were recorded on site during the surveys. It should be noted that this is not a comprehensive inventory of the bird species which may be present at the Site.

Great Crested Newts

The data search included one recent record of GCN from within 2 km of the Site centre. This was from 2017 and located 1.2 km west of the Site. There was one pond Site which was completely isolated by the buildings that surrounded the courtyard it was within, and no other ponds were identified within 500 m of the Site boundary. The habitats on Site were not considered suitable for GCN and the surrounding area lacked breeding ponds for the species, such that it is considered unlikely that they are present in the local area. GCN are not considered to be a constraint at this Site and are not considered further within this Report.

Reptiles

The data search included two recent records of slow worm, the most recent record from 2020 and 1.9 km north-west of the Site. The Site was dominated by buildings and hardstanding with isolated pockets of amenity grassland and introduced shrubs such that is was not considered suitable to support reptiles. Reptiles are not considered to be a constraint at this Site and are not considered further within this Report.

Bats

The data search contained the following recent records of bats from within 2 km of the Site centre:

- Nine records of unidentified bat species *Chiroptera* the most recent record was from 2020 and located approximately 900 m south of the Site;
- Three records of serotine *Eptesicus serotinus*, the most recent record was from 2017 and 1.7 km south-east of the Site;
- Eleven records of unidentified myotid bat *Myotis* sp., and thirty records of Daubenton's bat *Myotis daubentonii* the most recent records were from 2016 and 1.4 km north-east of the Site;
- Five records of Leisler's bat *Nyctalus leisleri*, the most recent record was from 2015 and 1.4 km east;
- Twenty-seven records of noctule bat *Nyctalus noctula*, the most recent record was from 2019 and 1.6 km east of the Site;
- Sixty-two records of unidentified pipistrelle bat species *Pipistrellus* sp., the most recent record was from 2018 and 1 km south-west of the Site;
- Seven records of Nathusius' pipistrelle *Pipistrellus nathusii,* the most recent record was from 2017 and 1.7 km south-east of the Site;
- Seventy-five records of common pipistrelle *Pipistrellus pipistrellus,* the most recent record was 810 m south of the Site and from 2020;
- Eighty-six records of soprano pipistrelle *Pipistrellus pygmaeus,* the most recent record was from 2019 and 868 m north-west of the Site; and
- Three records of brown-long-eared bat *Plecotus auritus,* the most recent record was from 2015 and located 1.4 km east of the Site.

Trees

Seven trees were noted to have low BRP, with the majority of these featuring dense ivy which could obscure potential roost features. One tree featured a rot hole. The trees (T) are shown in figure 3 and details are provided below:

- T1 was located in south-western extent of the Site and was a semi-mature ivy clad purple leaved plum tree (Photograph 4);
- T2 was located at the southern Site boundary and was a semi-mature sycamore with a rot-hole (Photograph 5);
- T3 and T4 were semi-mature ivy clad Lawson's cypress trees (Photograph 1); and
- T5, T6 and T7 comprised sycamore and cherry trees located in a courtyard between B2 and B3, they were ivy clad.

Buildings

Building 4 was assessed as having negligible BRP, it did not support any potential roost features that could be utilised by bats and was in good condition with no lifted tiles, edging or holes. Buildings 7 and 8 were assessed as having low BRP and Buildings 1, 2, 3, 5, 6 and 9 were assessed as having moderate BRP due to the number of potential roost features. Further details of the potential roost features identified are detailed in Table 4 below.

Habitats

The trees, hedgerows and introduced shrubs on Site create suitable foraging opportunities for bats. The southern extent of the Site had connectivity to residential gardens beyond which lay playing fields and the River Crane, which may provide further foraging and commuting opportunities for bats. The surrounding residential properties may also provide further roosting opportunities. Security lighting was present throughout the Site, however whether it was functional could not be established. The Site is in an urban location and boundaries of the Site are likely to be subject to light spill from the surrounding environment, such that it is anticipated the Site would be most attractive to light-tolerant bat species such as pipistrelles.

Table 4: Bat Roost Potential Assessment – Buildings

Building Reference	Building Description	BRP Feature	Evidence of Bats	BRP Assessment	Photograph Reference
B1	Featured textured concrete walls. It had two rows of PVC windows on the western aspect. Above the first row of windows was a flat felt roof. The second row were set back and lay above the small area of flat roof. The northern and southern aspects of the building comprised concrete walls with no windows. Building 1 connected to Building 2 on the eastern aspect.	Hole where pipes and wires enter the building on north-eastern aspect (TN3) Rotten soffit creating a gap in south-western aspect of B1 (TN4) Panel between PVC window pulled away from the wall on western aspect of the building (TN20)	None	Moderate	Photograph 7 Photograph 8 Photograph 9 Photograph 10
B2	Building 2 was a single storey building connected to the eastern aspect of B1 and of the same construction. Building 2 was connected to B3 on its north-eastern and northern extents.	Felt on lower flat roof area pulling away from wall creating a gap leading beneath the felt (TN5) Several worn and torn areas in the soffit on the southern aspect of the building (TN6)	None	Moderate	Photograph 11 Photograph 12 Photograph 13
B3	Building 3 was the main college building. It featured several internal courtyards. The eastern aspect of the building comprised several sections which contained two and three storeys. To the north of the entrance was a taller section of the building comprising a stairwell and an extra fourth storey. The eastern extent of the building featured buff coloured brick-built walls with a flat roof. Above the windows was decorative stonework the tops of which were lined with lead flashing.	Weep holes on southern extent of building (TN2) Lifted lead flashing above stonework (TN8). Holes in brickwork thought to have previously housed pipes or wires (TN9) Missing brick on eastern extent (TN10)	None	Moderate	Photograph 14 Photograph 15 Photograph 16 Photograph 17 Photograph 18

	The southern extent of the building comprised red brick with brown PVC window frames and three storeys. Weep holes were present on this aspect of the building. A small single storey brick-built boiler room was present on this aspect which joined to B2. The boiler room features a large open entrance on its south-western extent. Internally the boiler room could be seen to have a wooden boarded roof and a gap was present above the northern wall of the boiler room. The western extent of B3 featured a small porch area surrounding another entrance to the building. It was of wooden construction with a sloped clay pantile roof. In the western extent the red brick and buff brick sections of B3 met. The northern elevation of B3 could not be viewed.	Weep holes above windows on eastern extent of B3 (TN11) Crack in the stonework above window on eastern extent (TN12) Hole in brickwork (TN14) Rotten/damaged fascia creating gap leading under clay tiles of porch area (TN15) Weep holes on northern extent of red brick section (TN16) Lifted flashing on western area of roof (TN18) Gap above northern wall of boiler room, which could be accessed by bats due to open entrance. (TN22)			
B4	A self-contained single storey building constructed from textured pebble dash panels and had a flat roof.	None	None	Negligible	Photograph 19
B5	A residential property in the eastern corner of the college grounds. It featured two storeys and was brick-built with a hipped clay-pantile roof and two chimneys. The building had a plywood shed attached to its southern aspect with a sloped metal roof. The building had weepholes above the ground floor windows on the north-eastern extent of the building. The building may feature a loft void which may offer roosting and/or opportunities for bats if they were able to access it. The roof appeared to be in good conditions and no lifted tiles could be seen on the eastern and western	Weep holes above ground floor windows on north-eastern extent of the building (TN21) Hole in brickwork that looked to have previously housed a pipe or wire on south-western extent of the building (TN13)	None	Moderate	Photograph 20 Photograph 21 Photograph 22

	aspects of the buildings, however the observations of the northern and southern aspects of the roof were limited due to the presence of Heras fencing.				
B6	Building 6 was a college building to the west of B3. The southern extent of B6 featured open sheds and shelters which were formerly used for permaculture. These were constructed from plywood panels and metal sheeting, with gently sloping corrugated metal roofs, and from breezeblock with flat felt roofs. The remainder of the building was brick-built, with the western extent being single storey with a half-pitched tile roof and the southern extent featuring a flat roof and two-storeys with wooden cladding on the second storey. The remainder of the building was brick-built, single storey and featured a flat roof. To the north of B6 was a covered outdoor seating area with a curved transparent roof.	Missing mortar at the join of two walls on northern extent of B6 (TN17) Damaged cladding beneath vent on south-western aspect of B6 (TN19)	None	Moderate	Photograph 23 Photograph 24 Photograph 25 Photograph 26
B7	An outbuilding featuring corrugated metal sheet and wooden clad walls. It was in a poor state of repair and had a flat ivy clad roof.	Ivy clad roof on western aspect (TN7)	None	Low	Photograph 27
B8	A multi-storey, modern building formerly used by the college. It was predominantly brick built, with occasional metal cladding and soffits. The building had a flat roof, however the construction of this could not be determined owing to the height of the building.	Gap around soffit on north-west corner (TN24)	None	Low	Photograph 28 Photograph 29
B9	Building 9 appeared to be brick-built with a sawtooth metal roof.	Gaps in brickworks and vents on north-west side of building. (TN25)	None	Moderate	Photograph 30 Photograph 31

		Vents along south side of building (TN26) Rot gap around soffit on south side (TN27) – a bird was seen entering this gap with nesting material			Photograph 32

Badgers

No recent records of badger were included within the data search. The Site did not support any evidence to indicate that badgers were using or inhabiting it. The habitats on Site and within land immediately adjacent to the Site did not offer suitable opportunities for this species and the Site was surrounded by fencing which would limit the dispersal of badger onto Site Badgers are not considered to be constraint at the Site and are not considered further within the Report.

Other Protected Species

West European Hedgehog

The data search included 391 records of west European hedgehog *Erinaceous europeaus*. The most recent record was from 2020 and 1.2 km east of the Site. The introduced shrubs and amenity grassland offered suitable foraging opportunities for hedgehogs. The Site also has connectivity to the gardens of residential properties to the south through gaps in the fencing, which may provide further opportunities for hedgehogs, such that they may venture onto the Site.

Invasive Species

Cotoneaster and pink snowberry (TN1) were present within the introduced shrubs between B3 and B6, whilst individual stands of cotoneaster were present to the south of B2 and within the courtyard between B2 and B3. Several cotoneaster species are listed on Schedule 9 of the WCA (1981 as amended) as invasive species, whilst pink snowberry is not listed on Schedule 9 of the WCA (1981, as amended), it does have prolific growth and can reduce the biodiversity of an area by outcompeting other species.

Hedgerows

The hedgerows on Site were species-poor and did not contain sufficient woody species to be deemed ecologically 'Important' according to the Hedgerow Regulations (Photograph 3).

5.0 Evaluation

Designated sites-statutory sites/non-statutory sites

There were two international statutory designated sites from within 6 km of the Site, the closest of these was Richmond Park SAC and NNR, which was 2.7 km south-east of the Site boundary. There was one national statutory designated site from within 2 km of the Site centre, this was Ham Lands LNR located 1.1 km south-east of the Site boundary. There were 20 non-statutory designated SINCs within 2 km of the Site centre, the closest of which was 178 m south of the Site. The proposed development is not considered to have a significant adverse impact on any of the designated sites identified due to its distance from the sites and as it comprises redevelopment of an already built-up Site located within an urban area.

Habitats

The proposals will result in the complete redevelopment of the Site, this will include the demolition of all of the buildings on Site. New residential buildings will be constructed in their place. With the exception of trees along the eastern boundary being retained, all of the trees, introduced shrubs and other vegetation on Site will be cleared. The new development will feature landscaping including amenity planting adjacent to the new buildings, as well rain gardens, and ecological corridor planting along the northern and eastern boundaries. Several trees are also proposed across the Site. This has the potential to enhance the biodiversity value of the Site.

Species

The trees, dense scrub and introduced shrubs on Site offered nesting opportunities for birds. The majority of these habitats will be lost as a result of the proposals. Mitigation will need to be put in place prior to vegetation clearance and building demolition to ensure that no nesting birds are harmed and replacement nesting opportunities should be incorporated into the development to compensate for the loss of trees and other nesting habitats.

Buildings 1, 2, 3, 5, 6 and 9 were assessed as having moderate BRP, whilst Buildings 7 and 8 were assessed as having low BRP. Further surveys will need to be conducted to establish if these buildings are used by bats and the extent of their use. Building 4 was assessed as having negligible BRP and no further surveys will be required to this building.

Six trees on Site were assessed as offering low BRP, a precautionary approach will need to be applied to the felling of the trees with low BRP to ensure that no bats are harmed. In addition, bat boxes should be incorporated into the development proposals to ensure that roosting opportunities remain available for bats post-development.

There is potential for hedgehogs to venture onto the Site, and as such mitigation should be put in place to ensure that hedgehogs do not become trapped during the construction works.

Various cotoneaster species were present within the introduced shrubs on-Site. Several cotoneaster species are listed on Schedule 9 of the WCA (1981 as amended) as invasive species. Pink snowberry, which is not listed on Schedule 9 as an invasive but grows prolifically and can reduce biodiversity of an area by outcompeting other species was also identified within planting beds at the Site. Measures should be put in place to ensure that these species are not allowed to spread off Site during construction works.

6.0 Recommendations

6.1 Further Survey Requirement

The findings of the initial Site assessment have identified habitat or potential for bats. As such, surveys to identify presence or likely absence of these species are recommended to inform the development proposals. The survey requirements and their seasonal constraints are given in Table 5, below. All surveys listed (unless otherwise stated) are to current guidance.

Table 5: Scope of Recommended Protected Species Surveys

Species	Scope of Survey	Seasonal Constraints
Bats	Buildings 1, 2, 3, 5, 6 and 9 had moderate BRP and require two nocturnal bat surveys each. Buildings 7 and 8 had low BRP and require one nocturnal bat survey each.	Surveys between May – August (inclusive), with at least two weeks between survey visits.

6.2 Construction and Operational Phase Protection/Enhancement Measures

Species Protection

Nesting Birds

- Clearance of the trees, introduced shrubs and scrub should be performed either before early March or after late August in order to avoid the main bird nesting season. Conflict with the development can be avoided by clearing the Site of any suitable bird nesting habitat outside of the breeding period in advance of any proposed works;
- If, however, clearance works are deemed necessary during the nesting period an experienced ecologist will be required to check the Site habitats and bird boxes, immediately prior to works commencing to confirm that no nesting birds will be affected by the proposed works; and
- Demolition of the buildings should only be carried out following a check that no active nests are present on flat roofs.

Bats

- A precautionary approach should be taken to the felling of any trees with low BRP. This could include a single dawn survey completed during the active bat season (April-October, inclusive) on the morning prior to the works, or alternatively, an aerial inspection of the potential roost features immediately prior to works commencing;
- The detailed lighting design on Site should be functional and directional and in line with current guidance (BCT and ILP, 2018); BCT, 2014; Stone, E.L. (2013), including:
  - The use of lights utilising light emitting diodes (LED) without UV elements, therefore reducing the attraction of invertebrates to the lights;
  - Only luminaires with 0 % upward light ratio should be used and fitted on the horizontal to avoid excessive up-lighting, back lighting and light spill onto boundary hedgerows and trees;
  - A warm white spectrum (between 2000 – 3000 Kelvin) should be used, where possible, in order to reduce blue light component, therefore reducing the number of invertebrates attracted to the lights;
  - Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats; and
  - Ideally the lux level should be between 0 and 2 along vegetated corridors as this is within the range of natural moonlight.

Hedgehogs

- As is general good practice for Sites where hedgehogs may occur, it is recommended that no excavations or trenches are left uncovered overnight during the development works to prevent the species from becoming trapped. Alternatively, ramps can be provided to enable them to climb out of trenches or excavations

Cotoneaster and Pink Snowberry

- Precautionary measures must be applied during Site clearance works in order to ensure these species are prevented from spreading off-Site.

Site Protection

- All works on Site should follow an appropriate working methodology to avoid inadvertent damage to any habitats and associated fauna retained on, or surrounding, the Site. Any retained trees on, or adjacent to the Site should be adequately protected during the works in accordance with BS5837:2012.

General Site Enhancement

Following the issue of the NPPF (2019), by the Ministry of Housing, Communities and Local Government, *"Planning policies and decisions should contribute to and enhance the local environment by (d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures…"* ; and, therefore, we recommend the following principles of design should be followed:

- Planting should aim to enhance retained or adjacent vegetation and be of native species, or those of known value to wildlife, sourced from local nurseries to enhance foraging opportunities for local birds and bats, by increasing the invertebrate diversity on-Site. It is recommended that where trees are planted, they have a functional understorey. A species list of recommended trees and shrubs is provided in Appendix F; and
- In accordance with the submitted information supporting the outline planning consent for the wider site, and considering the measures applied to the School Zone, a further six bird nest boxes and four bat boxes should be installed on Site. These should include products suitable to the nature of the development, location and those most likely to be used by fauna in the local area. As such six nest boxes suitable to support house sparrow (Schwegler sparrow terrace, or similar approved product) fitted externally and integral into the wall of the new buildings. These should avoid a southerly direction and direct lighting and be in proximity to suitable vegetation corridors. The bat boxes (Vivara Pro Build-in Woodstone Bat Tube, or similar approved product) should be integrated into the south-facing walls of the new buildings, away from direct light, in an area of least disturbance from human activity and with connectivity to vegetated corridors.

7.0 Disclaimer

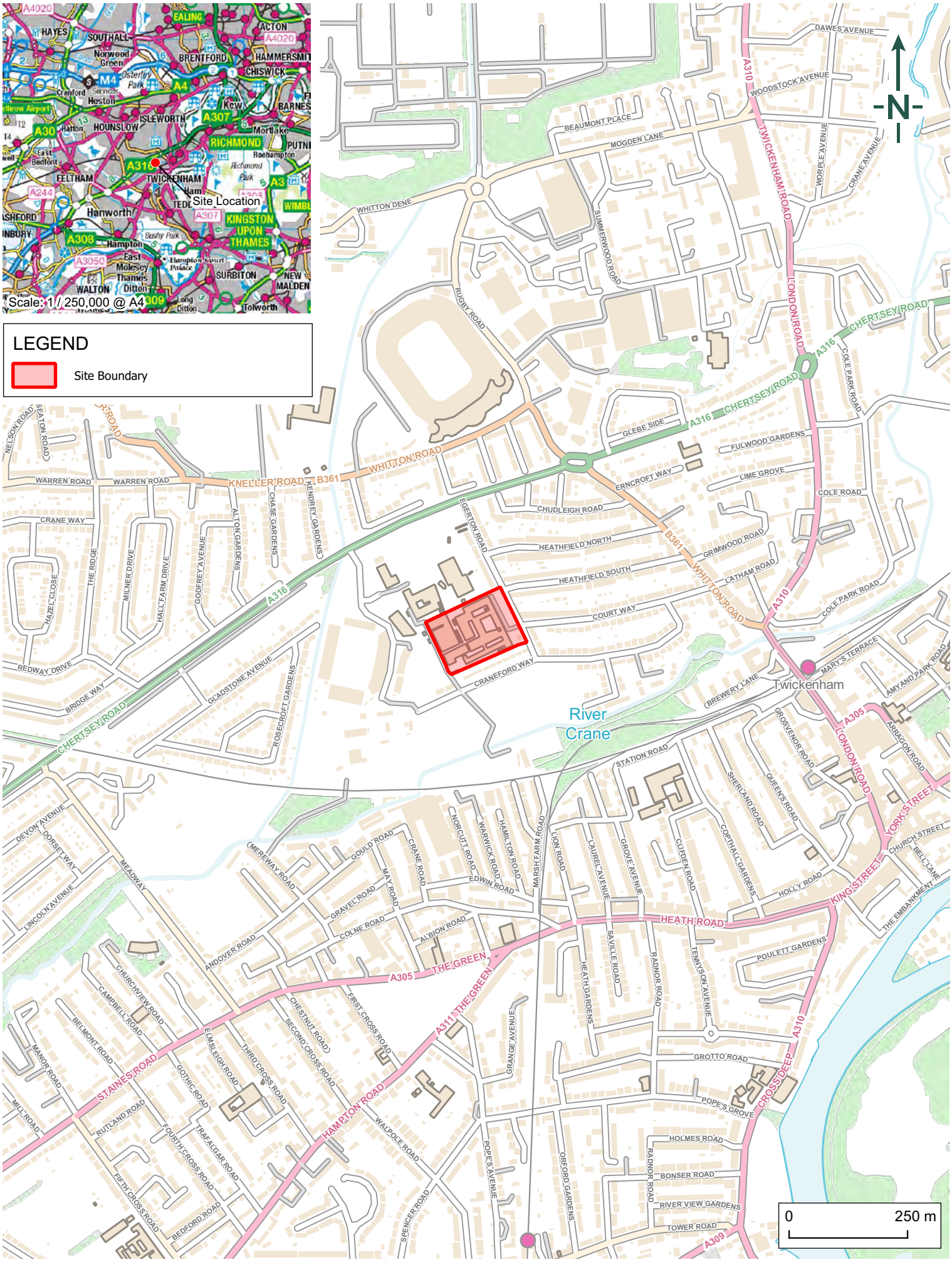
The recommendations contained in this Report represent Delta-Simons' professional opinions, based upon the information referred to in Section 1.0 of this Report, exercising the duty of care required of an experienced Ecology Consultant. Delta-Simons does not warrant or guarantee that the Site is free of Bats or other protected species.

The behaviour of animals can be unpredictable and may not conform to characteristics recorded in current scientific literature. This Report, therefore, cannot predict with absolute certainty that animal species will or will not occur in apparently suitable locations or habitats or that they will not occur in locations or habitats that appear unsuitable.

No part of the survey included an assessment of the materials and conditions of any buildings. No part of the survey included an asbestos assessment, nor did it represent an appraisal of other deleterious materials or hazardous substances.

This Report was prepared by Delta-Simons for the sole and exclusive use of the Client and for the specific purpose for which Delta-Simons was instructed as defined in Section 1.0 of this Report. Nothing contained in this Report shall be construed to give any rights or benefits to anyone other than the Client and Delta-Simons, and all duties and responsibilities undertaken are for the sole and exclusive benefit of the Client and not for the benefit of any other party. In particular, Delta-Simons does not intend, without its written consent, for this Report to be disseminated to anyone other than the Client or to be used or relied upon by anyone other than the Client. Use of the Report by any other person is unauthorised and such use is at the sole risk of the user. Anyone using or relying upon this Report, other than the Client, agrees by virtue of its use to indemnify and hold harmless Delta-Simons from and against all claims, losses and damages (of whatsoever nature and howsoever or whensoever arising), arising out of or resulting from the performance of the work by the Consultant.

Figure 1 – Site Location Map



Scale:1:10,000 @ A4

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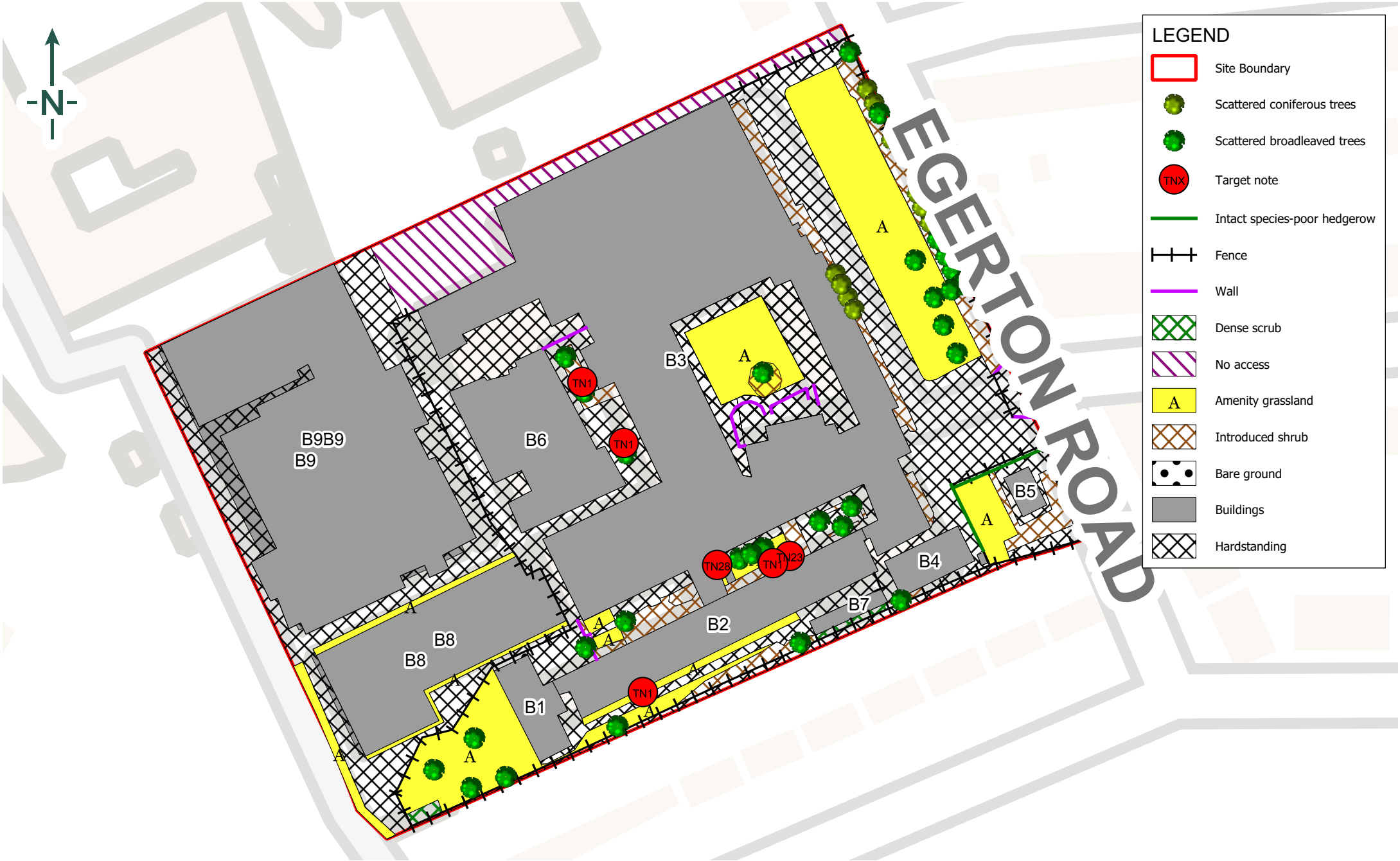
TITLE:
Site Location Map
Richmond Upon Thames College
Twickenham

DRAWN BY:	SCALE (@A4):	PROJECT NO:
KJ	1:10,000	18-0573.03
CHECKED BY:	REVISION:	FIGURE NO:
JB	0	1
DATE:		
05 March 2021		

Figure 2 – Phase 1 Habitat Survey Plan



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TITLE:
Phase 1 Habitat Survey Plan
Richmond Upon Thames College
Twickenham

DRAWN BY: KJ	SCALE (@A4): 1:1,100	PROJECT NO: 18-0573.03	
CHECKED BY: JB	REVISION: -	FIGURE NO: 2	
DATE: 16 April 2021			

Figure 3 – Buildings and Trees with Bat Roost Potential

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Buildings and Trees with Bat Roost Potential
Richmond Upon Thames College
Twickenham

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CHECKED BY: JB	REVISION: -	FIGURE NO: 3	
DATE: 15 April 2021			

Appendix A – Relevant Legislation

Relevant Legislation

National Planning Policy Framework

The revised National Planning Policy Framework (NPPF), sets out, amongst other points, how '*Planning policies and decisions should contribute to and enhance the natural and local environment by:*

"Minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity…"

The NPPF states that this should be achieved through local planning development frameworks and gives recommendations for criteria based policies which recognise the hierarchy of designated sites which range from internationally important habitat, to sites of importance at a local level and ensure that protection is *"in a manner commensurate with their statutory status or identified quality in the development plan.*"

A list of principles which local planning authorities should follow when determining planning applications is included in the NPPF:

- *"If significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- *Development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons[1] and a suitable compensation strategy exists;*
- *Development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; and*
- *Development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity."*

It is also worth noting that where there are potential impacts upon internationally designated sites (Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites) as a result of a proposed development, *"The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined."*

In addition, the Office of the Deputy Prime Minister circular 06/2005 remains current. It states that '*The presence of a protected species is a material consideration when a planning authority is considering a development proposal'. The circular advises that local authorities should consult Natural England before granting planning permission if the proposals could adversely affect a protected species.*'

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

The Conservation of Habitats and Species Regulations 2017 (as amended) are the British response to the Habitats & Species Directive 1992, and consolidate all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

The Regulations for the protection of European Protected Species (EPS) have been amended and consolidated with key changes including the removal of most of the defences from Regulation 40 and Regulation 43 including the removal of the 'incidental result of an otherwise lawful operation' defence, and the increase in the threshold for the offence of deliberately disturbing a EPS. Proposals that will affect European protected species may require a licence from Natural England to allow an otherwise unlawful act. In the 2009 a new offence of

1 For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

'breaching condition of an EPS licence' was added to the regulations. The licensing process is separate from and planning process. European protected species include all species of bats, great crested newt *Triturus cristatus*, dormouse *Muscardinus avellanarius*, and European otter *Lutra lutra*, amongst others.

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

This is the primary legislation covering endangered species in England and sets out the framework for the designation of Sites of Special Scientific Interest (SSSIs). It confers differing levels of protection on species themselves, their habitats or both depending on their conservation status. Species offered protection by the Act are listed in a series of schedules. These Schedules are subject to a rolling review every five years. Protected species are listed under Section 1 (birds), Schedule 5 (animals other than birds and invertebrates) and Schedule 8 (plants).

The Countryside and Rights of Way (CRoW) Act 2000

The CROW Act, introduced in England and Wales in 2000, amends and strengthens existing wildlife legislation detailed in the WCA. It places a duty on government departments and the National Assembly for Wales to have regard for biodiversity, and provides increased powers for the protection and maintenance of SSSIs.

The Act also contains lists of habitats and species (Section 74) for which conservation measures should be promoted, in accordance with the recommendations of the Convention on Biological Diversity (Rio Earth Summit) 1992.

The Natural Environment and Rural Communities (NERC) Act 2006

Section 40 of the NERC Act places a duty upon all local authorities and public bodies in England and Wales to promote and enhance biodiversity in all of their functions. Section 41 (England) list habitats and species of principal importance to the conservation of biodiversity in England. These species and habitats are a material consideration in the planning process.

The Hedgerow Regulations 1997

Under the Hedgerow Regulations 1997, it is against the law to remove or destroy certain hedgerows without permission from the local authority.

Local planning authority permission is required before removing hedges that are at least 20 metres (66 feet) in length more than 30 years old and contain certain species of plant. The authority will assess the importance of the hedgerow using criteria set out in the regulations.

Species

Birds

All wild birds are protected under Section 1 of the WCA 1981 (as amended). Subsection 1(1) makes it an offence to intentionally kill, injure, or take any wild bird; take, damage or destroy the nest of any such bird whilst it is in use or being built; or take or destroy an egg of any such wild bird. It is, furthermore, an offence to either intentionally, or recklessly, disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird. The law covers all species of wild birds including common, pest or opportunistic species.

Amphibians

All native amphibians are protected under the WCA 1981 (as amended), with some species also protected under the European Habitats Directive (92/43/EC), transposed in England and Wales through the Conservation of Habitats and Species Regulations 2017. All amphibians are protected from keeping, transporting, selling or exchanging. This means that in practice reasonable measures must be taken to avoid their incidental mortality.

The Great Crested Newt (GCN) is protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and Schedule 5/9(4)(b) and (c) of the WCA 1981 (as amended). It is an offence to deliberately kill, injure, capture GCN or to deliberately disturb this species, or to intentionally or recklessly obstruct access to their places of shelter or protection, to damage or destroy their breeding sites or resting places, or to intentionally or recklessly disturb a GCN whilst in a place of shelter or protection. The legislation applies to all stages of the life cycle including eggs, larvae and juveniles. It should be noted that GCNs spend the majority of

their lives on land, venturing up to 500 m (but more usually 250 m) from their breeding ponds and as such any ground works within 500 m of a breeding pond could potentially have an adverse effect on GCNs.

Reptiles

All six native species of reptiles are protected under the 1981 WCA (as amended), from intentional killing or injury. As such, all reasonable steps must be taken to avoid their incidental mortality when carrying out works.

Bats

All bats and their resting places are protected under Section 9(4)(b) and (c) of the WCA 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2017 (as amended).

It is an offence to destroy or damage a breeding site or resting place of a bat, to intentionally or recklessly obstruct access to any place of shelter or protection for bats, to deliberately disturb bat species, to intentionally or recklessly disturb a bat whilst in its place of shelter or protection, or deliberately capture, injure or kill a bat. It should be noted that a breeding site or resting place of a bat is protected whether or not bats are present, as long as it is likely that they will return, and any activity or works damaging or destroying such a breeding site or resting place are likely to require a Natural England European Protected Species Licence (EPSL).

Badgers

Badgers *Meles meles* and their setts are protected under the 1992 Protection of Badgers Act. Under this Act it is an offence to wilfully kill, injure, take, possess or cruelly ill-treat badgers, or to attempt to do so. It is also an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a sett, or to disturb an occupied sett, either by intent or negligence. When interpreting the Act, Natural England defines a sett as any structure within an area used by badgers that shows signs of having been occupied by badgers within the last 12 months.

Invasive Species

Invasive species are plant species which are prohibited from release into the wild. There is an extensive list (currently 42) which are set out in section 14(2) of the WCA 1981 (as amended) which states that '*if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence*.'

The most widespread of these are Japanese knotweed *Fallopia japonica* and giant hogweed *Heracleum mantegazzianum* which are also is covered by several pieces of legislation. The Environmental Protection Act 1990 (as amended) is a broad ranging piece of legislation that singles out Japanese knotweed and giant hogweed for special mention. The Act places a 'Duty of Care' on the producer and anyone they employ to dispose of soil or other material contaminated with Japanese knotweed or giant hogweed, such material becomes a controlled waste, which can only be taken to licensed landfill and must be dealt with in an appropriate way.

Appendix B – References

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Appendix C – Assessment of Structures, Trees and Habitats for Bats

Assessment of Structures, Trees and Habitats for Bats

Guidance on Assessing the Potential Suitability of Development Sites to Support Bats (adapted from Collins, J. (ed)).

Suitability	Description	
	Roosting	**Commuting and Foraging**
Negligible	An inspected structure or tree which is considered to have no features of importance for roosting bats. No further constraints apply to the method or timing of proposed works.	Negligible habitat features on-Site to support commuting or foraging bats.
Low	A structure with at least one or more features suitable to support opportunistic individual bats. However, inadequate space, shelter, protection and conditions, and the low suitability of surrounding habitats means that it is unlikely to be used as a maternity or hibernation roost site. A tree of adequate age and stature to support potential roosting features, however, either no features, or only features of limited potential recorded from the ground.	Habitat with potential to support low numbers of commuting bats due to its quality and connectivity. For example, a gappy hedgerow or unvegetated stream that is isolated from the surrounding landscape. Alternatively, suitable but isolated habitats suitable to support low numbers of foraging bats such as a lone tree or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that are of adequate size, shelter and protection, with suitable conditions and surrounding habitat to support a bat roost not of high conservation status (with respect to roost type not individual species conservation status).	Linear habitat continuity connecting to the wider landscape offering potential to support commuting bats, such as rows of trees and scrub or linked back gardens. Habitat such as trees, scrub, grassland or a waterbody with connectivity to the wider landscape offering foraging opportunities for bats.
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to their size, shelter, protection, conditions and the surrounding habitat.	Continuous high-quality habitat with strong connectivity to the wider landscape that is likely to be used by commuting bats on a regular basis, such as flowing waterbodies, hedgerows, rows of trees and woodland edges. High quality habitat with strong connectivity to the wider landscape that is likely to be regularly used by foraging bats, such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to, and connected to, known roost sites.

Appendix D – Target Notes

Target Notes

Target Note 1 – Shrub beds containing pink snowberry and cotoneaster

Target Note 2 – Weep holes

Target Note 3 – Wire hole

Target Note 4 – Rotting fascia

Target Note 5 – Gaps under felt at wall

Target Note 6 – Tears in soffit

Target Note 7 – Dense ivy cover

Target Note 8 – Lifted flashing

Target Note 9 – Pipe hole

Target Note 10 – Missing brick

Target Note 11 – Weep holes

Target Note 12 – Crack in stonework

Target Note 13 – Pipe hole

Target Note 14 – Hole in brick

Target Note 15 – Rotted fascia

Target Note 16 – Weep holes

Target Note 17 – Missing mortar

Target Note 18 – Lifted lead flashing

Target Note 19 – Lifted/damaged cladding

Target Note 20 – Pulled away between windows

Target Note 21 – Weep holes above window

Target Note 22 – Gap above wall in boiler room

Target Note 23 – Small pond in courtyard

Target Note 24 – Gap around soffit 8

Target Note 25 – Gaps in brickworks and vents

Target Note 26 – Vents along south side of building

Target Note 27 – Rot gap around soffit on south side

Target Note 28 – Bird box on shed

Appendix E – Site Photographs

Site Photographs

Photograph 1 – Lawsons Cypress trees to west of B3, Tree 3 and 4 are ivy clad

Photograph 2 – Cotoneaster and pink snowberry

Photograph 3 – Cherry laurel hedgerow surrounding garden of B5

Photograph 4 – Tree 1

Photograph 5 – Tree 2

Photograph 6 – Tree 5

Photograph 7 – Building 1

Photograph 8 – Hole on north-eastern aspect of B1

Photograph 9 – Rotten soffit on south-western aspect of B1

Photograph 10 – Lifted panel between windows on B1

Photograph 11 – Building 2

Photograph 12 – Gap between felt and wall on B2

Photograph 13 – Torn soffit on B2

Photograph 14 – Building 3

Photograph 15 – Weep holes on B3

Photograph 16 – Crack in stonework on B3

Photograph 17 – Rotten fascia forming gap under tiles on porch of B3

Photograph 18 – Gap above wall in boiler room associated with B3

Photograph 19 – Building 4

Photograph 20 – Building 5

Photograph 21 – Weep holes above window on B5

Photograph 22 – Hole in brickwork on B5

Photograph 23 – Building 6

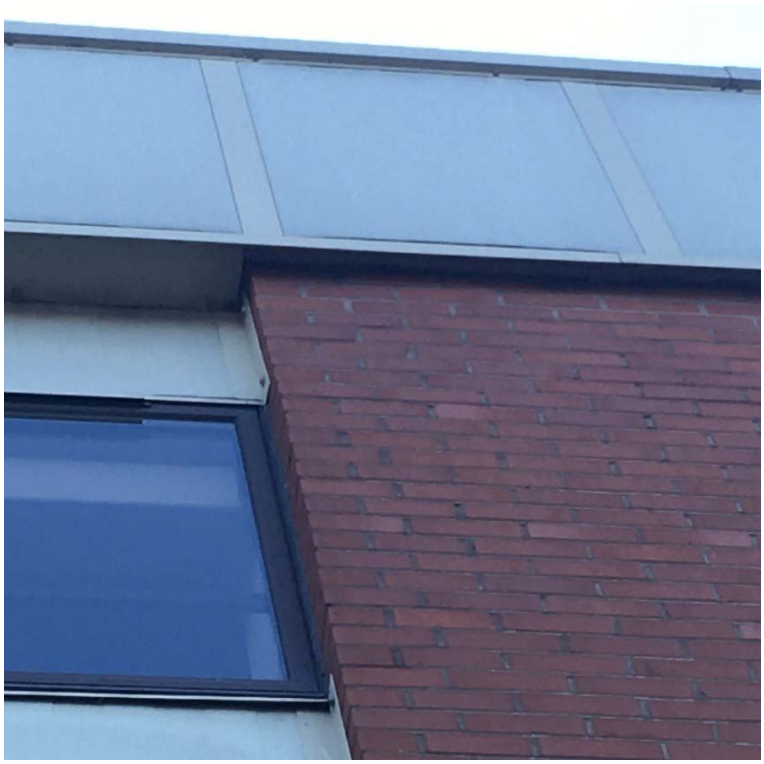
Photograph 24 – Eastern aspect of B6

Photograph 25 – Missing mortar at join of B6

Photograph 26 – Damaged cladding on B6

Photograph 27 – Building 7

Photograph 28 – Building 8



Photograph 29 – Gap around soffit on B8

Photograph 30 – Building 9

Photograph 31 – Vents and gaps in brickwork on B9

Photograph 32 – Rotten soffit on B9

Photograph 33 – Pond within courtyard

Appendix F – Native Floral Species to Plant for Wildlife Enhancement On-Site

Native Floral Species to Plant for Wildlife Enhancement On-Site

The following list gives good examples of plants for different conditions which have value for native fauna either as a food source or shelter. To maximise value for wildlife plants should ideally be native, not cultivars, and sourced locally where possible. Planting should look to provide food at all levels, with underplanting of trees with shrubs or species rich grassland to provide maximum value out of an area and add interest to planting schemes.

Note: it is currently generally not advised to plant ash because of ash die back. However, ash is a very valuable plant for wildlife especially as a semi-mature and mature tree. Therefore, if locally sourced trees or self-sets known to be free of the fungus are available then these should be incorporated. Additionally, trees not showing signs of being affected should be retained where possible.

Trees and Shrubs

Large trees

- Beech *Fagus sylvatica*;
- Bird cherry *Prunus padus*;
- Elm *Ulmus procera*;
- Oaks *Quercus robur* and *Q. petraea*;
- White willow *Salix alba*;
- Field maple *Acer campestre*;
- Silver birch *Betula pendula*;
- Rowan *Sorbus aucuparia*;
- Small-leaved lime *Tilia cordata*; and
- Walnut *Juglans regia*.

Medium/Small Trees

- Alder *Alnus glutinosa*;
- Apples *Malus* spp. (local varieties can be found);
- Field maple *Acer campestre*;
- Holly *Ilex aquifolium*;
- Pears *Pyrus* spp.;
- Rowan *Sorbus aucuparia*;
- Silver birch *Betula pendula*;
- Yew *Taxus baccata*;
- Elder *Sambucus nigra*;
- Hazel *Corylus avellana*;
- Hawthorn *Crataegus monogyna*;
- Honeysuckle *Lonicera periclynemum*;
- Wild privet *Ligustrum vulgare*;
- Blackthorn *Prunus spinosa*; and
- Guelder-rose *Viburnum opulus*.

Plants for hedgerows and woodland understoreys

A combination of shrubs and climbers can make attractive hedges of great benefit for wildlife, as well as providing a functional boundary. Standard trees should be incorporated in hedgerows, with ash, oak and wayfarer tree three traditional choices, depending on the region. These should be marked so as not to be cut during management works. In addition, undersowing with a suitable shade tolerant wildflower mix is important to maximise value.

Trees and shrubs suitable for hedges and understorey planting

- Blackthorn *Prunus spinosa*;
- Buckthorn *Rhamnus catharticus*;
- Field maple *Acer campestre*;
- Holly *Ilex aquifolium*;
- Elder Sambucus nigra;
- Guelder rose *Viburnum opulus*;
- Hawthorn *Crataegus monogyna*;
- Hazel *Corylus avellana*;
- Privets, including wild privet *Ligustrum vulgare*; and
- Spindle *Euonymus europaeus*.

Climber and scramblers suitable for hedgerows and understorey planting

- Dog rose *Rosa canina*;
- Field rose *Rosa arvensis*;
- Ivy *Hedera helix*;
- Honeysuckle *Lonicera periclymenum*;
- Wild clematis/old man's beard *Clematis vitalba*; and
- Hop *Humulus lupulus*.

Understorey flowering plants providing ground cover for shady areas

These species flower early before trees are in full leaf, and will do well in areas that become shady later in the year.

- Bluebell *Hyacinthoides non-scripta*;
- Bugle *Ajuga reptans*;
- Wild daffodil *Narcissus pseudonarcissus*;
- Foxglove *Digitalis purpurea*;
- Lords-and-ladies/cuckoopint *Arum maculatum*;
- Primrose *Primula vulgaris*;
- Sweet violet *Viola odorata*; and
- Wood avens *Geum urbanum*.