Greengage

Brighter strategies
for greener projects

Client: Notting Hill Home Ownership Ltd (NHHO)

Project: St Clare Business Park

Report: Preliminary Ecological Appraisal

QUALITY ASSURANCE

Issue/Revision:	Draft	Final
Date:	May 2022	June 2022
Comments:		
Prepared by:	Georgia Alfreds	Georgia Alfreds
Authorised by:	Paul White	Paul White
File Reference:	551024GA31May22DV0_PEA	551024GA20Jun22DV02_PEA.docx

CONTENTS

Tables

Figures

1.0 EXECUTIVE SUMMARY

Greengage Environmental Ltd was commissioned by Notting Hill Home Ownership Ltd (NHHO) to undertake an update Preliminary Ecological Appraisal (PEA) of a site known as St Clare Business Park in Hampton Hill, London Borough of Richmond upon Thames.

This document is a report of this survey and has been produced to support a planning application. Proposals seek to redevelop the site, to include demolition of existing buildings and erection of 1no. mixed use building between three and five storeys plus basement in height, comprising 98no. residential flats (Class C3) and 1,172sq.m of commercial floorspace (Class E); 1no. three storey building comprising 893sq.m of commercial floorspace (Class E); 14no. residential houses (Class C3); and, associated access, external landscaping and car parking.

This survey aimed to establish the ecological value of this site and the presence/likely-absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

The survey area comprises occupied and unoccupied office blocks and warehouses at the St Clare Business Park. The majority of the assessment site footprint therefore comprised of buildings and hardstanding. Other habitats at the site include scattered trees, introduced shrubs, and small parcels of amenity grassland.

Details received from a desk top study and the site walkover have confirmed that the site:

- Is within 200m of a statutory designated site (Bushy Park and Home Park Site of Special Scientific Interest);
- Has low-moderate potential for roosting bats; and
- Has confirmed presence of nesting birds and a population of house sparrow in the vicinity.

In lieu of mitigation, proposals may therefore stand to impact nesting birds and roosting bats through vegetation clearance and building demolition works.

Accordingly, additional surveys for bats were previously recommended to inform appropriate mitigation measures, which will need to be repeated due to the time that has since lapsed. A bat sensitive lighting scheme should also be designed which reduces light spill on the tree line along the railway.

Given the value for nesting birds, all vegetation clearance and demolition works should be undertaken outside of the breeding bird season (March – August, inclusive), unless an ecologist confirms absence of nests prior to works.

Recommendations for ecological enhancements have been made which would stand to result in net gains in biodiversity, reflecting best practice and planning policy drivers. These include:

- Wildlife friendly planting;
- Living roofs – to take the form of biodiverse substrate-based roofs;
- Invertebrate friendly features such as bee houses and stag beetle loggeries;

- Provision of hedgehog habitat / houses within dense vegetation and creation of hedgehog highway; and
- Incorporation of bird and nest boxes within the built form.

2.0 INTRODUCTION

Greengage was commissioned to undertake a Preliminary Ecological Appraisal (PEA) by Notting Hill Home Ownership Ltd (NHHO) of a site known as St Clare Business Park in Hampton Hill, London Borough of Richmond upon Thames.

This document is a report of this survey and has been produced to support a planning application which seeks the demolition of existing buildings and erection of 1no. mixed use building between three and five storeys plus basement in height, comprising 98no. residential flats (Class C3) and 1,172sq.m of commercial floorspace (Class E); 1no. three storey building comprising 893sq.m of commercial floorspace (Class E); 14no. residential houses (Class C3); and, associated access, external landscaping and car parking.

This survey aimed to establish the ecological value of this site and the presence/likely-absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

2.1 SITE DESCRIPTION

The survey area extends to approximately 0.9 hectares and is centred on National Grid Reference TQ 14191 70890, OS Co-ordinates 514191, 170890.

The site contains ten buildings and surrounding hardstanding, which can be accessed from Holly Road from the south and Windmill Road from the north.

The site is located in Hampton Hill, approximately 100m west of the High Street. The assessment site consists of office buildings and warehouses, surrounded by associated landscaping and car parking.

The site is bound to the west by the Shepperton branch railway line, by residential properties to the north and south, and mixed-use developments, including commercial and residential, to the east.

Open green space in the area includes Bushy Park, which is 100m to the east, a recreation ground, Fulwell golf club and a network of private gardens and street trees. Blue links include the nearby Longford River and the River Thames.

3.0 METHODOLOGY

The PEA (which included an Extended Ecological Phase 1 Survey) was undertaken in accordance with guidance in the UK Habitat Classification System (UKHab)[1] and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal[2], in accordance with BS42020:2013: Biodiversity[3]. The overall assessment consisted of:

- Site specific biological information gained from statutory and non-statutory consultation; and
- A site walkover, protected species scoping assessment and phase 1 habitat survey.

The site-specific consultation provided the ecological context for the site survey carried out on the 3rd May 2022.

The survey boundary and existing site is shown at Figure A.1.

Greengage undertook the site walkover during mild weather conditions, 16°C, Beaufort wind scale 2. Features within the site boundary and accessible features immediately bordering it were evaluated and the extent and distribution of habitats and plant communities were recorded, and supplemented with target notes on areas or species requiring further commentary. Fauna using the area were recorded and areas of habitat suitable for statutorily protected species were identified where present, with an active search carried out for evidence of such use.

3.1 DESK TOP REVIEW

A review of readily available ecological information and other relevant environmental databases (included Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) website[4]) was undertaken for the site and its vicinity. In addition, the National Biodiversity Network (NBN) online Gateway mapping tool and a biological records search from Greenspace Information for Greater London (GiGL) were reviewed to identify the location and citations of local non-statutory designated sites and presence of records for notable and protected species. This provided the overall ecological context for the site, to better inform the Phase 1 Survey.

3.2 BACKGROUND

This report should be read in conjunction with the following reports:

- Preliminary Ecological Appraisal (Greengage, 2018, ref: 551024epSept19FV01_PEA
- Bat Survey Report (Greengage are currently undertaking bat surveys and this report will follow as a standalone report which will summarise findings of the surveys)
- File Note summarising findings from a site visit on 3rd October 2019 (Greengage, 2019, ref: 551024dpOct19FV01_File_Note)
- Updated Bat Activity Survey (Greengage, July 2020, ref: 551024dp14Jul20FV02_Bat_Activity)

Greengage Environmental completed a Preliminary Ecological Appraisal on behalf of Notting Hill Home Ownership Ltd in 2018. Since a significant amount of time has lapsed since the previous PEA was produced, an updated Preliminary Ecological Appraisal (otherwise referred to as an extended Phase 1 Habitat Survey or Phase 1) is required to reflect any changes or degradation to the site since the previous assessment was carried out and to consider updates in new planning legislation. The 2018 PEA identified two buildings (B7 and B10) as having 'low' potential to support roosting bats, and one tree as having 'moderate' potential to support roosting bats.

Therefore, two emergence/re-entry surveys were completed in 2018. No emergences were recorded. Two walked activity transect surveys, with static monitoring, were also undertaken along the western site boundary in June 2020, in response to a council request (see file note referenced above). Since a significant time period has lapsed, further surveys are required to satisfy the planning resubmission. However, walked transects are not considered appropriate for this site, due to its limited extent, part of which is blocked by the buildings along the western boundary, restricting viability which would limit the benefit of a walked transect approach. Therefore, the placement of two static bat detectors is considered sufficient. The frequency and extent of static monitoring required under the Bat Conservation Trust (BCT) guidelines[5] is proportionate to the value present for bats, which assumes a low to moderate value along the existing tree line. The results of these will be summarised in a separate report.

3.3 ON SITE SURVEYS

Flora

The extent and distribution of different habitats on site were identified and mapped according to the standard UKHab methodologies, supplemented with target notes describing the dominant botanical species and any features of interest. Any present protected plant species and invasive/non-natives were also noted. A habitat map has been produced to illustrate the results, as shown at
Figure A.1

Fauna

The Phase 1 Survey specifically included assessments to identify the potential value for notable, rare and protected species at site. This involved identifying potential habitats in terms of refugia, breeding sites and foraging areas in the context of species known to be present locally and regionally.

The likelihood of occurrence is ranked as follows:

- Negligible - While presence cannot be absolutely discounted, the site includes very limited or poor-quality habitat for a particular species. The site may also be outside the known national range for a species;
- Low - On-site habitat is poor to moderate quality for a given species, with few or no information about their presence from desk top study. However, presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats;

- Moderate - The on-site habitats are of moderate quality, providing most or all of the key requirements for a species. Several factors may limit the likelihood of occurrence, habitat severance, habitat disturbance and small habitat area;
- High - On-site habitat of high quality for given species. Site is within a regional or national stronghold for that particular species with good quality surroundings and good connectivity; and
- Present - Presence confirmed for the survey itself or recent, confirmed records from information gathered through desk top study.

The species surveyed for included:

Badger (*Meles meles*)

The potential for badger to inhabit or forage within the study area was assessed. Evidence of badger activity includes the identification of setts (a system of underground tunnels and nesting chambers), grubbed up grassland (caused by the animals digging for earthworms, slugs, beetles etc.), badger hairs, paths, latrines and paw prints.

Bat Species (*Chiroptera*)

The site visit was undertaken in daylight and the evaluation of bat potential comprised an assessment of natural features on site that aimed to identify characteristics suitable for bat roosts, foraging and commuting. In accordance with Bat Conservation Trust's Good Practice Guidelines[6] and methods given in English Nature's (now Natural England) Bat Mitigation Guidelines[7] consideration was given to:

- The availability of access to roosts for bats;
- The presence and suitability of crevices and other places as roosts; and
- Signs of bat activity or presence.

Definite signs of bat activity were taken to be:

- The bats themselves;
- Droppings;
- Grease marks;
- Scratch marks; and
- Urine spatter.

Signs of possible bat presence were taken to be:

- Stains; and
- Moth and butterfly wings.

Features with potential as roost sites include mature trees with holes, crevices or splits (the most utilised trees being oak, ash, beech, willow and Scots pine), caves, bridges, tunnels and buildings with cracks or gaps serving as possible access points to voids or crevices.

Additionally, linear natural features such as tree lines, hedgerows and river corridors are often considered valuable for commuting and semi-natural habitats such as woodland, meadows and waterbodies can provide important foraging resources. Consideration was given to the presence of these features both immediately within and adjacent to the assessment area.

Great Crested Newt (*Triturus cristatus*)

An assessment was carried out to identify any potential habitats that may support great crested newt (GCN) and other native amphibians. The aquatic and terrestrial habitats required generally include small, still ponds or water bodies suitable for breeding; and woodland or grassland areas where there is optimal invertebrate prey potential.

Reptiles

The potential for reptile species on site was assessed during the walkover survey. Possible species include grass snake (*Natrix helvetica*), smooth snake (*Coronella austriaca*), adder (*Vipera berus*), common and sand lizard (*Lacerta vivipara* and *L. agilis*) and slow worm (*Anguis fragilis*). These native reptile species generally require open areas with low, mixed-height vegetation, such as heathland, rough grassland, and open scrub or, in the case of grass snake, waterbody margins. Suitable well drained and frost-free areas are needed so they can survive the winter.

Dormouse (*Muscardinus avellanarius*)

During the walkover survey the potential for dormouse to be present on site was assessed. This included observations for suitable habitat such as well-layered woodland, scrub and linking hedgerows, particularly those comprised of species offering suitable food sources such as honeysuckle and hazel, in addition to direct evidence such as characteristically gnawed hazelnuts, chewed ash keys and honeysuckle flowers, or nests.

Water Vole (*Arvicola terrestris*)

Water vole potential was assessed during the walkover survey. The potential is identified by the presence of ditches, rivers, dykes and lakes with holes and runs along the banks. Latrines, footprints or piles of food can also be noted.

Otter (*Lutra lutra*)

Where desktop review or consultation indicates the presence of otter in a river catchment, the presence of water bodies with good cover and potential holt (den) sites would be noted. Spraint, footprints or food remains can also be noted.

Birds

During the walkover survey, the potential for breeding, wintering and migratory birds was assessed. In particular, this includes areas of trees, scrub, heathland and wetlands that could support nests for common or notable species.

Invertebrates

As part of the walkover survey the quality of invertebrate habitat and the potential for notable terrestrial and aquatic invertebrate species was considered. There is a wide variety of habitats suitable for invertebrates including wetland areas, heathland, areas of bare sandy soil, ephemeral brownfield vegetation and meadows.

Biodiversity Action Plan priority species/ Species of Principal Importance

Where consultation and desk-study indicates the presence of BAP priority species (Species of Principal Importance) not protected by statute, effort was made to establish the potential for the site to support these species.

3.4 SURVEYORS

Georgia Alfreds, who undertook the site survey, has a degree in Geography (BSc Hons), an MSc in Environmental Biology: Conservation and Resource Management and is an Associate member of CIEEM with 7 years' experience in ecological survey and assessment.

Paul White, who reviewed this report, has a Bachelor's degree in Marine Biology (BSc Hons), a Natural England Great Crested Newt Licence (2018-38559-CLS-CLS) and Dormouse Licence (2020-44691-CLS-CLS), and is an Associate member of CIEEM. Paul has over 15 years' experience in ecological surveying and has undertaken and managed numerous ecological surveys and assessments.

This report was written by Georgia Alfreds and reviewed and verified by Paul White who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:

- Represents sound industry practice;
- Reports and recommends correctly, truthfully and objectively;
- Is appropriate given the local site conditions and scope of works proposed; and
- Avoids invalid, biased and exaggerated statements.

3.5 CONSTRAINTS

The PEA was undertaken during an optimal time of year during ideal conditions by a suitably qualified ecologist. It was possible to access all areas of the site. No significant constraints that stand to impact conclusions drawn in this report therefore presented themselves.

4.0 RESULTS

4.1 DESKTOP REVIEW

Designations

Consultations with the local biological record centres (GiGL) and the MAGIC dataset have confirmed that there are no statutory designations of national or international importance within the boundary of the site.

However, there is one Special Protection Area (SPA), one Ramsar Site, two Sites of Special Scientific Interest (SSSIs) and two Local Nature Reserves (LNRs) within 2km of the site. Notably, the Bushy Park and Home Park SSSI sits within 200m of the site boundary to the east.

There are 17 non-statutory Sites of Importance for Nature Conservation (SINCs) within a 2km radius of the site, and one Proposed SINC. SINCs are recognised by LPAs as locally important wildlife sites. Some of these SINCs form part of the nearby LNRs and SSSIs.

Table 4.1 below gives the locations and descriptions of a selection of the nearest/most relevant local designations.

Table 4.1 Statutory and Non-Statutory Designated Sites within Search Radius

Site Name	Approximate Location	Description
Statutory Designations		
Bushy Park and Home Park (SSSI)	100m east	Bushy Park and Home Park SSSI is of special interest for its nationally important saproxylic (dead and decaying wood associated) invertebrate assemblage, population of veteran trees and acid grassland communities. The saproxylic invertebrates include those associated with heartwood decay, bark and sapwood decay and with fungal fruiting-bodies found within the veteran trees which are located throughout the site, notably in the large areas currently managed as wood pasture. Lowland dry acid grassland communities present include National Vegetation Classification (NVC) types U1 sheep's fescue (*Festuca ovina*), common bent (*Agrostis capillaris*), sheep's sorrel (*Rumex acetosella*) grassland and U4 sheep's fescue (Festuca ovina), heath bedstraw (*Galium saxatile*) grassland community which are found within the grassland mosaic of the site.
South West London Waterbodies	1.9km west	The South West London Waterbodies SPA comprises a series of embanked water supply reservoirs and former gravel pits that support a range of man-made and semi-natural open-

Site Name	Approximate Location	Description
(SPA and RAMSAR)		water habitats. This is a Ramsar site and comprises a number of SSSIs. This SPA is designated for having 1% or more of the British populations of gadwall (*Anas strepera*) and shoveler (*Anas clypeata*), as well as nationally important numbers of cormorant (*Phalacrocorax carbo*), great crested grebe (*Podiceps cristatus*), tufted duck (*Aythya fuligula*), pochard (*Aythya ferina*) and coot (*Fulica atra*).
Kempton Park Reservoirs (SSSI)	1.9km west	Kempton Park Reservoirs are of national importance for wintering gadwall Anas strepera. The site also supports significant numbers of wintering shoveler (*Anas clypeata*). Regular breeding waders on the East Reservoir include lapwing (*Vanellus vanellus*), redshank (*Tringa botanus*), ringed plover (*Charadrius hiaticula*) and little ringed plover (*Charadrius dubius*). Avocet (*Recurvirostra avosetta*) bred on the East Reservoir in 1996. A wide range of passage birds, including smew (*Mergus albellus*), garganey (*Anas crecca*), Temminck's stint (*Calidris temminckii*), spotted crake (*Porzana porzana*) and red-necked phalarope (*Phalaropus lobatus*), have been recorded in recent years.
Kempton Nature Reserve (LNR)	1.9km west	Kempton Nature Reserve is of national importance for wintering gadwall (*Anas streptera*) and also supports significant numbers of wintering shoveler. The site also forms a key component of the South West London Waterbodies complex of sites which is a potential Special Protection Area under the EC Directive 79/409 on the Conservation of Wild Birds, and a Ramsar site. Regular breeding waders include lapwing, redshank, ringed plover and little ringed plover. A wide range of passage birds have been recorded in recent years.
Oak Avenue, Hampton (LNR)	1.9km west	Oak Avenue comprises of an area of wasteland with developing habitat including a native species hedgerow, woodland, pond with marsh area, a butterfly-attracting glade and ephemeral communities.
Non-Statutory		
Bushy Park and Home Park SINC	100m east	These two adjacent Royal Parks comprise a large area of old parkland habitats, including some of the best acid grassland in London and a variety of interesting wetlands. The acid grasslands support numerous locally uncommon plants,

Site Name	Approximate Location	Description
		several nationally scarce species and the only sizeable population in south-east England of autumn squill (*Scilla autumnalis*). Damp neutral grassland in Hampton Court Paddocks supports a completely different range of plants, including meadow crane's-bill (*Geranium pratense*) which is scarce in London. The numerous ponds and ditches are also home to rare plants, including the only London population of the nationally scarce mudwort (*Limosella aquatica*). The specially protected water vole occurs here. Open habitats also support a good diversity of invertebrates. The old parkland trees support fewer invertebrates than those in Richmond Park, although several nationally rare species such as the rusty click-beetle (*Elater ferrugineus*) are present. Older trees are also valuable for hole-nesting birds such as tree sparrow and jackdaw (*Corvus monedula*). A group of horse paddocks in the west of Bushy Park include several old pollards of sweet chestnut (*Castanea sativa*) and oak, an old hedgerow and a series of inter-connected pools.
Longford River in Richmond SINC	160m southwest	The 2.7 km section of the Longford River in Richmond borough, despite its vertical banks, supports a diverse range of vegetation, including hemlock water-dropwort (*Oenanthe crocata*), marsh woundwort (*Stachys palustris*), water dock (*Rumex hydrolapathum*), lesser pond-sedge (*Carex riparia*), common skullcap (*Scutellaria galericulata*), branched bur-reed (*Sparganium erectum*) and reed canary-grass (*Phalaris arundinacea*). Beneath the surface of the clear water, fennel-leaved pondweed (*Potamogeton pectinatus*) and hornwort (*Ceratophyllum demersum*) can be found. The river holds good populations of fish, including chub, roach, dace and gudgeon.
River Thames and tidal tributaries SINC	1.4km south	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 of particular importance for wildfowl and wading birds. Wetlands beside the river in Kew support the only London population of the nationally rare and specially-protected cut-grass (*Leersia oryzoides*). The numerous small islands in the upper

Site Name	Approximate Location	Description
		reaches support important invertebrate communities, including several nationally rare snails, as well as a number of heronries.
Hampton Water Treatment Works SINC	1.4km southwest	Adjacent to Stain Hill and Sunnyside Resevoirs, this large water works includes filter beds, some larger water storage beds, old Victorian buildings, herb-rich grasslands, bare ground and wasteland. The large areas of open water, especially the Grand Junction Reservoir in the north-west of the site, are used by large numbers of birds, particularly in winter. Most of the site is still in operational use so marginal vegetation, where it occurs, is generally sparse although skullcap (*Scutellaria galericulata*) is particularly prolific on the edges of the filter beds. It is the grasslands surrounding the filter beds and buildings however, which makes the site so special. They are among the most herb-rich grasslands in the Borough. A large population of the London rarity wild clary (*Salvia verbenaca*) is present throughout the grassland, which also contains several other scarce London species often associated with chalk grassland.
Kempton Waterworks SINC	1.9km west	Within an internationally important site for wintering waterfowl, while the passage and breeding birds are also of great interest. Wintering species reaching nationally significant numbers include gadwall, shoveler, teal and mallard. Breeding birds include grey heron, ringed plover, little ringed plover, lapwing, occasionally redshank, and in 1996 avocet. Alder-willow woodland borders the Portlane Brook, and the site also includes a herb-rich damp meadow supporting the London rarity early marsh-orchid (*Dactylorhiza incarnata*). The site appears important for feeding bats, with at least four species regularly observed. Palmate newt, grass snake and the specially-protected water vole are also present.
Oak Avenue Local Nature Reserve SINC	1.9km west	This nature reserve was created on a derelict site by Richmond Council with the assistance of local residents. The diverse and colourful 'wasteland' vegetation, which has established naturally on the site, includes some unusual plants, such as Greek dock (*Rumex cristatus*) and cotton

Site Name	Approximate Location	Description
		thistle (*Onopordum acanthium*), and supports diverse communities of butterflies and other invertebrates.

Biodiversity Action Plans

UK Biodiversity Action Plans (BAPs) have been developed which set priorities for nationally important habitats and species. To support the BAPs, Species/Habitat Statements (otherwise known as Species/Habitat Action Plans) were produced that provide an overview of the status of the species and set out the broad policies that can be developed to conserve them. A list of priority species of conservation importance was also developed.

The UK BAP was succeeded in 2012 by the UK-Post 2012 Biodiversity Framework which informed the creation of the Biodiversity 2020 strategy; England's contribution towards the UK's commitments under the United Nations Convention of Biological Diversity.

Despite this, the UK BAP priority species lists and conservation objectives still remain valid through integration with local BAPs (which remain valid), and in the form of the Habitats and Species of Principle Importance list (as required under section 41 of the Natural Environment and Rural Communities (NERC) Act).

Local Biodiversity Action Plans (LBAPs) ensure that national action plans (the UK BAP/Biodiversity 2020) are translated into effective action at the local level and establish targets and actions for locally characteristic species and habitats.

Greater London Biodiversity Action Plan

Notable features of the Local BAP that are of relevance to this report (given the potential presence of these species/habitats at site currently, or the potential for these species to inhabit the site in the future) include:

- Stag Beetle (*Lucanus cervus*) Action Plan;
- House Sparrow (*Passer domesticus*) Action Plan;
- Bat Species Action Plan;
- Private Gardens Action Plan; and
- Woodland Action Plan.

Richmond BAP

This document provides context for when creating and improving green infrastructure in the borough.

This builds on requirements of planning policy (see Appendix 2) and should be considered when developing landscaping plans for the site.

The following Species Action Plans are of relevance to this development:

- Bats;

- Song thrush; and
- Stag beetle.

It includes an Action Plan for the Built Environment, where guidance is provided on recommended biodiversity enhancement actions for development within the Borough. This includes installing green roofs where practicable, green walls and the installation of roosting and nesting sites for bats and birds.

Species Record

The information provided in the biological data search from GiGL identified records of a number of protected and BAP priority species within 2km search radius of the site. Among others, these include the following species of relevance to the site, primarily these are species that are known to be in the area that may be impacted by any proposals, or that stand to benefit as a consequence of potential ecological enhancements:

- Stag beetle;
- Rare and notable Lepidoptera including: small heath (*Coenonympha pamphilus*), white admiral (*Lasiommata megera*), white letter hairstreak (*Satyrium w-album*), sallow (*Cirrhia icteritia*), small square-spot (*Diarsia rubi*), autumnal rustic (*Eugnorisma glareosa*), ghost moth (*Hepialus humuli*), white ermine (*Spilosoma lubricipeda*), blood-vein (*Timandra comae*) and cinnabar (*Tyria jacobaeae*);
- Common toad (*Bufo bufo*);
- Common frog (*Rana temporaria*);
- Great crested newt;
- Palmate newt (*Lissotriton helveticus*);
- Slow worm;
- Grass snake;
- Numerous notable, rare or declining bird species including: cuckoo (*Cuculus canorus*), dunnock (*Prunella modularis*), house martin (*Delichon urbicum*), house sparrow, linnet (*Linnaria cannabina*), merlin (*Falco columbaricus*), redwing (*Turdus iliacus*), skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), starling (*Sturnum vulgaris*), swallow (*Hirundo rustica*) and swift (*Apus apus*).
- Badger;
- Common shrew (*Sorex araneus*);
- Hedgehog (*Erinaceus europaeus*);
- Water vole;
- Bat species including: common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*); Nathusius pipistrelle (*Pipistrellus nathusii*); Daubenton's bat (*Myotis daubentonii*); Natterer's bat (*Myotis nattereri*); brown long-eared bat (*Plecotus auritus*); serotine (*Eptesicus serotinus*) and noctule (*Nyctalus noctula*).

The species listed above are primarily those known to be in the area that may be impacted by any proposals at the site, or that stand to benefit as a consequence of potential ecological enhancements at the site and inform site-specific mitigation and enhancement recommendations described in the following chapter.

Detailed Description of Site: Habitats

The habitats presented across the assessment site consist of the following UKHab categories, as mapped at Figure A.1:

- Urban - Urban Tree (Scattered Trees);
- Grassland - Modified Grassland (Amenity grassland);
- Sparsely Vegetated Land - Ruderal/Ephemeral (Ephemeral/Short Perennial)
- Urban - Introduced Shrub; and
- Urban - Developed Land; Sealed Surface (Buildings)
- Urban - Developed Land; Sealed Surface (Hard-Standing)

Urban - Urban Trees (Scattered Trees)

There are a small number of mature trees at the Holly Road access, including Norway maple (*Acer platanoides*), a walnut (*Juglans* sp.) and an elder (*Sambucus nigra*). Other species recorded on site include leyland cypress (*Cupressus x leylandii*), Cotoneaster tree (*Cotoneaster frigidus 'Cornubia'*), pear (*Pyrus calleryana 'chanticleer'*), sycamore (*Acer pseudoplatanus*) and goat willow (*Salix caprea*). Smaller trees include cherry (*Prunus avium*), blackthorn (*Prunus spinosa*) and holly (*Ilex aquilifolium*). A number of large specimens bordering the railway include pedunculate oak (*Quercus robur*) and Leyland cypress.

Figure 4.1 Three scattered Norway maple trees recorded onsite

Grassland - Modified Grassland (Amenity Grassland)

A small parcel of amenity grassland, which appears to be infrequently managed, was present at the rear of St Clare House (Building 1). This is a small area of lawn which consists of overgrown and unkept perennial rye-grass (*Lolium perenne*), annual meadow-grass (*Poa annua*), lesser celandine (*Ficaria verna*), ground-ivy (*Glechoma hederacea*) and dandelion (*Taraxacum officinalis agg.*).

Other parcels of amenity grassland were present throughout the site car park, also including occasional species such as green alkanet (*Pentaglottis sempervirens*), creeping thistle (*Cirsium arvense*) and creeping buttercup (*Ranunculus repens*).

Figure 4.2 Amenity grassland parcel at the rear of Building 1

Sparsely Vegetated Land - Ruderal/Ephemeral (Ephemeral/Short Perennial)

Small patches of ephemeral/short perennial were present on site, on shingle material, amongst the hard standing car park and adjacent to B1. Species comprised creeping buttercup (*Ranunculus repens*), herb Robert (*Geranium robertianum*), common dog-violet (*Viola riviniana*), hairy brome (*Bromus ramosus*), dandelion, cleavers (*Galium aparine*), white clover (*Trifolium repens*), and locally abundant bluebell (*Hyacinthoides non-scripta*).

Urban - Introduced Shrub

Several parcels of unmanaged introduced shrub were recorded, comprising several varieties of cotoneaster (*Cotoneaster sp.*), Leyland cypress, rose (*Rosa sp.*), Japanese laurel (*Aucuba japonica*), blackthorn (*Prunus spinosa*), buddleia (*Buddleja davidii*), cherry, firethorn (*Pyrocantha coccinea*) and yucca (*Yucca sp.*). Planted flowers include periwinkle (*Vinca sp.*) and stinking iris (*Iris foetidissima*) and cleavers. There are several flowerbeds that are unplanted and growing self-sown weeds, and much of the planters and trees are densely covered with common ivy (*Hedera helix*).

Urban - Developed Land; Sealed Surface (Buildings)

The site contains 10 buildings. The buildings are overall in very good condition, as described in Table 4.2.

Table 4.2 Building descriptions

Building	Description	Photograph
1 (St Clare House)	Three storey, flat roof, brick built vacant building which has been secured.	
2 (Holly House)	Two storey, flat roof, brick built vacant building which has been secured.	

Building	Description	Photograph
3 (Lacey House)	Two storey, flat roof, brick built vacant building which has been secured.	
4 (Unit 7)	Two storey, flat roof, brick built vacant building which has been secured.	
5 (Unit 8)	Single storey, flat roof, brick built vacant building which has been secured.	
6 (Atcost Structure)	Two storey open fronted warehouse, comprising of fibre cement sheeting roof, concrete pillars and used as a storeroom. Building 6 conjoined on its entire northern aspect with Building 7.	

Building	Description	Photograph
7 (Atcost Structure)	Two storey open fronted warehouse, comprising of fibre cement sheeting roof, concrete pillars and used as a storeroom. Netting and corrugated metal sheeting surround the building. Concrete guttering. Currently heavily used by pigeons. Building 7 conjoined on its entire southern aspect with Building 6. Vegetation overgrowing western part of the roof.	
8 (Units 2-6)	Single storey brick-built building. Sloping flat roof comprising of painted corrugated metal.	
9 (Unit 1)	Single storey brick-built building, currently used as a garage. Sloping flat roof comprising of painted corrugated metal.	
10 (7-11 Windmill Road)	Northernmost part of the building is a single storey car show room, comprising corrugated metal walls and a pitched room. The southernmost part of the building functions as a garage and car wash, comprising brick and corrugated metal sheeting, with a sloping roof.	

Urban - Developed Land; Sealed Surface (Hard-Standing)

The majority of the site is hardstanding, allowing for movement of vehicles around the site and long-term storage of cars. The hardstanding was in good condition, with no cracks and minimal vegetation present.

Detailed description of Site: Species

Badger

It is possible that badgers could access the site via the railway cutting, however no badger setts, signs of badgers or gaps in the fence were observed at the site. Therefore, the site is not considered to support badgers.

Bats

Foraging

The site is likely to be of some importance for foraging bats due to the linear vegetation along the railway, which is likely to act as a dark corridor for commuting through the landscape and for foraging purposes. The group of mature Norway maple, being close to adjacent gardens, are likely to present foraging opportunities. However, the majority of the site consists of hardstanding and buildings and therefore the potential for foraging bats across the majority of the site is low.

Roosting

The buildings were externally and, where possible, internally inspected for evidence of bat roosting. The buildings, being mostly in good condition, lack the required features for crevice dwelling bats. Most have well-sealed flat roofs, intact brickwork and / or intact steel cladding, which are not considered suitable for bats. Therefore, nine of the buildings on site are considered to have negligible potential for roosting bats and two (buildings 7 and 10) are classified as having 'low' potential to support roosting bats.

Table 4.3 Description of bat rooting features

Building	Description of features	Photographs
7	Building 7 had a small number of cracks in the brickwork and gaps under the ridges and is therefore considered to have low potential to support roosting bats.	

Building	Description of features	Photographs
		
10	Building 10 which fronts Windmill Road, has a few potential roosting features, including gaps under the sloping roof, gaps under the wooden boarding and gaps under corrugated iron cladding. This building also has low potential to support roosting bats.	

In addition, a single walnut tree on site (labelled 'T25' in the Arboricultural Report, PJC, November 2017 ref: 4707/17-01 Rev 01) was assessed in 2018 as having potential to support roosting bats (Greengage, September 2019, ref: 551024epSept19FV01_PEA). It had north-facing cavities in a branch approximately 3-4m high. It was not possible to determine from ground level whether this cavity extends within the tree and whether the internal cavity was suitable for bats. However, the presence of two cavities suggested that the branch is hollow for at least part of its length and was therefore given moderate suitability to support a bat roost. The updated Phase 1 habitat survey identified the tree which has since developed a layer of ivy. Therefore, the assessment of 'moderate' suitability to support roosting bats, remains valid (Figure 4.3 Comparison of walnut tree in 2018 (left) to 2022 (right).

Figure 4.3 Comparison of walnut tree in 2018 (left) to 2022 (right)

Great Crested Newt

There are twelve records of great crested newts within 500m of the site, the closest of which was recorded 461m east of the site. There is one pond and one channelised river within 500m of the site. The waterbody, measuring approximately 1,105m^2, is situated within Bushy Park, however, there is a significant barrier of 100m of hard-standing, including pavements and roads, between the site and Bushy Park, and therefore, it is not considered likely that GCN are present at the site.

There is minimal suitable habitat on site for GCN, consisting only of introduced shrubs and limited amenity grassland which will offer few foraging and sheltering opportunities. Therefore, the potential for GCN is considered to be negligible.

Reptiles

The adjacent railways sidings are likely to be of value for commuting reptiles however. Railways are known to aid reptile dispersal, and there are records of slow-worm and grass snake in the local area. However, habitats across the site were considered to offer negligible value for reptiles, consisting mostly of hard standing with some introduced shrubs. The vegetation is too dense to provide basking opportunities, therefore the site provides negligible potential to support reptiles.

Dormouse

The GiGL data search did not return any dormouse records and habitats present on site are considered to offer negligible suitability to support dormouse. Dormouse are therefore considered likely absent from the site and not discussed further in this report.

Water Vole and Otter

The GiGL data search did not return any otter or water vole records and habitats present on site are considered to offer negligible suitability to support these species and they are therefore not discussed further in this report.

Birds

Potential nesting value was noted associated with vegetation across the site.

During the site visit in 2018, house sparrows were encountered in large numbers, particularly in the satellite car park, in which 5 house sparrows were observed perching in a sycamore sapling, a further 5 were observed foraging around the adjacent railway cuttings, and 3 were observed calling from the residential properties surrounding the site. Within the main site, a further 3 house sparrows were observed among the introduced shrub vegetation. House sparrow is a Species of Principal Importance, is red-listed (BOCC)[8], and is a London BAP species.

Evidence of nesting by feral pigeon (*Columba livia domestica*) was observed in the warehouses (Building 6 and 7) and feral pigeon were observed perching in this area.

There are records for numerous protected, notable, rare or declining bird species in the local area. This includes overwintering birds that are likely to be associated with the nearby SPA/Ramsar site.

Invertebrates

There are records for a wide variety of notable species in the local area. These records include the BAP species' stag beetle and a variety of notable Lepidoptera species within 2km, although these are likely to be associated with parks such as Bushy Park and Home Park SSSI. Potential value for notable invertebrates was considered low on site due to the general lack of vegetation; however, there is value in the tree line along the railway and the introduced shrubs.

Invasive/Non-native species

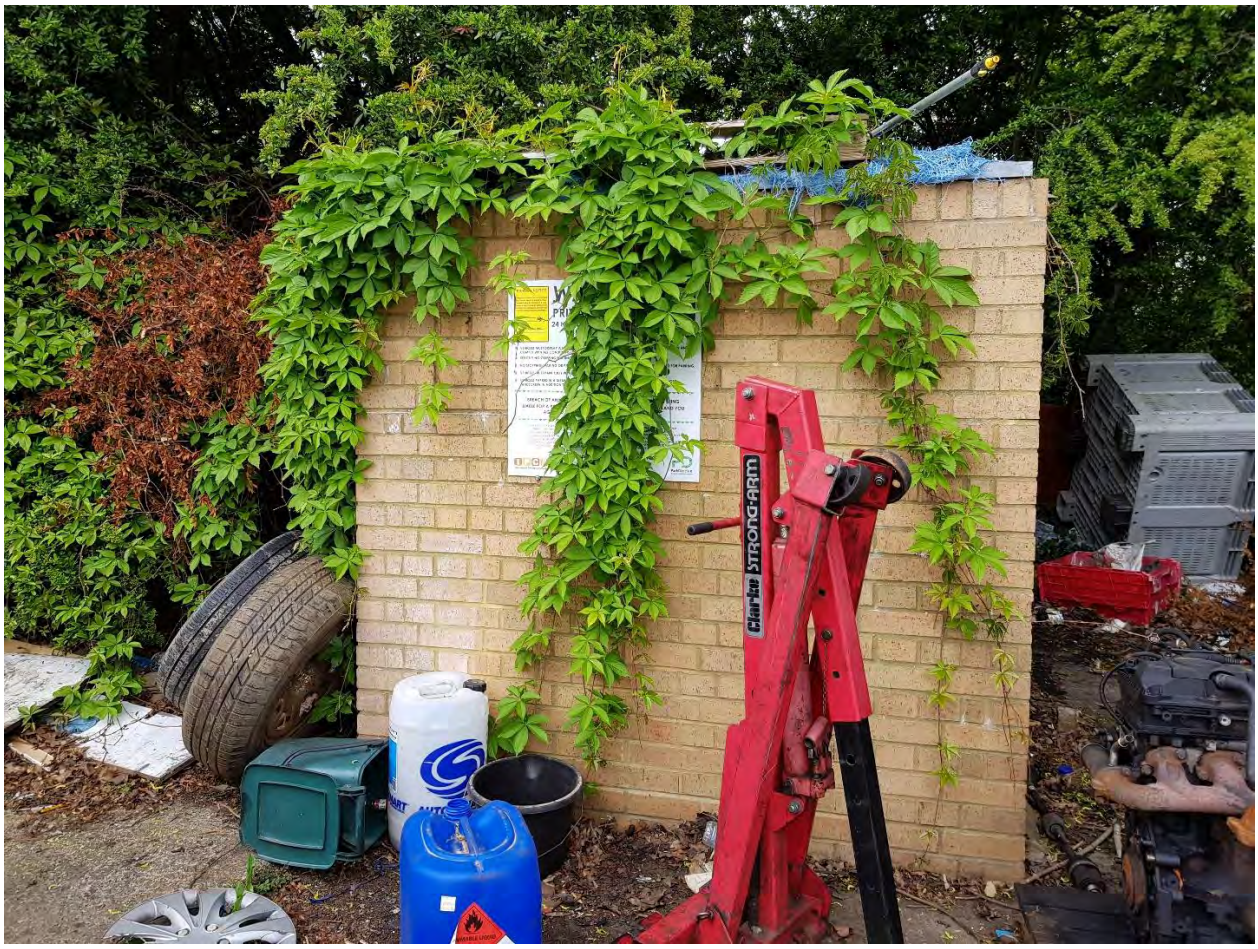
Three invasive species were identified on site at the time of the walkover survey.

Green alkanet (Target Note 1) is a category 3 listed species which falls under the London Invasive Species Initiative (LISI)[9]. Buddleia is also listed as a London LISI invasive non-native species of concern, category 3. This was recorded throughout the site.

Some species of Cotoneaster (*Cotoneaster* sp.) present on site (Target Note 2), are listed on Schedule 9 of the Wildlife and Countryside Act (1981) as amended, and their spread in the wild is therefore of concern.

Virginia creeper (*Parthenocissus quinquefolia*) was also recorded in the north-west of the site, on the roof of building 7 and along the fence adjacent to the railway line (Target Note 3) are listed of Schedule 9 of the Wildlife and Countryside Act (1981) as amended.

Figure 4.4 Schedule 9 W&CA (1981) as amended, Virginia creeper present on site.



There is therefore a confirmed presence of invasive species on site.

Other BAP Species

Records for key species of conservation concern were found for the local area, including hedgehog and common toad. It is possible that these species could access the site via the railway and utilise the areas of scattered trees, introduced shrub and amenity grassland for foraging and shelter.

5.0 EVALUATION AND DISCUSSION

5.1 BASELINE SUMMARY

The assessment site and its surroundings have potential to support the following ecological receptors of note, which could therefore be impacted upon by any future prospective development proposals, as indicated in Table 5.1 below. Comment on further recommendations for each receptor is provided; further detail and discussion can be found at paragraph 5.2 onward:

Table 5.1 Baseline Summary

Receptor	Presence/Potential Presence	Comments
Designated Sites: Statutory	Bushy Park and Home Park SSSI	The nearby SSSI is designated due to the presence of saproxylic invert habitats. It is not considered likely that the development will impact these habitats. On-site enhancements for invertebrates including log piles are recommended.
Designated Sites: Non-Statutory	Bushy Park and Home Park SINC and Longford River SINC	These two SINCs are within 200m of the site. However, it is not considered likely that the development will impact these sites assuming the tree line along the railway is retained and suitable Construction Environmental Management Plan (CEMP) measures are implemented.
Foraging bats	Low	There is low value for foraging and commuting bats along the tree line along the railway. This tree line should be retained, and a lighting scheme designed to avoid light spill in this area. Improved foraging habitat should be provided.
Roosting bats	Low – Moderate	Some opportunities for bats exist in cracks in brickwork in two buildings, however the potential is considered low. There is moderate potential for bats to roost in a mature walnut tree. Further surveys are required to determine the presence / likely-absence of a bat roost and design a mitigation strategy, if required.

Receptor	Presence/Potential Presence	Comments
Birds	Confirmed presence	Feral pigeon nests were observed in Building 6 and 7. Potential for other nesting species was noted in the trees and introduced shrubs. It is likely that house sparrow nest along the railway and in the soffits and eaves of the adjacent properties. Proposals should provide enhanced nesting opportunities.
Invertebrates	Low	There is some value for invertebrates in the tree line along the railway. Invertebrate enhancements are recommended.
Hedgehog	Low	Whilst hedgehog is not afforded the same level of protection as bats or birds, they are still protected from intentional injury or death under the Wild Mammal Protection Act (see Appendix B). Measures to protect hedgehog and retain suitable habitat on site for the species, allowing continued connectivity, are therefore described in Section 5.2.
Invasive/Non-native species	Confirmed	Further survey in relation to the invasive species found on site is not necessary. However, mitigation measures to ensure the spread of these species in the wild is including within Section 5.2.

5.2 DISCUSSION AND RECOMMENDATIONS

Discussion is provided below on the key ecological receptors that stand to be impacted/benefit from proposed works; high level commentary on appropriate mitigation, compensation and enhancement actions is also provided.

Designated sites

Statutory

No impacts are predicted upon Bushy Park and Home Park SSSI, however, since this site is designated for the presence of saproxylic (dead wood) habitats, which provide habitat for specialist invertebrates, it would be appropriate to include invertebrate enhancement features such as stag beetle loggeries.

Non-Statutory

No impacts are predicted to the nearby SINCs as very little habitat is due to be lost (vegetation clearance is limited to low value introduced shrubs and amenity grassland). The tree line along the railway is due to be retained which will maintain a green corridor through the landscape.

General best practice construction actions should be followed which should be detailed within a site wide Construction Environmental Management Plan (CEMP) which could be secured through condition.

Bats

Foraging and Commuting

In order to assess the commuting and foraging value of the site for bats, particularly along the railway line, several periods of monitoring are required using static bat detectors. This monitoring would assess the species present, their abundance, and the relative value of the site for bats. Evidence based mitigation can then be integrated within proposals including controlled hours of lighting, form of bulbs and levels of shielding, informed by the survey results.

The frequency and extent of static monitoring required under the BCT guidelines is proportionate to the value present for bats. Two statics should be placed along the railway line and western site boundary. They will be deployed on three occasions for a week (including spring - April/May, summer - June/July/August, autumn - September/October). This assumes a low to moderate value along the existing tree line. It is not considered necessary for the static monitoring to be supplemented by walked transects.

All the mature trees and treelines on site should be retained, protected from works and enhanced where possible. A lighting strategy should be produced which will ensure no light spill occurs along the treeline along the railway. Notwithstanding the results of the bat surveys, it is recommended that bat boxes are incorporated within the fabric of the buildings to be constructed at the site.

Roosting

Due to the presence of two low potential buildings (B7 and B10) and one moderate potential tree, it is recommended that further surveys for bats are undertaken. In accordance with the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines document, one emergence/re-entry survey is required for the low potential buildings by two surveyors and two emergence/re-entry surveys are required of the moderate potential tree by one surveyor. These should be undertaken two weeks apart between May and September for moderate, with at least one survey between May and August.

During the surveys, surveyors would observe and record any bats emerging or re-entering any roosts. This period of observation would take place from 15 minutes before sunset to 1.5 hours after sunset for emergence surveys, or 1.5 hours prior to sunrise to 15 minutes after sunrise for re-entry surveys.

Handheld bat detectors that monitor acoustic frequencies would be used during the survey. The survey would take place during fairly calm weather (no heavy rain or wind). Recorded bat calls would be analysed to identify, where possible, the species present and the behaviours associated with the calls recorded.

Birds

Due to the presence of nests and suitable nesting habitat, works should be timed so that any vegetation clearance or demolition of buildings is undertaken outside of the breeding bird season (March – August, inclusive). Where this is not possible, an ecologist should confirm that there are no active nests present a minimum of 24 hours prior to clearance. If nests are discovered, they should be protected until the birds have fledged.

Due to the presence of significant numbers of house sparrow in the surrounding areas on a previous survey, it is considered appropriate to incorporate sparrow terraces and dense shrub planting to support the population in this area.

Invasive/Non-native species

The three invasive species found on site (green alkanet, cotoneaster and Virginia creeper) have been confirmed on site. It is important that these species are removed sensitively from the site during the clearance works and destroyed in such a way that prevents their spread. Clearance should follow guidance from LISI[9] and DEFRA[10] respectively. LISI also details actions to help prevent, control and, where feasible, eradicate invasive non-native species in London. The following steps should be taken before, during and after site clearance to help control this species:

- Identify areas where these species are present and assess the risk of and how they would be spread;
- Set up monitoring schemes on site; and
- Raise awareness of these species through notices on site to help prevent the spread.

BAP Species

BAP species such as hedgehog and common toad should be considered during site clearance. Any vegetation clearance should be conducted sensitively using a phased approach, which would allow animals the opportunity to escape or to be spotted by contractors. Some species like common toad will often freeze when disturbed, and therefore these should be gently moved to the closest undisturbed green space.

Biodiversity Enhancements

In accordance with the National Planning Policy Framework, local policy drivers and recent changes to the legislative context, (Appendix B), proposals should seek to provide measurable net gains in biodiversity. These should aspire to a minimum of 10% net gain in biodiversity, which should be

evidenced through a Biodiversity Impact Assessment (BIA) using the Natural England Biodiversity 3.0 metric[11] or similar.

To enable proposals to deliver the desired net gains, the following measures should be considered for incorporation into the landscaping plans:

- Installation of living roofs on suitable flat-roof areas to provide foraging opportunities for invertebrates and birds – these should take the form of biodiverse substrate roofs with 80-150mm low nutrient substrate seeded and plug planted with wildflowers;
- Wildlife-friendly planting schemes, to include dense shrubs such as blackthorn, wild privet and hawthorn to provide habitat for house sparrow, and pollinator friendly herbaceous planting;
- Incorporation of invertebrate features including bee houses and stag beetle loggeries to be placed along retained tree lines or on living roofs, and enhancements on the living roof including rock piles, sand piles, water trays, rope coils and log piles;
- Provision of a variety of bird boxes, including those specifically targeting house sparrow, to be inbuilt into the fabric of new buildings for permanency;
- Provision of bat boxes, the exact specification to be informed by the above-recommended bat surveys;
- Hedgehog enhancements such as installation of log/brash piles, creation of gaps under fence panels to create a hedgehog highway;
- Any mitigation and ecological enhancements for the site should be detailed in an Ecological Management Plan which could be secured through condition, as per guidance in the British Standard BS42020:2013 Biodiversity.
- It is not possible to fully determine the impact of the development on the existing biodiversity at the site prior to the phase 2 bat surveys. However, assuming any appropriate mitigation identified by these surveys is implemented, alongside integration of the above recommended enhancements, the proposals should stand to result in overall net-gains in biodiversity.

6.0 SUMMARY & CONCLUSION

Greengage was commissioned by Notting Hill Home Ownership Ltd (NHHO) to undertake a PEA a site known as St Clare Business Park in Hampton Hill, London Borough of Richmond upon Thames, in order to establish the ecological value of this site and its potential to support notable and/or legally protected species.

The PEA identified value for a number of notable and protected species. A SSSI is located 100m east of the site, however it is not considered likely that the development will impact this habitat.

Key mitigation, compensation and enhancement actions are described to enable legislative and policy compliance, aiming to achieve net gains in biodiversity for the site. Further surveys are recommended for bats, and mitigation is prescribed for nesting birds.

Key actions should be included within EMP and CEMP documents for the site which could be secured through planning condition.

APPENDIX A SITE PLAN AND HABITAT MAP

Figure A.1 Site plan and habitat map

St Clare Business Park

- Target Notes
- Scattered Trees
- Red Line Boundary
- Building

UKHAB

- g4 - modified grassland
- u - urban
- u1b - developed land. sealed surface
- u1b5 - buildings
- s - sparsely vegetated land

Greengage

Greengage Environmental Ltd
9 Holyrood Street, London
SE1 2EL

www.greengage-env.com

Fig 1.0 Site Plan and Habitat Map

Project Number 551024
June 2022
Scale 1 to 1100 at A4
Map Data - Google Satellite

N

0 10 20 m

APPENDIX B RELEVANT LEGISLATION AND POLICY

B.1 LEGISLATION

Current key legislation relating to ecology includes The Environment Act[12] Wildlife and Countryside Act 1981 (as amended)[13]; The Conservation of Habitats and Species Regulations 2019 ('Habitats & Species Regulations')[14], The Countryside and Rights of Way Act 2000 (CRoW Act)[15], and The Natural Environment and Rural Communities Act, 2006[16].

The Environment Act, 2021

The Environment Act, 2021 will mandate the requirement for new development in England to deliver a minimum 10% biodiversity net gain (BNG), as measured by the agreed metric (the current relevant version being the Natural England metric 3.0), secured through planning condition as standard (as per schedule 14 of the Act). Approach to the delivery of BNG must follow the mitigation hierarchy, with avoidance of impact and on-site compensation/gains prioritised, ahead of the use of offsite biodiversity unit offsets, or the purchase of biodiversity credits.

The Act introduces the condition that no development may begin unless a biodiversity net gain plan has been submitted and approved by the local planning authority (LPA).

The Act also amends requirements of the NERC Act, 2006, adding the need to not just conserve, but enhance biodiversity through planning projects. Furthermore, it introduces the need for the LPA to have regard to relevant local nature recovery strategies and relevant species/protected site conservation strategies, when making their decision.

Under the Act, the enhancements must be maintained for at least 30 years.

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The Conservation of Habitats & Species Regulations replace The Conservation (Natural Habitats, etc.) Regulations 1994 (as amended)[17], and transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive')[18], and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive')[19] into UK law (in conjunction with the Wildlife and Countryside Act).

Regulation 43 and 47 respectively of the Conservation of Habitats & Species Regulations makes it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2 (European protected species of animals), or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5 (European protected species of plant). Development that would contravene the protection afforded to European protected species requires a derogation (in the form of a licence) from the provisions of the Habitats Directive.

Regulation 63 (1) states: 'A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which —

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and

(b) is not directly connected with or necessary to the management of that site;

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.'

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats[20] (the 'Bern Convention') and the Birds Directive and EU Habitats Directive are implemented in Great Britain.

The Countryside and Rights of Way Act 2000

The Wildlife and Countryside Act has been updated by the CRoW Act. The CRoW Act amends the law relating to nature conservation and protection of wildlife. In relation to threatened species it strengthens the legal protection and adds the word 'reckless' to the offences of damaging, disturbing, or obstructing access to any structure or place a protected species uses for shelter or protection, and disturbing any protected species whilst it is occupying a structure or place it uses for shelter or protection.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Biodiversity Action Plans provide a framework for prioritising conservation actions for biodiversity.

Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. The list, a result of the most comprehensive analysis ever undertaken in the UK, currently contains 1,149 species, including for example, hedgehog (*Erinaceus europaeus*), and 65 habitats that were listed as priorities for conservation action under the now defunct UK Biodiversity Action Plan[21] (UK BAP). Despite the devolution of the UK BAP and succession of the UK Post-2010 Biodiversity Framework[22] (and Biodiversity 2020 strategy[23] in England), as a response to the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020[24] and EU Biodiversity Strategy (EUBS)[25], this list (now referred to as the list of Species and Habitats of Principal Importance in England) will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 41 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

Biodiversity Action Plans

Non-statutory Biodiversity Action Plans (BAPs) have been prepared on a local and regional scale throughout the UK over the past 15 years. Such plans provide a mechanism for implementing the government's broad strategy for conserving and enhancing the most endangered ('priority') habitats and species in the UK for the next 20 years. As described above the UK BAP was succeeded in England by Biodiversity 2020 although the list of priority habitats and species remains valid as the list of Species of Principal Importance for Nature Conservation.

Regional and local BAPs are still valid however and continue to be updated and produced.

Detail on the relevant BAPs for this site are provided in the main text of this report.

Legislation Relating to Nesting Birds

Nesting birds, with certain exceptions, are protected from intentional killing, destruction of nests and destruction/taking of eggs under the Wildlife and Countryside Act 1981 (as amended) and the CRoW Act. Any clearance of dense vegetation should therefore be undertaken outside of the nesting bird season, taken to run conservatively from March to August (inclusive), unless an ecologist confirms the absence of active nests prior to clearance.

Legislation Relating to Bats

All UK bats and their roosts are protected by law. Since the first legislation was introduced in 1981, which gave strong legal protection to all bat species and their roosts in England, Scotland and Wales, additional legislation and amendments have been implemented throughout the UK.

Six of the 18 British species of bat have Biodiversity Action Plans (BAPs) assigned to them, which highlights the importance of specific habitats to species, details of the threats they face and proposes measures to aid in the reduction of population declines.

Although habitats that are important for bats are not legally protected, care should be taken when dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

The Wildlife & Countryside Act 1981 (WCA) was the first legislation to provide protection for all bats and their roosts in England, Scotland and Wales (earlier legislation gave protection to horseshoe bats only.)

All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annexe IV of the Habitats Directive, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 43 of the Conservation of Habitats and Species Regulations 2017, which transposes the Habitats Directive into UK law. Consequently, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;

- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

This legislation applies to all bat life stages.

The implications of the above in relation to the proposals are that where it is necessary during construction to remove trees, buildings or structures in which bats roost, it must first be determined that work is compulsory and if so, appropriate licenses must be obtained from Natural England.

Legislation Relating to Reptiles

All species of reptile native to the UK are protected to some degree under national and/or international legislation, which provides mechanisms to protect the species, their habitats and sites occupied by the species.

Sand lizards and smooth snakes are European protected species and are afforded full protection under Section 9 of the Wildlife and Countryside Act 1981 and Regulation 43 of the Conservation of Habitats and Species Regulations 2017. However, these species are rare and highly localised. Their occurrence is not considered as relevant in this instance, as the ranges and specialist habitats of these species do not occur at this site.

The remaining widespread species of native reptiles (adder, grass snake, slow worm and viviparous lizard) are protected under part of Section 9(1) and all of Section 9(5) of the Wildlife and Countryside Act 1981. They are protected against intentional killing and injury and against sale, transporting for sale etc. The habitat of these species is not protected. However, in terms of development, disturbing or destroying reptile habitat during the course of development activities while reptiles are present is likely to lead to an offence under the Wildlife and Countryside Act 1981. It is therefore important to identify the presence of these species within a potential development site. If any of these species are confirmed, all reasonable measures must then be taken to ensure the species are removed to avoid the threat of injury or death associated with development activities.

Each species of native reptile has specific habitat requirements but general shared features include a structurally diverse habitat that provides for shelter, basking, foraging and hibernating.

All reptiles are BAP species and as such are also of material consideration in the planning process due to the NPPF.

Legislation Relating to Dormice

Dormice are given full protection under Schedule 5 of the Wildlife and Countryside Act 1981, as amended. Protection to the species is also afforded by Regulation 43 of the Conservation of Habitats and Species Regulations 2017, making the hazel dormouse a European Protected Species. These two pieces of legislation operate in parallel, although there are some small differences in scope and wording. Under the provisions of Section 9 of the Wildlife & Countryside Act, it is an offence to:

- Intentionally kill, injure or take a dormouse;
- Possess or control and live or dead specimen or anything derived from a dormouse (unless it can be shown to have been legally acquired);
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a dormouse; and
- Intentionally or recklessly disturb a dormouse while it is occupying a structure or place which it uses for that purpose.

Regulation 43 of the Conservation of Habitats and Species Regulations 2017 makes it an offence to:

- Deliberately capture or kill a dormouse;
- Deliberately disturb a dormouse;
- Damage or destroy a breeding site or resting place of a dormouse; and
- Keep transport, sell or exchange, or offer for sale or exchange a live or dead dormouse or any part of a dormouse.

Legislation Relating to Great Crested Newts

Legislation Relating to Natura 2000 Sites and Habitats Directive Annex I/II Species

European Commission Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive'), and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive') form the cornerstones of nature conservation legislation across EU member states. Priority species requiring protection across Europe are listed in the Annexes of these Directives. Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 and Offshore Marine Conservation Regulations, 2007 (as amended) transpose these directives into UK law and set the basis for the designations of protected sites (known as Natura 2000 sites; Special Areas of Conservation under the Habitat Directive and Special Areas of Protection under the Birds Directive) that are of importance for habitats, species or assemblages listed on the directive Annexes. In the UK Ramsar sites are also offered the same level of protection as SPAs and SACs however the qualifying species for the designation may differ; Ramsar sites being designated specifically as important wetland habitats.

Under article 6(3) of the Habitats Directive, where projects stand to have likely significant effect (in accordance with the European Court of Justice ruling of C-127/02 Waddenzee cockle fishing) upon the integrity of conservation objectives (i.e. conservation status of the qualifying species or habitats) within the designated sites then the Competent Authority must undertake an Appropriate Assessment.

B.2 PLANNING POLICY

National

National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2021[26] sets out the Government's planning policies for England, including how plans and decisions are expected to apply a presumption in favour of sustainable development. Chapter 15 of the NPPF focuses on conservation and enhancement of the natural environment, stating plans should 'identify and pursue opportunities for securing measurable net gains for biodiversity'.

It goes on to state: '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'. Alongside this, it acknowledges that planning should be refused where irreplaceable habitats such as ancient woodland are lost.

Regional

The London Plan[27]

Policy G1 Green infrastructure

1. London's network of green and open spaces, and green features in the built environment such as green roofs and street trees, should be protected, planned, designed and managed as integrated features of green infrastructure.
2. Boroughs should prepare green infrastructure strategies that integrate objectives relating to open space provision, biodiversity conservation, flood management, health and wellbeing, sport and recreation.
3. Development Plans and Opportunity Area Planning Frameworks should:
    1. identify key green infrastructure assets, their function and their potential function
    2. identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions.
4. Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.

Policy G5 Urban greening

1. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage.

2. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development. (excluding B2 and B8 uses).
3. Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Table 8.2.

Policy G6 Biodiversity and access to nature

1. Sites of Importance for Nature Conservation (SINCs) should be protected.
2. Boroughs, in developing Development Plans, should:
    a. use up-to-date information about the natural environment and the relevant procedures to identify SINCs and ecological corridors to identify coherent ecological networks
    b. identify areas of deficiency in access to nature (i.e. areas that are more than 1km walking distance from an accessible Metropolitan or Borough SINC) and seek opportunities to address them
    c. support the protection and conservation of priority species and habitats that sit outside the SINC network, and promote opportunities for enhancing them using Biodiversity Action Plans
    d. seek opportunities to create other habitats, or features such as artificial nest sites, that are of particular relevance and benefit in an urban context
    e. ensure designated sites of European or national nature conservation importance are clearly identified and impacts assessed in accordance with legislative requirements.
3. Where harm to a SINC is unavoidable, and where the benefits of the development proposal clearly outweigh the impacts on biodiversity, the following mitigation hierarchy should be applied to minimise development impacts:
    a. avoid damaging the significant ecological features of the site
    b. minimise the overall spatial impact and mitigate it by improving the quality or management of the rest of the site
    c. deliver off-site compensation of better biodiversity value.
4. Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process.
5. Proposals which reduce deficiencies in access to nature should be considered positively.

Policy G7 Trees and woodlands

1. London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees.
2. In their Development Plans, boroughs should:
    a. Protect 'veteran' trees and ancient woodland where these are not already part of a protected site
    b. Identify opportunities for tree planting in strategic locations
3. Development proposals should ensure that, wherever possible, existing trees of quality are retained [Category A and B]. If planning permission is granted that necessitates the removal of trees, there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.

London Environment Strategy 2018[28]

The Mayor's Environment Strategy was published in May 2018. This document sets out the strategic vision for the environment throughout London. Although not primarily a planning guidance document, it does set strategic objectives, policies and proposals that are of relevance to the delivery of new development in a planning context, including:

Objective 5.1 Make more than half of London green by 2050

Policy 5.1.1 Protect, enhance and increase green areas in the city, to provide green infrastructure services and benefits that London needs now.

This policy states:

"New development proposals should avoid reducing the overall amount of green cover and, where possible, seek to enhance the wider green infrastructure network to increase the benefits this provides. […] New developments should aim to avoid fragmentation of existing green space, reduce storm water run-off rates by using sustainable drainage, and include new tree planting, wildlife-friendly landscaping, or features such as green roofs to mitigate any unavoidable loss".

This supports the 'environmental net gain' approach promoted by government in the 25 Year Environment Plan.

Proposal 5.1.1.d The London Plan includes policies to green streets and buildings, including increasing the extent of green roofs, green walls and sustainable drainage.

Objective 5.2 conserving and enhancement wildlife and natural habitats

Policy 5.2.1 Protect a core network of nature conservation sites and ensure a net gain in biodiversity

This policy requires new development to include new wildlife habitat, nesting and roosting sites, and ecologically appropriate landscaping will provide more resources for wildlife and help to strengthen ecological corridors. It states:

"Opportunities should be sought to create or restore priority habitats (previously known as UK Biodiversity Action Plan habitats) that have been identified as conservation priorities in London [and] all land managers and landowners should take BAP priority species into account".

Local

London Borough of Richmond Upon Thames - Local Plan (adopted July 2018)

Whilst the draft local plan is in development, the current local plan for Richmond Upon Thames looks ahead to 2033 and identified where the main developments will take place.

Policy LP 12 - Green Infrastructure

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

A. To ensure all development proposals protect, and where opportunities arise enhance, green infrastructure,

the following will be taken into account when assessing development proposals:

a. the need to protect the integrity of the green spaces and features that are part of the wider green infrastructure network; improvements and enhancements to the green infrastructure network are supported;

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

c. incorporating green infrastructure features, which make a positive contribution to the wider green infrastructure network.

Policy LP 15 - Biodiversity

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

1. protecting biodiversity in, and adjacent to, the borough's designated sites for biodiversity and nature conservation importance (including buffer zones), as well as other existing habitats and features of biodiversity value;

2. supporting enhancements to biodiversity;

3. incorporating and creating new habitats or biodiversity features, including trees, into development sites and into the design of buildings themselves where appropriate; major developments are required to deliver net gain for biodiversity, through incorporation of ecological enhancements, wherever possible;

4. ensuring new biodiversity features or habitats connect to the wider ecological and green infrastructure networks and complement surrounding habitats;

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

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

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

1. firstly be avoided (the applicant has to demonstrate that there is no alternative site with less harmful impacts),
2. secondly be adequately mitigated; or
3. as a last resort, appropriately compensated for.

REFERENCES

[1] *Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020) The UK Habitat Classification User Manual Version*
[2] *CIEEM (2017); Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology and Environmental Management, Winchester.*
[3] *BSI (2013); British Standard 42020:2013: Biodiversity – Code of practice for planning and development, BSI Standards Publication*
[4] *MAGIC (2019); Interactive Map. (Partnership project involving six government organisations: Defra (Department for Environment, Food and Rural Affairs); English Heritage; Natural England; Environment Agency; Forestry Commission; Department for Communities and Local Government). Available at: www.magic.gov.uk.*
[5] *Bat Conservation Trust (BCT) & Institute of Lighting Engineers (ICL) (2009) BATS AND LIGHTING IN THE UK Bats and the Built Environment Series Version 3*
[6] *Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London*
[7] *English Nature, (2004); Bat Mitigation Guidelines. English Nature.*
[8] *JNCC, Birds of Conservation Concern 5 (2021), Accessed here: https://jncc.gov.uk/news/bocc5/#:~:text=Birds%20of%20Conservation%20Concern%205%20%E2%80%93%20the%20latest%20assessment%20of%20the,on%20the%20assessment%27s%20Red%20List.*
[9] *London Invasive Species Initiative (LISI). Available from: LISI | London Invasive Species Initiative (londonisi.org.uk)*
[10] *DEFRA, Stop invasive non-native plants from spreading. Available From: Stop invasive non-native plants from spreading - GOV.UK (www.gov.uk)*
[11] *Natural England (2021). The Biodiversity Metric 3.0 (JP039). Available at: http://publications.naturalengland.org.uk/publication/6049804846366720*
[12] *GOV.UK. (2021). Environment Act 2021. Available at: https://www.legislation.gov.uk/ukpga/2021/30/contents/enacted*
[13] *HM Government, (1981); Part I and Part II of Wildlife and Countryside Act (as amended). HMSO*
[14] *HM Government, (2017); The Conservation of Habitats and Species Regulations 2017. Statutory Instrument 2017 no. 490 Wildlife Countryside. OPSI*
[15] *HM Government, (2000); The Countryside and Rights of Way Act. HMSO*
[16] *HM Government, (2006); Natural Environment and Rural Communities Act 2006. HMSO*
[17] *HM Government, (1994); The Conservation (Natural Habitats, &c.) Regulations. HMSO*
[18] *CEC (Council of the European Communities), (1992); Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora*
[19] *The European Parliament And Of The Council, (30 November 2009); Directive 2009/147/EC On The Conservation Of Wild Birds (Codified Version)*
[20] *CEC (Council of the European Communities), (1979); Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 19.IX.1979). EC*
[21] *UK Biodiversity Action Plan (2007). UKBAP Priority Species and Habitats. http://www.ukbap.org.uk/newprioritylist.aspx*
[22] *JNCC and Defra (on behalf of the Four Countries' Biodiversity Group) (2012). UK Post-2010 Biodiversity Framework. July 2012. Available from: http://jncc.defra.gov.uk/page-6189*
[23] *Defra (2011). Biodiversity 2020: A strategy for England's wildlife and ecosystem services*
[24] *Convention on Biological Diversity (CBD) (2010). Decision X/2 Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets. Available at https://www.cbd.int/decision/cop/?id=12268*
[25] *European Commission (2012). Our life insurance, our natural capital: an EU biodiversity strategy to 2020 European Parliament resolution of 20 April 2012 on our life insurance, our natural capital: an EU biodiversity strategy to 2020 (2011/2307(INI))*

[26] *GOV.UK. (2021). National Planning Policy Framework. [online] Available at: https://www.gov.uk/government/publications/national-planning-policy-framework--2*

[27] *Greater London Authority (2021) The London Plan: The Spatial Development Strategy for Greater London (GLA)*

[28] *Greater London Authority (2018). London Environment Strategy 2018. London: Greater London Authority.*