Greengage

Charlie Ratchford Resource Centre London Borough of Camden
Extended Ecological Phase 1 Habitat Survey Report (compliant for BREEAM and CSH Ecology credits), January 2015

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1.0 INTRODUCTION

1.1 Greengage Environmental LLP were commissioned to undertake an Ecological Extended Phase 1 Survey (hereafter 'Phase 1 Survey') by London Borough of Camden on a site known as the Charlie Ratchford Resource Centre in Camden, in order to establish the ecological value of this site and its potential to support notable and/or legally protected species. This report has been produced in support of a planning application for the site and with the findings from this survey informing the available credits under *BREEAM* and *Code for Sustainable Homes 2010 Ecology*.

1.2 The site is split in two with the Crogsland Road site on the western side of Crogsland Road and the Belmont Street site on the eastern side. The proposals for the Crogsland Road site involve the construction of a 6-storey Extra Care/Community Facility on the currently vacant plot. The Community Resource Facility will sit on the ground floor with approximately 36 Extra Care units provided on up to 5 floors above. Proposals for the Belmont Street site, which currently comprises the existing Charlie Ratchford Resource Centre, are not clear at this stage but it is intended to provide residential development for private sale in the order of 38 units.

1.3 It is understood that development proposed for the two plots will be brought forward by two separate development partners.

1.4 The Phase 1 survey was undertaken in accordance with guidance in the *Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 Habitat Survey*[1] and the *Chartered Institute of Ecological and Environmental Management (CIEEM) (2013) 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 and ecological survey.

1.5 The site-specific consultation provided the ecological context for the Phase 1 Survey carried out on the 9th July 2014. Site photographs are shown in Appendix 1.0.

1.6 The survey boundary and existing site is shown at Figure 1.0.

1.7 Greengage undertook the site walkover during clear and warm weather conditions. 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, 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.

1.8 The recommendations and opinions expressed in this report are based on the combination of information stated, site observations and feedback from the consultation exercise.

2.0 SITE DESCRIPTION

2.1 The assessment site covers an area of approximately 0.403 hectares (ha) and is centred on National Grid Reference TQ282843, OS Co-ordinates 528297, 184302.

2.2 The site is split in two with the Crogsland Road site on the western side of Crogsland Road and the Belmont Street site on the eastern side. The majority of the Crogsland Road site is derelict land currently being used as a car park. Dense buddleia runs along the western border with some more scattered patches at the northern end. The southern part of this section of the site is occupied by a small block of woodland. The Belmont Street site is dominated by the existing Charlie Ratchford Resource Centre, a single-storey flat roofed building. Areas to the north and south of the building comprise predominately short amenity grassland with some scattered trees. A small area of ornamental planting is located in the southeast corner.

2.3 The site is set in an urban environment with residential housing extending to the north, east and west. Commercial buildings associated with Chalk Farm Road sit to the south with the railway line beyond. Haverstock School directly borders the Crogsland Road site to the west. Green space in the in the vicinity of the site is predominately restricted to soft landscaping and private gardens associated with the residential housing. In the wider area there are more significant expanse of green space such as Primrose Hill 650m to the southwest and Regents Park 840m to the south. The Regents Canal runs 480m to the southeast.

PROPOSED DEVELOPMENT

2.4 The proposals for the Crogsland Road site involve the construction of a 6-storey Extra Care/Community Facility on the currently vacant plot. The Community Resource Facility will sit on the ground floor with approximately 36 Extra Care units provided on up to 5 floors above. Proposals for the Belmont Street site, which currently comprises the existing Charlie Ratchford Resource Centre, are not clear at this stage but it is intended to provide residential development for private sale in the order of 38 units.

2.5 It is understood that development proposed for the two plots will be brought forward by two separate development partners.

3.0 METHODOLOGY

DESK TOP REVIEW

3.1 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 local London Borough websites were reviewed to identify the location and citations of local non statutory designated sites. This provided the overall ecological context for the site, to better inform the Phase 1 Survey.

ON SITE SURVEYS

Flora

3.2 The extent and distribution of different habitats on site were identified and mapped according to the standard Phase 1 Survey methodology[5], supplemented with target notes describing the dominant botanical species and any valuable or interesting features. A habitat map has been produced to illustrate the results, as shown on Figure 2.0.

Fauna - Protected Species

3.3 The Phase 1 Survey specifically includes surveys to identify the likely presence of protected species and species protected by statute. This involved identifying potential habitats in terms of refugia, breeding sites and foraging areas.

3.4 The likelihood of occurrence is ranked as follows and relies on the current survey and evaluation of existing data through the desk top study.

- 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.

3.5 The species surveyed for included:

Badgers (Meles meles)

3.6 The potential for badgers to inhabit or forage within the study area was assessed during the site walkover. 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.

Great Crested Newts (Triturus cristatus)

3.7 During the site walkover, an assessment was carried out to identify any potential habitats that may support great crested newts (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.

Bat species (Chiroptera)

3.8 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 the guidelines and methods given in English Nature's (now Natural England) *Bat Mitigation Guidelines*[6] 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.

3.9 Definite signs of bat activity were taken to be:

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

3.10 Signs of possible bat presence were taken to be:

- Stains; and
- Moth and butterfly wings.

3.11 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 crevices serving as entrance or exit holes.

3.12 Additionally, linear natural features such as tree lines, hedgerows and river corridors are often considered valuable for foraging and commuting. Consideration was given to the presence of these features both immediately within and adjacent to the assessment area.

3.13 The exterior and interior of the buildings (where necessary) were checked for gaps, cavities, access points and crevices, and any signs of bat droppings, in accordance with English Nature (now Natural England) guidelines.

Reptiles

3.14 The potential for reptile species on site was assessed during the walkover survey. Possible species include the grass snake (*Natrix natrix*), smooth snake (*Coronella austriaca*), adder (*Vipera berus*), common and sand lizards (*Lacerta vivipara* and *L. agilis*) and the 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.

Dormice (Muscardinus avellanarius)

3.15 During the walkover survey the potential for dormice to be present on site was assessed. This included observations for suitable habitat such as well-layered woodland, scrub and linking hedgerows, particularly those 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 voles (Arvicola terrestris)

3.16 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.

Otters (Lutra lutra)

3.17 Where desk-top review or consultation indicates the presence of otters in a river catchment, the presence of water bodies with good cover and potential holt (den) sites would be noted.

Birds

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

Notable Invertebrates

3.19 As part of the walkover survey the quality of invertebrate habitat and the potential for notable 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.

Other Fauna

Biodiversity Action Plan priority species

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

4.0 BASELINE CONDITIONS

DESK TOP REVIEW

Designations

4.1 Consultations with the local biological record centre (GiGL) and the Multi-Agency Geographic Information for the Countryside (MAGIC) dataset[7] have confirmed that there are no statutory designations of national or international importance within the boundary of the site. In addition, there are no such sites within a 2km radius, although 3 Local Nature Reserves (LNRs) was identified.

4.2 There are however, 19 Sites of Importance for Nature Conservation (SINC) within a 2km radius of the site.

4.3 Table 4.1 below gives the locations and descriptions of the 3 LNR's and 8 closest SINCs.

Table 4.1 Location and Descriptions of the 3 LNR's and 8 Closest SINC's

Site Name	Designation Status and Location	Description
Belsize Wood Local Nature Reserve	LNR Designation: Borough Grade I TQ 274 853	The northern end of the reserve is poorly vegetated as a result of continual public access. The southern end has much more limited public access and is relatively species rich. The dominated tree species are ash, oak (*Quercus spp.*) and wild cherry (*Prunus avium*). The ground-flora includes butcher's broom (*Ruscus aculeatus*), enchanter's nightshade (*Circaea lutetiana)* and cow parsley (*Anthriscus sylvestris*). Many other species are found at this end of the reserve and this makes the site attractive to common birds.
Camley Street Nature Park	LNR TQ 299 834	Urban wild space containing a range of habitat examples created by on former vacant land. The wildlife interest is of high local educational and social value owing to the severe deficiency of wildlife sits in Greater London. The site is primarily an educational resource and a means of increasing local community awareness of the natural environment.
St John's Wood Church Grounds	LNR TQ 271 830	This site is a small park developed on the site of a former burial ground. The main body of the park comprises an area of short mown turf with scattered trees. However, there is an area that is managed as a wildlife area and contains a mixture of meadow and woodland habitats with associated communities of tall grasses and herbs. In

Site Name	Designation Status and Location	Description
		addition a hedge of native species has been planted along part of the eastern boundary.
Chalk Farm Embankment and Adelaide Nature Reserve	SINC	Steep sided railway embankment lying between Adelaide Road and railway sidings, is densely vegetated with secondary woodland. The nature reserve to the west is far more open, with neutral grassland and scrub present as well as woodland.
Primrose Hill	Designation: Borough Grade II TQ 276 838	This area of Regents Park is mostly mown amenity grassland with scattered groups of mature trees. London plane is the most common species but common lime, hawthorn, horse-chestnut (*Aesculus hippocastanum*) and young whitebeams (*Rosaceaeare* family) are also present. The park is attractive to a variety of birds including wood pigeons, starlings and robins.
Rochester Terrace Gardens	Designation: Local TQ 291 845	Small public garden with a number of non-native trees including London plane (*Platanus × acerifolia*), weeping ash (Fraxinus excelsior pendula) and common lime (*Tilia x europaea*). The perimeter consists of native shrubs such as hawthorn (*Crataegus monogyna*) and field maple (*Acer campestre*). The amenity grassland is managed for wild flowers.
London Zoo	Designation- Borough Grade I TQ 280 834	London Zoo is extremely important for environmental education and international conservation. The habitats in the zoo support many of the native bird, mammal and invertebrate species. Bird boxes attempt to encourage the populations of House Sparrows. Kestrals, grey herons and sparrowhawks are also regular visitors to London Zoo.
	Designation: Metropolitan TQ 280 829	The park supports a variety of breeding bird populations, mainly thanks to the mature trees and ornamental lakes. Migrant birds also use the park and an informally managed wildlife park in the north-west of the park supports butterflies and other invertebrates.
St Pancras Gardens	Designation: Borough Grade II TQ 297 835	The site contains some large mature tress including London plane, common lime and poplar (*Populus sp.*). Beside the railway boundary two nature areas have been established. These have creeping thistle (*Cirsium arvense*), common knapweed (*Centaurea nigra*), field scabious (*Knautia arvensis*) and many other species as components. This makes it a very attractive area to insects.

Site Name	Designation Status and Location	Description
North London Line	Designation: Borough Grade II TQ 299 841	Most of the area is covered in shrub of buddleia and bramble with some scattered silver birch and sycamore trees. Patches of ivy (*Hedra helix*) and false oat-grass (*Arrhenatherum elatius*) occur intermingled with the above and this creates an attractive habitat for butterflies and other invertebrates.
Hampstead Heath	Designation: Metropolitan TQ 273 866	This extensive site is well-known for its unique mix of semi-natural and formal habitats. Ancient woodlands contain old and over-mature trees providing dead wood for specialist invertebrates, including the nationally rare jewel beetle (*Agrilus pannonicus*). Other locally rare species which use the habitat provided by the park include the tube web spider (*Atypus affinis*) creeping willow (*Salix repens)* and various *sphagnum* species

Biodiversity Action Plans

4.4 UK Biodiversity Action Plans (BAPs) have been developed which set priorities for nationally important habitats and species. To support the BAPs, Species Statements have been produced that provide an overview of the status of the species and set out the broad policies that can be developed to conserve them.

4.5 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 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) and application via Local Biodiversity Action Plans.

4.6 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.

4.7 The site is subject to the London BAP and Camden LBAP

London BAP

4.8 The London BAP[8] lists 26 priority habitats and species to protect and enhance, which are of importance to London's nature conservation. Notable features of the London BAP that are of relevance to this report are:

- The onus placed on the importance of built structures to local wildlife;
- The bat Species Action Plan (SAP);

- The house sparrow SAP; and
- The former black redstart SAP.

Camden LBAP

4.9 This Camden BAP translates the UK Biodiversity framework, England Biodiversity Strategy and the regional London BAP targets onto the local level. The Plan outlines a series of actions to ensure that biodiversity is safeguarded in the borough and that Camden's residents are given opportunities to access the natural environment.

4.10 The focus and content of the BAP has been informed by an evidence base (the Camden Biodiversity Audit) and policy requirements. This was further shaped through stakeholder engagement, including a biodiversity workshop with key partners. As a result there will be three key areas of focus:

1. Access to Nature
2. The Built Environment
3. Open Spaces and Natural Habitats

Species Record

4.11 The information provided from the consultation exercise identified records of a number of protected and BAP priority species within 2km search radius of the site. Among others these include:

- Eurasian Eagle-Owl (*Buba buba*);
- Kestrel (*Falco tinniculus*);
- Common Cuckoo (*Cuculus canorus*);
- Common Swift (*Apus apus*);
- House Martin (*Delichon urbicum*);
- Black Redstart (*Phoenicurus ochruros*);
- Common Toad (*Bufo bufo*);
- Common Frog (*Rana temporaria*);
- Hedge Accentor (*Prunella modularis*);
- Reed Bunting (*Emberiza schoeniclus*);
- European Honey-Buzzard (*Pernis apivorus*);
- Hobby (*Falco Subbuteo*);
- Lesser-spotted Woodpecker (*Dendrocopus minor*);
- Song Thrush (*Turdus phlomelos*);

- Common Starling (*Sturnus vulgaris*);
- House Sparrow (*Passer domesticus*);
- West European Hedgehog (*Erinaceus europaeus*) and;
- Bats (P*ipistrellus* sp., Myotis sp., Plecotus sp. and *Nycatlus* sp.).

4.12 A number of invasive species were also identified through the consultation exercise, within a 2km radius of the site. Among others these include:

- Giant Hogweed (*Herocleum mantegazzianum*);
- Cotoneaster (*Cotoneaster*);
- Butterfly-bush (*Buddlleja davidii*);
- False-acacia (*Rotinia pseudoacacia*);
- Turkey oak (*Quercus cerris*);
- Evergreen Oak (*Quercus ilex*);
- Rose ringed Parakeet (*Psittacula krameri*); and
- Japanese Knotweed (*Fallopia japonica*).

DESCRIPTION OF SITE ECOLOGY

Detailed Description of Site: Habitats

4.13 The habitats presented across the assessment site consist of the following Joint Nature Conservation Committee (JNCC) Phase 1 Habitat categories, as mapped at Figure 2.0:

- Building/Hard-standing (J3.6);
- Bareground (J4);
- Amenity Grassland (J1.2);
- Scattered Trees (A.3);
- Woodland (A1);
- Introduced Shrub (J1.4); and
- Scrub (A2).

Target Note 1

4.14 Existing Charlie Ratchford Resource Centre that dominates much of the Belmont Street site. A single-storey flat roofed building in a good state of repair with negligible potential for bat roosting.

Target Note 2

4.15 Scattered trees associated with the Belmont Street site, the majority which sit to the south of the existing Charlie Ratchford Resource Centre. Species include sycamore (*Acer pseudoplatanus*), wild cherry (*Prunus avium*) and Norway maple (*Acer platanoides*).

Target Note 3

4.16 Ornamental shrub and garden planting to south of Charlie Ratchford Resource Centre.

Target Note 4

4.17 Stretches of short amenity grassland to north and south of Charlie Ratchford Resource Centre. Species present include birds-foot trefoil (*Lotus corniculatus*), white clover (*Trifolium repens*), self-heal (*Prunella vulgaris*), daisy (*Bellis perennis*) and ribwort plantain (*Plantago lanceolata*).

Target Note 5

4.18 Bare ground at the northern end of the Crogsland Road comprising areas of hardstanding, gravel and rubble. This bare ground features scattered buddleia and some occasional bramble in addition to areas of ephemeral/short perennial and other plants such as yarrow (*Achillea millefolium*), hedge mustard (*Sisymbrium officinale*), ribwort plantain (*Plantago lanceolata*), knapweed (*Centaurea* sp.), ragwort (*Jacobaea vulgaris*), red clover (*Trifolium pratense*), black medic (*Medicago lupulina*), red fescue (*Festuca Rubra*) and perennial rye grass (*Lolium perenne*),

Target Note 6

4.19 Dense buddleia present on the western boundary of the Crogsland Road site.

Target Note 7

4.20 Small patch of scrub to the south of temporary metal storage structure.

Target Note 8

4.21 Small block of woodland at southern end of Crogsland Road site. Species present include common alder (*Alnus glutinosa*), silver birch (Betula pendula), wild cherry (*Prunus avium*) and magnolia.

DETAILED DESCRIPTION OF SITE: PROTECTED SPECIES POTENTIAL

Badger

4.22 No direct evidence of badgers was identified during the site visit. The site itself and much of the surrounding area has negligible potential for foraging badgers; there is limited suitable habitat. The overall potential for badgers is considered to be negligible.

Great Crested Newt

4.23 There are no watercourses or waterbodies directly present on the application site and terrestrial habitats on site were considered largely unsuitable, with the Belmont Street site covered exclusively almost by building, urban hard-standing and amenity grassland, and the Crogsland Road site covered by bare ground, buddleia and a small block of unsuitable woodland. Therefore it is concluded that the land does not support habitat suitable for GCN and the potential is negligible.

Bats

Foraging

4.24 The habitats on site provide some limited opportunities for bat foraging with areas of amenity grassland, scrub, introduced shrub and scattered trees. The site is not particularly well connected to other areas of suitable foraging habitat. The potential for bats to be foraging on and adjacent to the site can be considered to be low.

Roosting

4.25 The only building on the site is the existing flat roofed single-storey Charlie Ratchford Resource Centre which is well maintained with no loose brick work, cracks, crevices or other potential bat roosting features. Although there were a number of trees on-site these were generally again lacking any cracks, crevices or holes that would present opportunities for roosting bats. Overall the potential for bats to be roosting on site was considered to be negligible and no further bat surveys were recommended.

Reptiles

4.26 No reptiles were identified during the site visit. General habitats across the site were not suitable as there were no open areas with low height vegetation, such as heathland, rough grassland and open scrub. Overall, potential is therefore considered negligible.

Dormice

4.27 No direct evidence of dormouse activity or suitable habitat was identified during the site visit. As such, the potential for the site to support dormice is considered negligible.

Water Voles

4.28 No direct evidence of water vole activity or suitable habitat was identified during the site visit. No latrines, footprints or piles of food were noted. Therefore we can consider the potential for water voles on site to be negligible.

Otters

4.29 There are no water bodies on site to provide habitat for otters. Overall the potential is considered to be negligible.

Invertebrates

4.30 The majority of site is lacking in suitable habitat for notable invertebrates. There was some limited potential in a small rubble pile at the northern end of the western half of the site. Overall the potential can be considered as low to moderate.

Nesting Birds

4.31 Bird nesting potential was noted in many of the trees and patches of introduced shrub present on the western border of the Crogsland Road site. It is therefore recommended that any clearance in these areas is undertaken outside of bird nesting season (usually taken to run from March to September) or, if clearance is required within this period then, after an ecologist has confirmed absence of nesting birds. Overall the potential can be considered as moderate.

Other BAP Species

4.32 None were observed during the site walkover.

Baseline Summary

4.33 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 4.2 below:

Table 4.2 Baseline Summary

Receptor	Presence/Potential Presence	Comments
Badgers	Negligible	Local habitat is limited. No direct evidence of badgers on site.
Great Crested Newts	Negligible	Local habitat is limited. No direct evidence of great crested newts on site.
Foraging bats	Low	Suitable habitat on-site and locally is limited.
Roosting bats	Negligible	No direct evidence of roosting bats on site. All built structures and trees in good condition and lacking in features suitable for roosting bats.
Reptiles	Negligible	No open areas with low height vegetation, such as heathland, rough grassland and open scrub.
Water Voles	Negligible	Local habitat is limited. No direct evidence of water voles on site.
Dormice	Negligible	Local habitat is limited. No direct evidence of dormice on site.
Otters	Negligible	Local habitat is limited. No direct evidence of otters on site.
Invertebrates	Low to Moderate	Lack of habitat mosaic, no suitable areas of vegetation.
Birds	Moderate	Suitable nesting habitat present across the site. Although no direct evidence of nesting was observed.

CONSERVATION VALUE – RATCLIFFE CRITERIA

4.34 The nature conservation value of the site was assessed using the Ratcliffe Criteria[9], currently accepted as being the most effective method for assessing the nature conservation value of sites.

4.35 The results of the use of Ratcliffe Criteria are indicated below:

Size – A habitat's importance for nature conservation generally increases with its size.
The site is 0.403ha and predominately covered by buildings, hardstanding, amenity grassland, introduced shrub and bare ground.
VALUE: Low

Naturalness – Sites which have remained relatively unaltered by man tend to be the most valuable. Further, the sites which are considered most natural are generally those which are hardest to recreate. NB throughout the UK there is probably no site that can be considered completely natural and therefore an assessment must be made related to degrees of naturalness
All areas of the habitats show that they have been altered by previous development and usage on site.
VALUE: Low

Diversity – Variety is better than uniformity, species or habitat richness is generally better than a poor species or habitat complement. It should be noted that certain habitats are intrinsically poor in species diversity and that this should be borne in mind when making any assessment.
The majority of the site is covered by buildings, hardstanding and amenity grassland. Although there are trees scattered across the site, and a small block of woodland this does not represent a diverse habitat.
VALUE: Low

Fragility – A habitat that is fragile is one that is sensitive to changing influences. Habitats that are liable to such influences are likely to be of higher

value than those that are not.
Habitats associated with the sites are generally common across the UK and therefore, not considered fragile and are less sensitive to potential future redevelopment or changes in land use.
VALUE: Negligible

Typicalness – Those habitats, which are representative or typical of good examples of their type, are considered of higher value than those which are not.
The sites are typical of the area, with this part of Camden very much dominated by residential urban development. Although the small block of woodland located at the southern end of the site is not typical of the area it is not particularly ecologically valuable.
VALUE: Low

Rarity – A site where rare or protected species or habitats exist is considered of higher value.
The majority of protected species potential is considered to be negligible or low.
VALUE: Negligible to Low

Position in an ecological or geographical unit – Sites, and their associated habitats, which are contiguous with other similar sites, tend to be more valuable than those sites which are situated in isolation.
The site is situated in Camden, North London within an area very much dominated by residential urban development. The site is similar to contiguous areas but these areas are of predominately low ecological importance.
VALUE: Low

Intrinsic Value – This criterion is based upon the value humans place on a

feature of ecology as opposed to its actual nature conservation value.
The site shows limited intrinsic value from an ecological perspective.
VALUE: Low

Potential Value – Habitats that, through an adjustment of current influences, have the potential to be of higher nature conservation value than they are currently.
There are opportunities to increase the ecological value of the site. Further green space can be created through enhancement in design.
VALUE: Moderate

Re-creatibility – A site that is difficult to recreate, generally because of its more natural development, is deemed to be of higher nature conservation value than one which can be recreated reasonably simply (additional assessment criterion from Ratcliffe).
The site is lacking in mature habitats, with the entire site easily reproducible.
VALUE: Negligible

Evaluation Summary

4.36 Using the Ratcliffe Criteria it is determined that overall the site has a **Negligible - Low** conservation interest.

5.0 POLICY & LEGISLATIVE CONTEXT

5.1 The policy and legislation outlined below is specifically relevant to the site and proposals. Additional general policy is given in Appendix 3.0.

NATIONAL POLICY

5.2 The introduction of the National Planning Policy Framework (NPPF) in March 2012 sets out the Government's planning policies for England and how these are expected to be applied in the presumption in favour of sustainable development. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so and is a material consideration for local planning authorities in determining applications.

5.3 The NPPF has replaced much existing planning policy guidance, including Planning Policy Statement 9: Biological and Geological Conservation. However, the government circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact within the Planning System, which accompanied PPS9, remains valid. Therefore features of ecological value should be considered in the context of:

- NPPF sections on biodiversity;
- Circular 06/05: Biodiversity and Geological Conservation; and
- The UK Biodiversity Action Plan (UK BAP).

Wildlife and Countryside Act (1981)[10]

5.4 This policy strengthened the protection for SSSIs, providing additional safeguards for particular types of area and restricting the killing, taking from the wild and disturbance of various species. All of the UK's wild bird species are protected under the 1981 Act. Extra protection is given to birds listed in Schedule 1 of the 1981 Act.

Nesting Birds

5.5 Any clearance works of vegetation that may be habitat for nesting birds should be undertaken out of the breeding season (generally outside the months of March – October). All birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions intentionally to:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built; and
- Take or destroy the egg of any wild bird.

REGIONAL POLICY

The London Plan: Spatial Development Strategy for Greater London[11]

5.6 The London Plan is comprised of separate chapters relating to a number of areas, including London's Places, People, Economy and Transport. The following policies have been identified within the London Plan, which relate specifically to ecology and this development.

Policy 2.18 Green Infrastructure

5.7 *'Policy 2.18 aims to protect, promote, expand and manage the extent and quality of, and access to, London's network of open and green spaces'*.

Policy 5.10 Urban Greening

5.8 This policy encourages the *'greening of London's buildings and spaces and specifically those in central London by including a target for increasing the area of green space (including green roofs etc) within the Central Activities Zone'.*

Policy 5.11 Green Roofs and Development Site Environs

5.9 Policy 5.11 specifically supports the inclusion of planting within developments and encourages boroughs to support the inclusion of green roofs.

Policy 5.13 Sustainable Drainage

5.10 'Policy 5.13 promotes the inclusion of sustainable urban drainage systems in developments and sets out a drainage hierarchy that developers should follow when designing their schemes'.

Policy 7.19 Biodiversity and Access to Nature

5.11 '*The Mayor will work with all the relevant partners to ensure a proactive approach to the protection, enhancement, creation, promotion and management of biodiversity in support of the Mayors Biodiversity Strategy*.'

Supplementary Planning Guidance (SPG): Sustainable Design and Construction 2014[12]

5.12 As part of the London Plan 2011 implementation framework, the SPG, relating to sustainable design and construction, was released in April for consultation which includes the following sections detailing Mayoral priorities in relation to biodiversity of relevance to this development.

Nature conservation and biodiversity

5.13 The Mayor's priorities include ensuring '*developers make a contribution to biodiversity on their development site'*.

Overheating

5.14 Where priorities include the inclusions of '*measures, in the design of schemes, in line with the cooling hierarchy set out in London Plan policy 5.9 to prevent overheating over the scheme's lifetime'*

Urban greening

5.15 A Priority is for developers to '*integrate green infrastructure into development schemes, including by creating links with wider green infrastructure network'*.

Use less energy

5.16 '*The design of developments should prioritise passive measures*' which can include '*green roofs, green walls and other green infrastructure which can keep buildings warm or cool and improve biodiversity and contribute to sustainable urban drainage'*.

LOCAL POLICY

Camden Development Policies

5.17 Camden development policies set out detailed planning criteria that are used to determine applications for planning permission in the borough.

5.18 Development Policy 22 (DP22) contains strategies that mirror those in CPG3, aiming to promote sustainable design and construction at a local level. It outlines that schemes must demonstrate sustainable development principles and incorporate green or brown roofs and green walls wherever suitable. The Council requires development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures.

5.19 Development Policy 24 (DP24) proposes that design quality should be kept to a consistently high standard. New developments should consider any existing natural features, such a topography, trees and biodiversity, among other aspects of the local environment.

Camden Planning Guidance

5.20 Camden Planning Guidance (CPG) presents advice and information on how Camden will apply their policies. CPG3 surrounds Sustainability and includes guidance that all developments should include green or brown roofs and have considered biodiversity in

the developmental design. It sets out the implications of various environmental variables, including the negative impacts lighting can have on biodiversity. The policy explains that mitigation is highly sought after, if developments with adverse effects cannot be avoided.

Core Strategy

5.21 The local objectives for biodiversity within parks and open spaces are outlined in the Core Strategy 15 (CS15) policy. This has the intention to protect and improve sites of nature conservation and biodiversity, by including green or brown roofs and green walls, protecting trees, and promoting the provision of new trees and vegetation.

6.0 BREEAM AND CSH ECOLOGY CREDIT REQUIREMENTS

6.1 The following section gives an overview of the potentially achievable credits under BREEAM (LE02-LE05) and CSH Ecology (ECO1-ECO4).

LE02 – ECOLOGICAL VALUE OF SITE AND PROTECTION OF ECOLOGICAL FEATURES

6.2 The credit criteria states that 1 credit can be awarded:

- 'Where evidence provided demonstrates that the site's construction zone is defined as land of low ecological value and all existing features of ecological value will be adequately protected from damaging site preparation and construction works.'

LE03 – MITIGATING ECOLOGICAL IMPACT

6.3 With regards to Mitigating Ecological Impact credits are awarded as follows:

- 1 credit: 'Where evidence provided demonstrates that the change in the sites existing ecological value, as a result of development, is minimal.'
- 2 credits: 'Where evidence provided demonstrates there is no negative change in the sites existing ecological value as a result of development.

LE04 – ENHANCING SITE ECOLOGY

6.4 With regards to Enhancing Site Ecology credits are awarded as follows:

- 1 Credit: 'Where the design team (or client) has appointed a suitably qualified ecologist to advise and report on enhancing and protecting the ecological value of the site; and implemented the professionals recommendations for general enhancement and protection of site ecology';
- 2 Credits: 'Where there is a positive increase in the ecological value of the site of up to (but not including) 6 species';
- 3 Credits: 'Where there is a positive increase in the ecological value of the site of 6 species or greater.'

LE05 – LONG TERM IMPACT ON BIODIVERSITY

6.5 With regards to Long Term Impact on Biodiversity (LE05) credits are awarded as follows:

- 1 Credit: 'The client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements';

- 2 Credits: 'The client has committed to achieving the mandatory requirements listed below and at least four of the additional requirements.

ECO1 - ECOLOGICAL VALUE OF SITE

6.6 The credit criteria states that 1 credit can be awarded:

- '*Where the development site is confirmed as land of inherently low ecological value by being confirmed by a 'suitably qualified ecologist*.'

ECO2 - ECOLOCIAL ENHANCEMENT

6.7 1 credit:

- '*Where a suitably qualified ecologist has been appointed to recommend appropriate ecological features that will positively enhance the ecology of the site*

  AND

- *Where the developer adopts all key recommendations and 30% of additional recommendations'*.

ECO3 - PROTECTION OF ECOLOCIAL FEATURES

6.8 1 credit:

- '*Where the site has been classified as having low ecological value in accordance with Section 1 of Checklist Eco 1, Ecological features of the site, AND no features of ecological value have been identified.*

  OR

- *If a suitably qualified ecologist has confirmed a feature can be removed because of its insignificant ecological value or where an arboriculturalist has confirmed a feature can be removed owing to poor health/condition (e.g. diseased trees which require felling for health and safety and/or conservation reasons), the credit can be achieved provided all other features are adequately protected in accordance with the ecologist's recommendations'*.

ECO4 - CHANGE IN ECOLOGICAL VALUE

6.9 With regards the ecological value before and after development credit are awarded as follows:

- 1 credit: '*Minor negative change: between –9 and less than or equal to –3'*;
- 2 credits: '*Neutral: greater than –3 and less than or equal to +3'*;
- 3 credits: '*Minor enhancement: greater than 3 and less than or equal to 9'*;
- 4 credits: '*Major enhancement: greater than +9'*.

7.0 LE02, ECO1 & ECO3 - ECOLOGICAL VALUE OF LAND AND PROTECTION OF ECOLOGICAL FEATURES

SUITABLY QUALIFIED ECOLOGIST

7.1 Compliance with these credits is demonstrated by having a suitably qualified ecologist verifying the land as being of low ecological value, through a site specific ecological survey and associated ecological report.

7.2 Greengage include *'Suitably Qualified Ecologists'*, the necessary requirement for LE02, ECO1 and ECO3, to establish the ecological value of the site. A *'Suitably Qualified Ecologist'* (SQE) is defined as:

- *'An individual with a degree or equivalent qualification in ecology or a related subject;*
- *They should be a practicing ecologist with a minimum of three years' experience; and*
- *Is covered by a professional code of conduct and subject to peer review.'*

7.3 Specifically Mitch Cooke has a degree in Ecology (Hons), an MSc in Environmental Assessment and Management, and is a full member of CIEEM with over 20 years' experience in ecological survey and assessment. Mitch has set up and developed ecological and environmental teams for over 10 years and has undertaken and managed numerous ecological surveys and assessments. He is the Partner at Greengage Environmental and manages the team.

7.4 James, who undertook the site visit and wrote this report, has a bachelors degree in Environmental Sciences (BSc Hons) and a Masters degree in Environmental Consultancy, and is a graduate member of CIEEM.

7.5 This report was written by James Bumphrey and reviewed and verified by Mitch Cooke 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.

ECOLOGICAL VALUE OF LAND AND PROTECTION OF ECOLOGICAL FEATURES: AWARDING OF CREDITS

7.6 With regards to LE02, ECO1 and ECO3 the site is predominately covered by buildings, hardstanding, amenity grassland, introduced shrub and has negligible or low potential

to support the majority of protected species or habitats of ecological value. The only exception to this was the moderate potential noted for breeding birds. The potential exception to this is the small block of woodland at the southern end of the western half of site. However, overall this area is not considered to be an ecologically diverse habitat and is considered to be of low ecological value.

7.7 Consequently there is no UK wildlife legislation that is relevant to the protection of ecological features during the demolition or construction phase of the proposed development, other than that regarding breeding birds. In accordance with good practice, we have included key wildlife protection legislation at Appendix 3.0 and section 5.0 - in the event that any wildlife is discovered during the site works then all works that will affect said wildlife should cease and an ecologist from Greengage should be contacted for advice.

7.8 In summary, we recommend for the developments:

- 1 credit is awarded for LE02 '*Ecological Value of Site and Protection of Ecological Features*';
- 1 credit is awarded for CSH ECO1 *'Ecological Value of Site'*; and
- 1 credit is awarded for CSH ECO3 *'Protection of Ecological Features.'*

8.0 LE03 - MITIGATING ECOLOGICAL IMPACT

8.1 BREEAM calculates the change in ecological value by comparing the diversity of plant species pre- and post-construction. The ecological value of the site is expressed as an area weighted average of plant species for the land types present on the site. Using the BREEAM assessment calculator, the pre-construction habitat type is compared with post-construction and the total change in species diversity is calculated.

8.2 Appendix 2.0 shows the BREEAM calculator results which are relevant for credits under *BREEAM* (LE03 and LE04).

MITIGATING ECOLOGICAL IMPACT: AWARDING OF CREDITS

8.3 Under the current proposals the patches of ephemeral/short perennial plants associated with the northern end of the Crogsland Road site will be lost and replaced by a small area of wildlife planting.

8.4 If the proposed planting (section 9) is incorporated into the design, then the development should be awarded the 1 out of a possible 2 credits under LE03, due to there being a minimal negative change in the ecological value of the site as a result of development. Written commitment by the client will be required to confirm the enhancements will be undertaken, in addition to providing the final planting schedule to confirm the exact number of plants incorporated into the planters and reconfirm the credits under *BREEAM* (LE03 and LE04).

9.0 LE04, ECO2 & ECO4 - ENHANCING SITE ECOLOGY & CHANGE IN ECOLOGICAL VALUE

KEY ENHANCEMENT RECOMMENDATIONS

9.1 The client has appointed Greengage the Suitably Qualified Ecologist (SQE), to advise on the ecological value of the application site and therefore 1 credit is recommended to be awarded under LE04 and ECO2 if the applicant confirms that the recommendations made by the SQE will be implemented on each site.

9.2 Further credits are available for enhancing the ecological value of the application site under LE04 and ECO4 that will be awarded on receipt of written confirmation that the following enhancement measures have been adhered to.

ENHANCEMENT: WILDLIFE PLANTNG

9.3 It is recommended that any areas of soft landscaping incorporate planting of wildlife value (see Tables 9.2 and 9.3 below). These plants will attract bees and butterflies that complement the Camden Local Biodiversity Action Plan (BAP) targets.

Table 9.2 – Species Mix for Planting in the Shade

Species Name	Latin Name	Wildlife Benefit	Growth Conditions	Picture
Common Polypody	*Polypodium vulgare*		Tolerant of shady, dry conditions.	
Broad buckler fern	*Dryopteris dilatata*	Attractive to beetles and ladybirds	A hardy, shade tolerant fern. It is a semi-evergreen perennial. Prefers poorly-drained or moist but well-drained soil. Tolerant of dry shade.	
Broad buckler fern 'Crispa Whiteside' AGM	*Dryopteris dilatata 'Crispa Whiteside' AGM*	As above	As above	

Male fern	*Dryopteris filix-ma*	Attractive to Angle shades moth, beetles, ladybirds	A hardy, shade tolerant fern. It is a deciduous perennial. Prefers poorly-drained or moist but well-drained soil. Tolerant of dry shade.	
Male fern 'Cristata' AGM	*Dryopteris filix-ma 'Cristata' AGM*	As above	As above	
Royal fern	*Osmunda regalis*	Attractive to beetles and ladybirds	A hardy, shade tolerant fern. It is a deciduous perennial. Prefers poorly-drained or moist but well-drained soil.	
Lady-fern	*Athyrium filix-femina*	Beetles, Ladybirds	A hardy, shade tolerant fern. It is a deciduous perennial. Prefers poorly-drained or moist but well-drained soil.	
Bloody crane's-bill	*Geranium sanguineum*	Attractive to Buff-tailed bumble bee, Common carder bumble bee, White-tailed bumble bee	Tolerant of light shade, and a well-drained soil.	

Foxglove	*Digitalis purpurea*	Buff-tailed bumble bee, Common carder bumble bee, Honey bee, Lesser yellow underwing moth, Moths, Red mason bee, Red-tailed bumble bee, White-tailed bumble bee, Wool-carder bee	Tolerant of light shade, and a well-drained soil.	
Hosta	*Hosta crispula*	Slugs!	Tolerant of light shade. Prefers poorly-drained or moist but well-drained soil.	
Red campion	*Silene dioica*	Ladybirds	Tolerant of light shade, and a well-drained soil.	
Perennial cornflower	*Centaurea montana*	Bees and wasps	Tolerant of light shade. Prefers poorly-drained or moist but well-drained soil.	
Dusky cranesbill	*Geranium phaeum*	Attractive to bees	Tolerant of light shade. Prefers well-drained or moist but well-drained soil.	

Wild Marjoram	*Origanum vulgare*	Late flowering, attracts bees and butterflies including the White-letter Hairstreak.	Drought resistant, low growing, tolerant of partial shade or full sun	
Wild Marjoram 'Aureum'	*Origanum vulgare 'Aureum'*	Late flowering, attracts bees and butterflies	Drought resistant, low growing, tolerant of partial shade or full sun	

Table 9.3 – Species Mix for Planting in the Sun

Species Name	Latin Name	Wildlife Benefit	Growth Conditions	Picture
Common lavender	*Lavender angustifolia*	Attracts Goldfinch, Honey bee, Red mason bee and Small white.	Exposure: Full sun Hardiness: Hardy Soil type: Well-drained/light, Dry, Sandy	
Common thyme	*Thymus vulgaris*	Butterflies, Common carder bumble bee, Honey bee, Red mason bee, White-tailed bumble bee	Exposure: Full sun Hardiness: Hardy Soil type: Well-drained	
Common rosemary	*Rosmarinus officinalis*	Bees and wasps	Exposure: Full sun Hardiness: Hardy Soil type: Well-drained/light, Dry, Sandy	

Chamomile	*Chamaemelum nobile*	Attractive to moths	Exposure: Full sun/partial shade Hardiness: Hardy Soil type: Well-drained	
Chives	*Allium schoenoprasum*	Attractive to bees and wasps	Exposure: Full sun Hardiness: Hardy Soil type: Well-drained/dry	
Sage	*Salvia officinalis*	Attractive to Common carder bumble bee, Green tortoise beetle, Red mason bee, White-tailed bumble bee	Exposure: Full sun Hardiness: Hardy Soil type: Moist but well-drained	
Common Dogwood	*Cornus sanguinea*	Attractive to Blackbird, Carrion crow, Chaffinch, Fieldfare, Mistle thrush, Redwing, Robin, Waxwing, Yellowhammer and the Holly blue butterfly	Exposure: Full sun, Partial shade Hardiness: Hardy Soil type: Well-drained or Moist but well-drained	
Common Dogwood 'Midwinter fire'	*Cornus sanguine 'Midwinter fire'*	As above	As above	

Bluebells	*Hyacinthoides non-scriptus (English variety)*	Attracts bees, wasps and great bulb flies.	Exposure: Partial shade, Shade Hardiness: Hardy Soil type: Well-drained/light, Clay/heavy, Dry, Moist	
Wild Marjoram	*Origanum vulgare*	Late flowering, attracts bees and butterflies including the White-letter Hairstreak	Drought resistant, low growing, tolerant of partial shade or full sun	
Wild Marjoram 'Aureum'	*Origanum vulgare 'Aureum'*	Late flowering, attracts bees and butterflies including the White-letter Hairstreak	Drought resistant, low growing, tolerant of partial shade or full sun	
Yarrow	*Achillea millefolium*	Attracts beneficial Syrphid flies.	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained/ Moist/chalk/ Clay/sand/loam	
Red-hot poker	*Kniphofia uvaria*	Attractive to Bees and wasps; and the House sparrow, a London BAP Priority Species	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained/ Moist/sand or loam	

Common poppy	*Papaver rhoeas*	Has no nectar but the flowers provide pollen for bees. Beetles feed in the seed capsules and some species may overwinter here when the capsules are empty	Hardy plant grows on disturbed soils in full sun	
Cornflower	*Centaurea cyanus*	Attract many beneficial insects that come to nectar and feed on the pollen.	A hardy plant which grows of many soil types and prefers full sun.	
Ox Eye Daisy	*Leucanthemum vulgare*	Late flowering attracts beetles and hoverflies.	Grows on disturbed soils and wastelands as well as wildflower meadows, tolerant of a wide range of environmental conditions including drought.	
Coneflower	*Echinecea sp.*	Bees and wasps, Butterflies, Flies	Exposure: Full sun, or partial shade Hardiness: Hardy Soil type: Well-drained	
Californian poppy	*Eschscholzia 'Carmine King'*	Bees and wasps, Flies, Marmalade hoverfly	Exposure: Full sun, Hardiness: hardy Soil type: Well-drained/dry	

Clustered bellflower	*Campanula glomerata*	Common carder bumble bee, Red-tailed bumble bee	Exposure: Full sun, Hardiness: hardy Soil type: Well-drained/dry	
Common bistort	*Persicaria bistorta*	Small copper butterfly	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained/ Moist but well-drained	
Crocus	*Crocus tommasinianus*	Buff-tailed bumble bee, White-tailed bumble bee	Exposure: Full sun, Hardiness: hardy Soil type: Well-drained/dry	
Ice plant	*Sedum spectabile*	Buff-tailed bumble bee, Comma, Orange-tip, Painted lady, Peacock, Red admiral, Small tortoiseshell	Hardiness: hardy Soil type: Well-drained/dry	
Sea-holly	*Eryngium amethystinum*	Buff-tailed bumble bee, Butterflies, Common carder bumble bee, Honey bee, Red mason bee, Red-tailed bumble bee, *Syrphus ribesii,* White-tailed bumble bee	Hardiness: hardy Soil type: Well-drained/dry	

Small scabious	*Scabiosa columbaria*	Meadow brown, Small skipper butterflies	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained	
Verbena	*Verbena bonariensis*	Insects including the Peacock butterfly	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained	
Vervain	*Verbena officinalis*	Insects including the honey bee	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained	
Cosmos	*Cosmos bipinnatus*	Bees and wasps, Flies, Hummingbird hawk-moth	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained/ Moist but well-drained	

Purple moor-grass -	*Molinia caerulea*	Common sun beetle, moths including *Eupelix cuspidata,* Large skipper butterfly, and insetcs including *Myrmus miriformis*	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained/ Moist but well-drained	
Quaking-grass	*Briza media*	Attractive to *Atomaria mesomela*, Common sun beetle, Greenfinch, Linnet, Yellowhammer; and the House sparrow, a London BAP Priority Species	Exposure: Full sun, Hardiness: Hardy Soil type: Well-drained/ Moist but well-drained/chalk/ clay/sand/loam	

ENHANCEMENT: HORTICULTURAL GOOD PRACTICE

9.4 Any soft landscaping will require a low level of maintenance once established. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) should be discouraged to prevent changes to the food chain, particularly on invertebrates, birds and/or mammals.

ADDITIONAL RECOMMENDATIONS

9.5 All of the aforementioned are key recommendations and are compulsory to gain the ECO2 credit. Additional recommendations that should be considered for incorporation within the development, as part of the CSH assessment, include the following:

- Bat boxes;
- Bird boxes;
- Individual bee house;
- Individual hedgehog house;
- Invertebrate habitat wall; and
- Bird feeders.

AWARDING OF CREDITS LE04, EC02 & ECO4 - ENHANCING SITE ECOLOGY & CHANGE IN ECOLOGICAL VALUE

9.6 The ecological value before and after development has been measured based on the species per hectare values for the current site obtained from data collected during the

site walkover, and for the proposed development based on species per hectare values for habitat types recommended by the SQE.

9.7 We would recommend that 8 species from the tables above are incorporated into at least 20sqm of planting. With regards to calculating the change in ecological value, if the above recommendations incorporated then the following credits will be awarded

- 1 out of an available 3 credits for BREEAM LE04 '*Enhancing Site Ecology'* should be awarded.
- 2 out of an available 4 credits for CSH ECO4 'Change in Ecological Value'.

9.8 The overall change in species per hectare is calculated as -0.85 which is a Neutral enhancement: greater than -3 and less than or equal to 3. Therefore, the proposed development is likely to be awarded the credits upon receipt of written confirmation that the key enhancement recommendations have been adhered to and on presentation of the final plans and plant list. The calculations for LE03, LE04 and ECO 4 are shown at Appendix 2.0.

9.9 If the advice in the 'key recommendations' section is adhered to along with at least 30% of the 'additional recommendations' listed above, the proposed development should be awarded the maximum one credit for ECO2.

10.0 LE05 - LONG TERM IMPACT ON BIODIVERSITY

10.1 There is a maximum of 2 credits available under the BREEAM issue '*Long Term Impact on Biodiversity*' (LE05). The full 2 credits can be awarded where evidence is provided to demonstrate that the client has committed to achieving the mandatory requirements and at least 4 of the additional requirements. Alternatively, 1 credit can be awarded where evidence is provided to demonstrate that the client has committed to achieving the mandatory requirements and at least 2 of the additional requirements.

10.2 A summary of each requirement and an explanation of how they will be met (if applicable) are given below.

MANDATORY REQUIRMENTS

10.3 The mandatory requirements for LE05 are summarised as follows:

- Appointment of '*suitably qualified ecologist'*;
- '*Suitably qualified ecologist'* confirms that all relevant legislation relating to the protection and enhancement of ecology is complied with during design and construction process; and
- Production of a Landscape and Habitat Management Plan appropriate for the site to cover the first 5 years after project completion – information provided on scope of plan and key responsibilities.

10.4 The client team have appointed a SQE to produce this report. We confirm that there is no ecological value on site that requires protection under UK and EU legislation; however, in accordance with good practice, we have included the relevant legislation at section 5.0 and Appendix 3.0.

10.5 The management and aftercare of areas of nature conservation value that are to be retained, enhanced or created, is essential to ensure that they attain their full potential for both wildlife and people. Typically, a management plan is recommended to include:

- Management of any protected features on site;
- Management of any new, existing or enhanced habitats; and
- A reference to the current or future site level Biodiversity Action Plan.

10.6 The nature of the existing site and the proposed enhancements, a Landscape & Habitat Management Plan is not deemed appropriate.

ADDITIONAL REQUIREMENTS

10.7 The additional requirements for LE05 are summarised as follows:

- The contractor is required to nominate a 'Biodiversity Champion' who oversees site activities;

- The contractor is required to train relevant workforce on how to protect ecology during the project;
- The contractor is required to record and monitor the effectiveness of protecting ecological features during the project;
- New habitat relevant to local Biodiversity Action Plans (BAP) is created;
- Programme site works to minimise disturbance to wildlife, a clear plan or timetable needs to demonstrate how this will happen; and
- Take full account of the UK BAP and incorporate UK BAP aspects into the project.

10.8 BREEAM guidance advises that where the additional requirements and the management plan are deemed in writing by the appointed suitably qualified ecologist not to be applicable, all credits can be awarded. The guidance also suggests that this is likely to be the case in the majority of assessments in central town/city areas which have a high proportion of existing development with no or minimal existing external landscaped areas within the boundary of the assessed site.

10.9 The additional requirements are not relevant for this site due to its high proportion of existing development. Furthermore, a detailed Landscape and Habitat Management Plan, which forms part of the mandatory requirements, as no enhancements are deemed appropriate for the development.

LE05 - LONG TERM IMPACT ON BIODIVERSITY: AWARDING OF CREDITS

10.10 Due to the nature of the application site with its high proportion of existing development the additional requirements are not applicable and three of the mandatory requirements require the client team's commitment.

10.11 We have listed all relevant UK and EU legislation in section 5.0 and Appendix 3.0. It is important that the team and construction workforce commit to complying with this legislation and guidance during the design and construction process.

10.12 Therefore, as the first two mandatory items have been met, and the third mandatory requirement and all the additional requirements are not deemed appropriate, the maximum 2 credits can be awarded.

11.0 SUMMARY & CONCLUSIONS

11.1 A site survey was carried out on the 9th July 2014 in order to establish the ecological value of the assessment site and its potential to support notable and/or legally protected species. Along with a review of readily available ecological information and other relevant environmental databases an assessment of the application site's ecological value was made.

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

- Has negligible potential to provide habitat for badgers;
- Has negligible potential to provide habitat for great crested newts;
- Has negligible potential to provide habitat for roosting bats;
- Has low potential to provide habitat for foraging bats;
- Has negligible potential to provide habitat for reptiles;
- Has negligible potential to provide habitat for dormice;
- Has negligible potential to provide habitat for water voles;
- Has negligible potential to provide habitat for otters;
- Has low to moderate potential to provide habitat for invertebrates; and
- Has moderate potential for nesting birds.

11.3 The scale and nature of the proposed development will not give rise to any negative impacts to any designated site for nature conservation. If the proposed enhancements are incorporated then the development will have positive impact on the ecological value of the site and surrounding area.

11.4 Bird nesting potential was noted in many of the trees and areas of shrub across the site. It is therefore recommended that any clearance of this vegetation is undertaken outside of bird nesting season (usually taken to run from March to August) or, if clearance is required within this period, after an ecologist has confirmed the absence of nesting birds.

11.5 The potential *BREEAM* and *CSH Ecology* credits are also addressed in this report. At present those credits being awarded to the two assessment schemes are as follows:

- The site has low ecological value therefore:
  - 1 credit can be recommended for LE02 '*Ecological Value of the Site'* and Protection of Features';
  - 1 credit for LE03 '*Mitigating Ecological Impact'*;
  - 1 credit can be recommended for CSH ECO1 '*Ecological Value of the Site'*, and
  - A further 1 credit for CSH ECO3 '*Protection of Ecological Features'*.

- A number of ecological enhancement measures have been recommended therefore, upon confirmation from the client that these will be adopted the following credits can be awarded:
    - 1 credit for LE04 '*Enhancing Site Ecology'*;
    - 2 credits can be awarded for LE05 '*Long Term Impact on Biodiversity'*;
    - 1 credit for CSH ECO2 '*Ecological Enhancement'*; and
    - 2 credits for CSH ECO4 '*Change in Ecological Value'*.

11.6 Therefore, following the written commitment where necessary, it is recommended to award the proposed development 5 credits at this stage with regards to Land Use and Ecology under *BREEAM* and 5 credits under the *CSH 2010: Ecology*.

APPENDIX 1.0: SITE PHOTOGRAPHS

Photograph 1 – Tree, amenity grassland and introduced shrub on Belmont Street site

Photograph 2 - Amenity Grassland to north of Belmont Street site

Photograph 3 – Crogsland Road site

Photograph 4 – Trees on boundary of Crogsland Road site

Photograph 5 – Buddleia and ephemeral/short perennial plants

Photograph 6 – Block of woodland at sound end of Crogsland Road site

APPENDIX 2.0: BREEAM AND CSH CALCULATOR RESULTS

Greengage Environmental LLP

BREEAM & CSH Ecology Credit Calculator

Job Name: CRRC

Job Number: 550544

Date: Aug-14

BEFORE DEVELOPMENT

Plot type	Area of plot (m^2)	Species No	Area * species
Building/Hardstanding/Introduced Shrub	2720	0	0
Woodland	510	12	6120
Ephemeral/Short Perennial	220	15	3300
Scrub	60	5	300
Amenity Grassland	500	8	4000
Introduced Shrub	20	3	60
Total	4030	43	13780

Species per plot type before development **3.419354839**

AFTER DEVELOPMENT

Plot type	Area of plot (m2)	Species No	Area * species
Building/Hardstanding/Landscaping	2980	0	0
Woodland	510	12	6120
Wildlife Planting	20	8	160
Amenity Grassland	500	8	4000
Introduced Shrub	20	3	60
Total	4030		10340

Species per plot before development **2.565756824**

Species change **-0.853598**

1=OK
0=ERROR

ECO4 **2**
LE0 3 **1**
LE0 4 **1**

1

APPENDIX 3.0: LEGISLATION

NATIONAL POLICY

The introduction of the National Planning Policy Framework (NPPF) in March 2012 sets out the Government's planning policies for England and how these are expected to be applied in the presumption in favour of sustainable development. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so and is a material consideration for local planning authorities in determining applications.

Planning Policy Statements have been revoked although they are still a consideration for planning now that the NPPF has been published. Therefore features of ecological value should be considered in the context of:

- Planning Policy Statement on Biodiversity and Geological Conservation (PPS9); and
- The UK Biodiversity Action Plan (UK BAP).

WILDLIFE & COUNTRYSIDE ACT (1981)

This policy strengthened the protection for SSSIs, providing additional safeguards for particular types of area and restricting the killing, taking from the wild and disturbance of various species. All of the UK's wild bird species are protected under the 1981 Act. Extra protection is given to birds listed in Schedule 1 of the 1981 Act.

GREAT CRESTED NEWTS

Great crested newts are protected by both the Wildlife and Countryside Act (1981) and the Conservation of Habitats and Species Regulations 2010 Killing, injuring, capturing, handling or possessing the species is prohibited, as is damage to their habitats and trade in the species. Activities which involve the handling or disturbance of newts require a license form Natural England.

BADGERS

Natural England guidelines on development activities that may affect Badger setts, in addition to direct destruction/obstruction of entrances includes the following:

- No use of heavy machinery within 30m of an active sett entrance;
- No use of light machinery within 20m of an active sett entrance; and
- No use of hand tools within 10m of an active sett entrance (Natural England, 2002).

Any activity that could disturb a sett would require a licence to be obtained from Natural England following the granting of planning permission. For a major development, an activity that results in considerable loss of foraging area or obstruction of badger paths may also constitute disturbance.

TREE PRESERVATION ORDERS

TPOs are used to protect trees that are particularly attractive and contribute to the appearance of an area. It is illegal to cut down, prune, or otherwise damage a tree protected by a TPO without the Council's consent. The unauthorised lopping or felling of a tree is considered a criminal offence. TPO's are made by the Council when trees are under threat of being cut down or damaged.

BATS

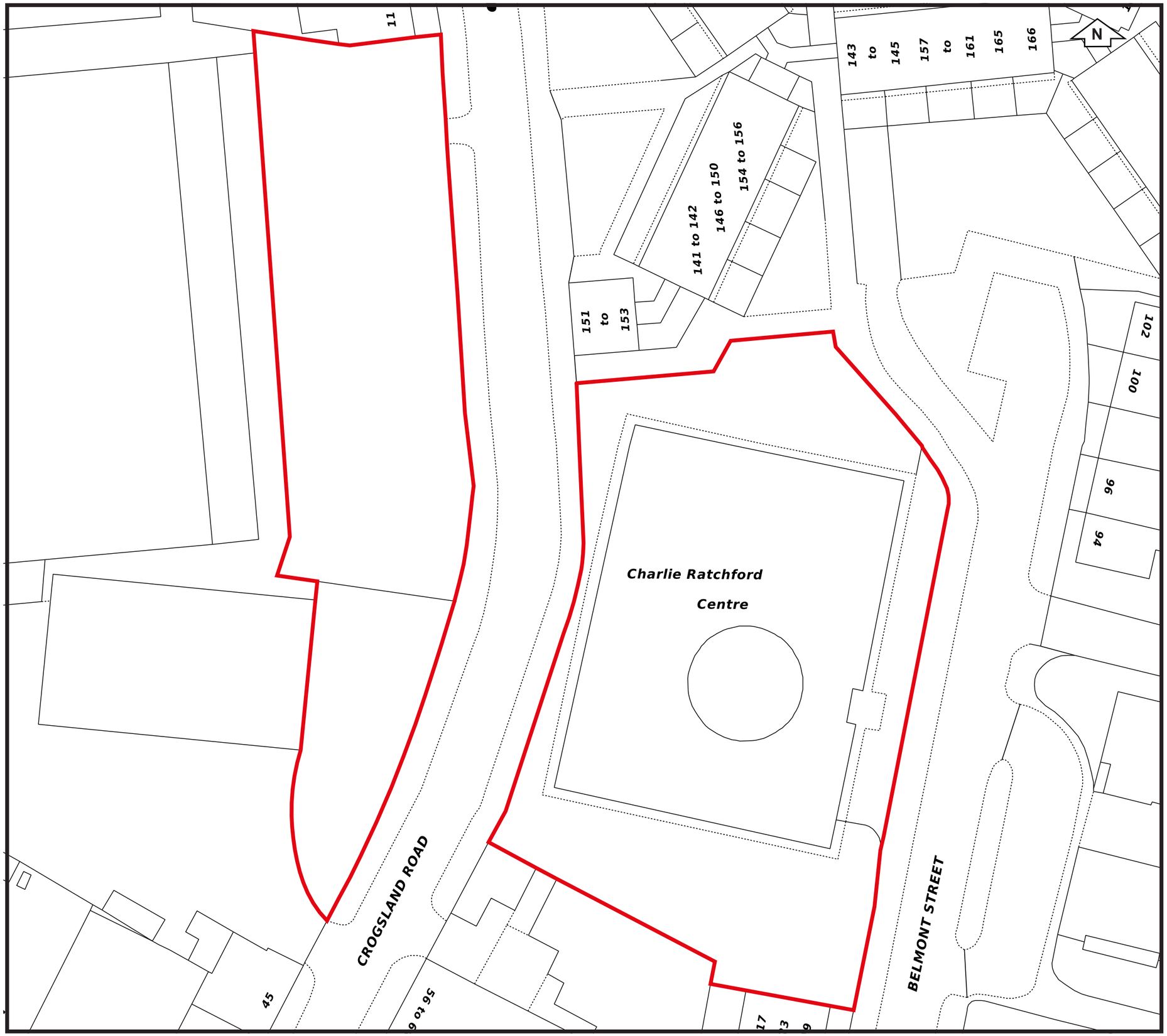
All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 (as amended) and under Annexe IV of the Habitats Directive, 1992 as a European protected species. Furthermore, the Countryside and Rights of Way Act, 2000 (Schedule 12, paragraph 5) has amended Section 9 of the 1981 Act. They are therefore fully protected under Section 9 of the 1981 Act and under the Conservation of Habitats and Species Regulations 2010, which transposes the Habitats Directive into UK law.

Consequently, it is an offence to intentionally kill, injure or take any bat as well as intentionally or recklessly damage, destruct or obstruct the access to the place of shelter or disturb the animal while it is occupying it. This legislation applies to all life stages. Additionally at a national level in terms of conservation, 6 of the 16 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.

REPTILES

All reptiles are protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is illegal to intentionally kill or injure grass snakes, slow worms or common lizards. There is no provision for licensing the intentional killing or injuring of grass snakes, slow worms or common lizards during development. The defence in the Act permits otherwise illegal activity if it is the incidental result of a lawful operation and could not reasonably have been avoided.

FIGURE 1.0: SITE PLAN



CRRC, CAMDEN

Assessment Site

Greengage

Greengage Environmental
64 Great Suffolk Street, London, SE1 0BL
T: 0203 544 4000

www.greengage-env.com

FIGURE 1.0

Assessment Site

Job No. 2340 - Not to scale - August 2014

FIGURE 2.0: HABITAT MAP

CRRC, CAMDEN

- Assessment Site
- Building
- Hardstanding
- A — Amenity Grassland
- Scrub
- Introduced Shrub
- Scattered Trees
- Woodland
- Bare Ground
- Ephemeral/Short Perennial
- 4 — Target Notes

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FIGURE 2.0

Habitat Map

Job No. 2340 - Not to scale - August 2014

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