Preliminary Ecological Assessment

Regis Road, Kentish Town,
Camden, London

On Behalf of:
Firstplan Ltd

February 2022

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SES Quality Management

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A	Final	25/02/2022	Gwilym Pask-Hale ACIEEM (Ecologist) & Sarah Coulson (Assistant Ecologist)	Jessica Breeze ACIEEM (Principal Ecologist)	Andrew Pankhurst BA(Hons) ACIEEM

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Executive Summary

1. This report presents the findings and recommendations of the Preliminary Ecological Appraisal (PEA) undertaken at Regis Road, Kentish Town in Camden, London. The proposals for the site comprise creation / installation of several small individual units providing delivery-only food, a hydroponic farm, a container providing easy access to test rides, a small retail unit and a charging hub suitable for fleet drivers.

2. The site was approximately 0.1ha in extent and comprised hardstanding bareground and buildings. The wider landscape to the east and west was dominated by an industrial estate and residential housing surrounding Camden, with a trainline across the northern boundary. A large sycamore was present on the site boundary.

3. No further surveys for protected species are required however recommendations have been provided for bats. These are primarily to incorporate enhancements within the development.

4. Badgers, breeding birds, hedgehog and common toad may utilise the habitats available within, and adjacent to, the site and therefore although further surveys are not deemed necessary, mitigation and enhancement measures are proposed for these species, including precautionary working methods, retention and protection of existing habitats and new habitat creation.

5. Overall, the site is considered to be of low ecological value and the development unlikely to have a negative impact on local ecological connectivity.

6. Through implementing the recommended measures detailed in this report, it is considered that any adverse effects from the proposed development on the habitats and species on site will be fully mitigated. With suitable enhancement of the habitats on site, there could be a net gain for local biodiversity in line with relevant wildlife legislation and national planning policy (MHCLG, 2021), and local planning policies related to biodiversity.

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Appendices

1.0 Introduction

1.1 Southern Ecological Solutions Ltd. (SES) was commissioned by Firstplan Ltd to undertake a Preliminary Ecological Appraisal (PEA) in order to inform a planning application for development on Regis Road, Kentish Town in Camden, London (the site) (Appendix 1). The site is located centrally at Ordnance Survey Grid Reference TQ 28647 85274 and is approximately 0.1ha in extent. This report presents the findings and recommendations of the PEA to inform a planning application for the development of the site.

1.2 The site comprised hardstanding bareground and buildings. The landscape to the east and west was dominated by an industrial estate and residential housing surrounding Camden, with a trainline across the northern boundary.

1.3 The PEA was conducted in January 2022 by SES and this survey aimed to:

- Map the main ecological features within the site and compile a plant species list for each habitat type;
- Make an initial assessment of the presence or likely absence of species of conservation concern
- Identify any legal and planning policy constraints relevant to nature conservation which may affect the development (see Appendix 2);
- Determine any potential further ecological issues;
- Determine the need for further surveys and mitigation; and
- Make recommendations for minimising impacts on biodiversity and providing net gains in biodiversity where possible in accordance with Chapter 15: *Conserving and Enhancing the Natural Environment*, of the National Planning Policy Framework (MHCLG, 2021), and relevant nature conservation policies within the adopted Camden Local Plan.

2.0 Methods

2.1 This report has been prepared with reference to British Standards Institution (BSI) BS 42020:2013 'Biodiversity – code of practice for planning and development' (BSI, 2013) and The Chartered Institute of Ecology and Environmental Management's (CIEEM) Technical Guidance Series 'Ecological Report Writing' (CIEEM, 2017) and Code of Professional Conduct (CIEEM, 2019).

2.2 The following PEA follows guidance and methods as prescribed by the CIEEM Guidelines for Ecological Appraisal 2nd edition (2017b) and the Guidelines for Ecological Impact Assessment (2019). Following these methods, a baseline of rare and/or noted ecological receptors (species and habitats) was established and valued. Predicted significant impacts upon these receptors have been identified and constraints and opportunities identified. This step-wise assessment process has informed likely mitigation and enhancement measures. These surveys will fully inform the predicted impacts of the scheme in accordance with the NPPF (MHCLG, 2021), local planning policy and relevant wildlife legislation.

2.3 CIEEM guidelines for Ecological Assessment in the United Kingdom (2019) have been utilised to assess the impacts upon habitats within the zone of influence of the site. CIEEM suggests that it is best to use the geographical scale (i.e. international, national, regional etc.) at which a feature (i.e. a habitat, species or other ecological resource) may or may not be important as the appropriate measure of value. As such, data from the data search, extended Phase 1 Habitat survey and subsequent species-specific surveys has been reviewed and the likely occurrence of protected and notable species/species groups assessed. This has allowed predictions of impacts to be made along with recommendations for mitigation, compensation and enhancement.

2.4 The following geographical scale categories are considered appropriate:

- International;
- National (*i.e.* England);
- Regional (Greater London);
- County (London);
- District (Kentish Town);
- Local or Parish (Kentish town); and
- Within Site or zone of influence only

Desk Study

2.5 SES commissioned a data search for records of protected and notable species from Green Space Information for Greater London (GIGL). The data search encompassed the study area, and up to 2km from the boundary. This data was received on 16 January 2022.

2.6 Hazel dormouse *Muscardinus avellanarius* records were also sought from the National Biodiversity Network (NBN) Atlas www.nbnatlas.org, which holds data from the People's Trust for Endangered Species (PTES). As dormouse are particularly under-recorded, the data search for this species encompassed an area of up to 10km from the site boundary.

2.7 A web-based search was undertaken for national statutory designated sites via the Multi Agency Geographic Information for the Countryside (MAGIC) spatial data resource www.magic.gov.uk was

undertaken in January 2022 (5km from the site boundary). MAGIC was also used to view the network of public footpaths links in the vicinity of the site.

2.8 SES also requested details of non-statutory designated sites within 2km of the site boundary from GIGL. This data was received on 16 January 2022.

2.9 Maps of the site and wider area, using the MAGIC online spatial data resource and aerial photographs on Google Earth (Google Inc., 2011), were examined to determine potential notable habitats on and adjacent to site and the wider landscape. In particular waterbodies (within 500m of the site boundary), watercourses and other landscape features that may be of ecological significance to protected species, notably great crested newt and mobile species such as bats and birds.

Extended Phase 1 Habitat Survey

2.10 An extended Phase 1 habitat survey was carried out on 14 January 2022 by suitably qualified ecologist Sarah Coulson BSc (Hons). This is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites. Phase 1 Habitat Survey methods are set out in the *Handbook for Phase 1 Habitat Survey* (Joint Nature Conservation Committee (JNCC), 2010). Habitat mapping was undertaken using the standard classification to indicate habitat types.

2.11 The dominant and readily identifiable higher plant species identified in each of the various habitat parcels were recorded and their abundances assessed on the DAFOR scale:

- D - Dominant
- A - Abundant
- F - Frequent
- O - Occasional
- R - Rare

2.12 These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (2010).

2.13 All impacts upon ecological features have been considered for the purposes of this survey following industry best practice guidance. Only relevant protected and notable species have been discussed within this report to keep its contents concise and relevant to the works being undertaken and for ease of application.

Protected and Notable Species

Badger

2.14 An initial assessment was undertaken as part of the PEA to identify areas that might be used by badger *Meles meles* for foraging, commuting and sett creation, such as earth banks, woodland, hedgerows and rough grassland. This assessment also included the recording of signs such paths, hairs, latrines and setts. The survey area comprised the development site (red line area; see Appendix 1) and within 30m of this boundary where open access was available.

Bats

2.15 The site was assessed for its suitability to support roosting, foraging and commuting bats. Trees and the building were assessed for their potential to support roosting bats using guidelines issued by the Bat Conservation Trust (BCT) (Collins, 2016). Roosting habitats were assigned a level of suitability according to the descriptions outlined in Table 1.

2.16 Good bat foraging habitat generally includes sheltered areas and habitats with good numbers of insects, such as woodland, scrub, ponds, lakes and species-rich or rough grassland. Good commuting habitat generally comprises linear features such as well-connected hedgerows, woodland edge and watercourses. The site was assigned a level of suitability according to the descriptions outlined in Appendix 3.

Birds

2.17 The sites' suitability to support a notable bird assemblage was initially assessed during the extended PEA. Suitable breeding habitat generally includes scrub, hedgerows, trees and ruderal vegetation but can also include buildings, open ground, grassland, arable cropland and piles of debris. The site was also assessed at this time for its potential to support significant wintering and/or migratory bird populations.

Great Crested Newt

2.18 Terrestrial habitats on site were assessed for their suitability for great crested newt as part of the extended PEA. Suitable terrestrial habitat generally includes rough grassland and woodland where they can forage and hibernate, with good links to the ponds where they breed.

Hazel Dormice

2.19 Habitats were assessed for their general suitability for hazel dormice. This species generally uses areas of dense woody vegetation and are more likely to be found where there is a wide diversity of woody species contributing to a three-dimensional habitat structure, a number of food sources, plants suitable for nest-building materials and good habitat connectivity.

Invertebrates

2.20 The site was assessed for its potential to support rare or notable invertebrate species as part of the extended PEA. This assessment was made on the basis of the habitats present and their structural complexity and diversity, giving particular consideration to rare and notable species recorded in the local vicinity.

Reptiles

2.21 The site was assessed for its suitability for the four commoner reptile species during the extended PEA; common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus*. Specific habitat requirements vary between species. Common lizard favour rough grassland, however they can be found in a variety of habitats ranging from woodland glades to walls and pastures.

Slow-worms use similar habitats to common lizards and are often found in gardens and derelict land. Grass snake have similar habitat requirements to common lizards but have a greater reliance on ponds and wetlands where they hunt amphibians. Adders occupy areas of rough, open countryside and are often associated with woodland edge habitats.

Other Notable Species

2.22 The extended PEA included a first stage assessment of the suitability of habitats on site to support NERC Act 2006 species of principle importance which are likely to occur in the local area, including hedgehog *Erinaceus europaeus*, brown hare *Lepus europaeus*, harvest mouse *Micromys minutus*, polecat *Mustela putorius* and common toad *Bufo bufo*.

Constraints

2.23 Desktop data searches are a valuable tool in evaluating a site's potential to hold rare and protected species, it is not however an absolute in confirming presence or absence of notable species due to the nature of how the records are collected.

2.24 The survey was undertaken outside of the flowering season for the majority of plants, as such the species list for the site will not be exhaustive. However, this does not impact habitat identification.

2.25 Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by SES for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

3.0 Baseline Ecological Conditions

Designated Sites

3.1 There was one site designated under the Conservation of Habitats and Species Regulations (Habitats Regulations, 2019) within 10km of the site.

3.2 Lee Valley Ramsar and SPA was located approximately 9.2km from the site to the northeast. Table 2 below gives proximity and summary description. This site is considered to be of **International** value. Confidence in this assessment is high.

Table 1: Statutory sites designated under Habitats Regulations 2019 within the 10km of the site

Site name	Distance and direction from site	Size (ha)	Reason for designation
Lee Valley Ramsar and SPA	6.4km northeast	451.3	The Lee Valley SPA comprises a series of embanked water supply reservoirs, sewage treatment lagoons and former gravel pits that display a range of man-made and semi-natural wetland and valley bottom habitats. Site contains internationally important populations of bitten *Botaurus stellaris*.

Key: Ramsar = Ramsar, **SPA** = Special Protection

3.3 There was one site within 5km designated under the Wildlife and Countryside Act 1981 under Section 21 of the National Parks and Access to the Countryside Act (1949) (Table 3). Hampstead Heath Site of Special Scientific Interest (SSSI), designated for being long established high forest woodland. SSSIs are considered to be of **National** value.

3.4 The site falls within the SSSI Impact Risk Zone however the proposed scheme does not fall into the listed impacts e.g. *Airports, helipads and other aviation proposals*.

3.5 Records were returned for 29 Sites of Importance for Nature Conservation (SINC) located within 2km of the site.

Table 2. Nationally Designated Sites within 5km and Statutory and Non-Statutory Locally Designated sites within 2km of the site.

Site Name	Distance & Direction	Size (ha)	Description & Reason for Designation
Nationally Designated Sites			
Hampstead Heath Woods SSSI	2.1km Northwest	16.17	Hampstead Heath Woods are examples of long-established high forest woodlands with an exceptional structure comprising an abundance of old and over-mature trees providing dead wood habitat for a range of invertebrate species. The site also includes an adjacent small valley containing an acidic flush with developing bog-moss communities.
Belsize Wood LNR	1.2km West	0.27	The site is deeply shaded and has a rich variety of species, especially of insects. The understorey is dominated hawthorn and elder, and the most common canopy trees are ash, sycamore and Swedish whitebeam. Ground level plants include butcher's-broom, enchanter's-nightshade and nettles. A number of common birds nest there.

Site Name	Distance & Direction	Size (ha)	Description & Reason for Designation
Adelaide LNR	1.4km Southwest	0.28	The reserve is dominated by a south facing meadow with some adjacent areas of woodland. There are two ponds one of which has a dipping platform.
Non-Statutory Locally Designated Sites			
Kentish Town City Farm, Gospel Oak Railsides and Mark Fitzpatrick Nature Reserve SINC	Adjacent to site West	6.57	Hedge, Pond/lake, Ruderal, Scrub, Secondary woodland, Semi-improved neutral grassland, Tall herbs.
North London Line at York Way SINC	0.9km Southeast	1.08	Roughland, Ruderal, Scattered trees, Scrub, Semi-improved neutral grassland, Tall herbs
Rochester Terrace Gardens SINC	0.9km Southeast	0.44	Amenity grassland, Hedge, Planted shrubbery, Scattered trees, Scrub
Dartmouth Park Hill and Reservoir SINC	1.1km Northeast	3.14	Acid grassland, Hedge, Planted shrubbery, Scrub, Semi-improved neutral grassland.
Tufnell Park Primary School Gardens SINC	1.2km East	0.22	Flower beds, Planted shrubbery, Pond/Lake.
Foxham Gardens SINC	1.2km Northeast	0.61	Amenity grassland, Flower beds, Planted shrubbery.
Holly Lodge Gardens SINC	1.2km Northeast	1.4	Amenity grassland, Planted shrubbery, Scattered trees
Belsize Wood Local Nature Reserve & Russell Nurseries Woodland Walk SINC	1.2km West	0.7	Ancient woodland, Pond/Lake, Scattered trees, Scrub, Secondary woodland, Tall herbs.
Highgate Cemetery SINC	1.4km North	14.86	Pond/Lake, Secondary woodland, Semi-improved neutral grassland, Vegetated wall/tombstones
Chalk Farm Embankment and Adelaide Local Nature Reserve SINC	1.4km Southwest	0.92	Pond/Lake, Scattered trees, Scrub, Secondary woodland, Semi-improved neutral grassland, Tall herbs.
Hampstead Green SINC	1.5km east	0.24	Hedge, Scattered trees, Semi-improved neutral grassland, Tall herbs

Site Name	Distance & Direction	Size (ha)	Description & Reason for Designation
Whittington Park SINC	1.5km Northeast	3.77	Amenity grassland, Flower beds, Hedge, Planted shrubbery, Scattered trees, Secondary woodland.
Market Road Garden SINC	1.5km West	1.1	Amenity grassland, Planted shrubbery, Scattered trees
Primrose Hill SINC	1.7km North	25.26	Amenity grassland, Hedge, Planted shrubbery, Scattered trees, Scrub, Semiimproved neutral grassland, Tall herbs
Holloway Road to Caledonian Road Railsides SINC	1.7km Southeast	2.121	Roughland, Ruderal
Hampstead Heath SINC	1.8km Northwest	316.91	Acid grassland, Ancient woodland, Bog, Hedge, Pond/Lake, Rough grassland, Scrub, Secondary woodland, Veteran trees
Copenhagen Junction SINC	1.8km East	2.94	Bracken, Roughland, Ruderal
Archway Park SINC	1.8km North	0.83	Amenity grassland, Flower beds, Planted shrubbery
London Zoo SINC	1.8km North	15.31	Planted shrubbery, Pond/Lake, Ruderal, Scattered trees, Semi-improved neutral grassland, Vegetated wall/tombstones
Waterlow Park SINC	1.8km North	10.19	Amenity grassland, Hedge, Planted shrubbery, Pond/lake, Ruderal, Scattered trees, Scrub, Semi-improved neutral grassland, Tall herbs, Wet grassland
Junction Road Railway Cutting SINC	1.8km Southwest	0.5	Scrub, Secondary woodland, Tall herbs
Archway Road Cutting SINC	1.9km East	0.73	Flower beds, Planted shrubbery, Secondary woodland, Semi-improved neutral grassland
Royal Northern Hospital SINC	1.9km Northeast	0.48	Amenity grassland, ornamental shrubberies and scattered trees.
St Joseph's Social Centre SINC	1.9km Northeast	0.49	Orchard, hedges, woodland, flowerbeds and grassland areas.
Upper Holloway Railway Cutting SINC	1.9km South	4.71	Roughland, Ruderal, Secondary woodland, Vegetated wall/tombstones
Regent's Park SINC	2km South	132.06	Amenity grassland, Planted shrubbery, Pond/Lake, Scattered trees, Scrub, Secondary woodland, Semi-improved neutral grassland
Caledonian Park SINC	2km southeast	3.128	Amenity grassland, Flower beds, Planted shrubbery, Scattered trees
London's Canals SINC	2km West	189.66	Aquatic flora, amongst which are found a number of locally uncommon, cleanwater species. The canals also support an important invertebrate fauna (including several species of dragon/damselflies), a diverse fish community, and breeding waterfowl.

Site Name	Distance & Direction	Size (ha)	Description & Reason for Designation
St Martin's Gardens SINC	No coordinates	0.69	Amenity grassland, Hedge, Planted shrubbery, Ruderal, Scattered trees, Semi-improved neutral grassland, Tall herbs

Key: SSSI – Site of Special Scientific Interest; LNR – Local Nature Reserve SINC – Site of Importance for Nature Conservation

Habitats

3.6 A Phase 1 habitat map of the site and target notes are provided within Appendix 4. Site photographs are illustrated in Appendix 5. Plant species recorded per habitat type are tabled in Appendix 6.

3.7 No habitats of principle importance were found on site.

3.8 The Phase 1 Habitat types (JNCC, 2010) within the development site (red-line area) were:

- Bare ground
- Buildings
- Fence
- Scattered tree
- Wall

Bare ground

3.9 The majority of the site was composed concrete hardstanding. The site had little vegetation present primarily rare instances of dandelion *Taraxacum officinale*, common nettle *Urtica dioca,* cleavers *Galium aparine*, herb Robert *Geranium robertianum*, and nipplewort *Lapsana communis*. Therefore, this habitat is of **negligible** importance.

Buildings

3.10 Five buildings were present on site.

3.11 Building 1 was a portacabin, with a single story and a bitumen painted roof. Buildings 2 to 5 were all shipping containers of various sizes. As such there was no vegetation present on the buildings themselves. Therefore, this habitat is of **negligible** importance.

Fence

3.12 A post and wire fence encompassed the site. This habitat is of **negligible** importance.

Scattered Tree

3.13 The large sycamore *Acer pseudoplatanus* tree was present just outside the site boundary. This habitat is of **site** importance.

Wall

3.14 Along the northern boundary of the site is a brick wall, this had buddleia *Buddleia davidii* growing on it. Aside from this, the habitat had little to no vegetation present. Therefore, this habitat is of **negligible** importance.

Summary

3.15 The majority of habitats on site were of **negligible** importance, with the exception of the tree which was of **site** importance. No habitats of principle importance were present on site.

Protected and Notable Species

3.16 Protected species are animals and plants listed on Conservation of Habitats and Species Regulations 2019 as amended and The Wildlife and Countryside Act as amended (WCA) 1981, The Protection of Badgers Act 1992, or listed in Section 40 or 41 of the NERC 2006. Protected and notable species with existing records within 2km of the site are detailed below.

Flora

Desk Study

3.17 No records of Schedule 8 protected plant species were reported within the data search.

3.18 No records of Schedule 9 invasive plant species were reported in the data search and no Schedule 9 species were observed on site.

On-site Assessment

3.19 During the extended Phase 1 survey, no invasive species listed under Schedule 9 of the WCA 1981 were recorded, though buddleia *Buddleja davidii* was found on site and is listed as a category 3 species of concern within the London Invasive Species Initiative (LISI).

3.20 No protected, rare or notable species were recorded.

Importance

3.21 The botanical assemblage of the development site was considered to be of **negligible** importance only, as little vegetation was recorded with the majority of site comprising hardstanding and buildings. Confidence in this assessment is **high**.

Badger

Desk Study

3.22 There were two records of badger returned on the data search, the most recent being in 2020.

On-site Assessment

3.23 The site contains no suitable sett building, foraging and commuting habitats for badgers and no evidence of badgers was observed on site. The embankment adjacent to the northern site boundary did comprise suitable habitat for badgers, thus it is possible they may wander into the site.

3.24 The site is assessed as being of **site** importance for badgers with the lack of presence of suitable habitats and its size, confidence in this assessment is **high**.

Bats

Desk Study

3.25 Records of bats identified within 2km of the site are summarised in Table 3 below.

Table 3. Summary of bat records within 2km of the site.

Species	Nearest approximate distance to site (km)	Total No. of Records	Date of Most Recent Record
Bat *Chiroptera*	0.6	5	2021
Pipistrelle bat Pipistrellus sp.	0.6	128	2017
Common pipistrelle *Pipistrellus pipistrellus*	0.4	195	2017
Soprano pipistrelle *Pipistrellus pygmaeus*	0.6	140	2017
Nathusius pipistrell *Pipistrellus nathusii*	1.4	29	2017
Nyctalus Bat *Nylctalus sp.*	0.6	31	2017
Noctule *Nyctalus noctula*	0.3	51	2017
Lesser noctule *Nyctalus leisleri*	0.6	3	2012
Serotine *Eptesicus serotinus*	1.8	2	2017
Myotis bat *Myotis sp.*	1.6	6	2017
Daubenton's bat *Myotis daubentonii*	1.3	6	2020
Natterer's Bat *Myotis nattereri*	1.7	4	2012
Brown Long-eared Bat *Plecotus auritus*	0.4	12	2015

Potential Roost Assessment

3.26 Five buildings on site were all found to be unsuitable/negligible for roosting bats, being composed of metal shipping container style buildings and portacabins. The sole tree on site did not possess any potential roost features and is considered unsuitable for roosting bats.

Importance

3.27 As none of the buildings or trees on site were suitable for roosting bats, the site is considered to be of **negligible** importance for roosting bats. Confidence in this assessment is **high**.

Preliminary Assessment for Foraging and Commuting

3.28 The railway embankment adjacent to the northern boundary represents suitable habitat for foraging and commuting bats. However, habitats on site, comprising buildings and hardstanding, do not provide suitable foraging and / or commuting habitat.

Importance

3.29 The adjacent (off site) railway embankment was valued as being of **low** suitability for foraging and commuting bats following current guidance (Collins, 2016; see Appendix 3). The site itself was considered to be of **negligible** suitability for foraging and commuting bats.

3.30 The site is itself considered to be of **site** importance for foraging/commuting bats. Confidence in this assessment is **high**.

Birds

Desk Study

3.31 The data search returned records of species listed under Schedule 1 of the WCA 1981 within 2km. All of the species such as bittern *Botaurus stellaris* or red kite *Milvus milvus* were all either wading species or raptors. None of which would make sure of the habitats on site.

3.32 Records were obtained for 36 red-listed Birds of Conservation Concern (BoCC) (Eaton et al. 2015), with species relevant to the sites habitats and context including, House sparrow *Passer domesticus,* have been recorded within 2km.

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3.33 The buildings on site are suboptimal for nesting species such as house sparrow owing to the lack of vegetation on site, and none were observed during the initial assessment. The tree on the site boundary provides some suitable nesting habitat.

Importance

3.34 The habitats present on site are ubiquitous with the surrounding area and there was no evidence of Schedule 1 species. Although red list species such as house sparrow may utilise the site, the potential of the site to support a notable bird assemblage was considered to be limited by its small scale and lack of dense / extensive vegetation. As such it is considered that the site has only **site** importance for birds, confidence in this assessment in **high**.

Great Crested Newt

Desk Study

3.35 No records for great crested newt were identified within 2km of the site and there were no ponds on site or within 500m.

On-site Assessment

3.36 None of the habitats on site represented suitable terrestrial habitat for great crested newts due to the near complete lack of vegetation. Additionally, no ponds were present on site or within 500m.

Importance

3.37 Terrestrial habitats on site were considered to be of **negligible** importance to any local great crested newt population, confidence in this assessment is **high**. As such this species is not considered further in this report.

Hazel Dormice

Desk Study

3.38 No records for dormice within 2km of the site were returned from the GIGL records search. The extended 10km NBN Atlas search also returned zero records.

On-site Assessment

3.39 The site was considered to provide no opportunities for dormice on site due to the lack of woodland and scrub vegetation. The adjacent embankment has suitable foraging habitat for dormice.

Importance

3.40 Given the absence of local records, lack of suitable habitat on site, and location within an urban habitat, the site was considered to be of **negligible** importance to any local dormouse population, confidence in this assessment is **high**. As such this species is not considered further in this report.

Invertebrates

Desk Study

3.41 The records centre returned for variety of species including 49 records of Stag beetle *Lucanus cervus* within 2km of the site. The closest records were 215m west of the site. Other species included small heath *Coenonympha pamphilus* and white-letter hairstreak *Satyrium w-album*.

On-site Assessment

3.42 The site was considered unfavourable to support a notable assemblage of invertebrates due to a lack vegetation. Given the hardstanding/concrete nature of the site, stag beetles are considered to not be present on site as it lacks the woodpiles and deadwood they require. Similarly the lack of flowering plants on site render it unsuitable for butterfly species such as small heath.

Importance

3.43 The site was considered to be of **negligible** importance for invertebrates and therefore invertebrates are not considered further in this report.

Reptiles

Desk Study

3.44 The data search returned one record of slow-worm *Anguis fragilis* and 153 records of grass snake *Natrix natrix* within 2km of the site.

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3.45 The railway embankment immediately north of the site contained suitable dispersal and foraging habitat for reptiles but these habitats did not extend into the site. The site itself contained no habitat suitable for reptiles.

Importance

3.46 Given the lack of habitats on site, the site is considered to have **negligible** level importance for reptiles, confidence in this assessment is **high**. As such reptiles are not considered further in this report.

Other Notable Species

Desk Study

3.47 Records returned for NERC Act 2006 notable species included 461 for hedgehog *Erinaceus europaeus* within in 2km of the site, the closest was 0.5km from site in 2015, and 51 records of common toad *Bufo bufo.* No records were found for water vole *Erinaceus europaeus*, European otter *Lutra lutra*, white-clawed crayfish *Austropotamobius pallipes,* brown hare *Lepus europaeus* or European polecat *Mustela putorius.*

On-site Assessment

3.48 Riparian species such as water vole, otter and white-clawed crayfish are considered absent from this site due to the lack of aquatic habitat and these species are not considered further in this report.

3.49 Hedgehogs can utilise a range of habitats including woodland, hedgerows, residential gardens, farmland and grassland. They are known to nest (summer/maternity/hibernation) in brash piles, dense scrub and buildings. The site was bordered by a railway embankment with suitable habitat for foraging and commuting hedgehogs. It is therefore considered possible, though unlikely, that the site may be sporadically visited by commuting individuals for foraging and sheltering. The site is therefore considered to be of up to **site** importance for hedgehogs, confidence in this assessment is **high**.

3.50 Common toads require access to aquatic habitats in order to reproduce which are absent from the local landscape. Outside of the breeding season, toads can utilise a range of habitats including scrub, hedgerows, woodland, brash piles, buildings and private gardens. Although there a minimal areas of suitable habitat on site, due to the presence of suitable habitats adjacent to the site (railway embankment) and the number of records within the wider area, it is possible that individual toads could sporadically be present on site. Therefore the site is considered to be of up to **site** importance for common toad, confidence in this assessment is **high**.

3.51 Brown hare are closely associated with cereal crops and woodland edges. Habitats within site and the immediate wider landscape are considered unsuitable for this species and as such, the site is considered to be of **negligible** importance for brown hare. Confidence in this assessment is high and brown hare are not considered further in this report.

Importance

3.52 The site was therefore considered to have up to **site** value for hedgehog and for common toad.

Summary

Table 4. Summary evaluation of features.

Feature	Summary Description	Value
SPA and Ramsar	Lee Valley	International
SSSI	Hempstead Heath	National
SINC	London's Canals Hampstead Heath Highgate Cemetery Regent's Park Waterlow Park Kentish Town City Farm, Gospel Oak Railsides and Mark Fitzpatrick Nature Reserve Chalk Farm Embankment and Adelaide Local Nature Reserve Belsize Wood Local Nature Reserve & Russell Nurseries Woodland Walk Dartmouth Park Hill and Reservoir Archway Road Cutting Caledonian Park Upper Holloway Railway Cutting Junction Road Railway Cutting Holloway Road to Caledonian Road Railsides Copenhagen Junction London Zoo Primrose Hill North London Line at York Way Market Road Garden St Joseph's Social Centre Holly Lodge Gardens Rochester Terrace Gardens Hampstead Green St Martin's Gardens Archway Park Foxham Gardens Tufnell Park Primary School Gardens Whittington Park Royal Northern Hospital	County
Habitats	Majority of site comprised building and hardstanding, a single large tree was present just outside the boundary.	Site

Feature	Summary Description	Value
Flora	No species listed on Schedule 8 or Schedule 9 plant species were found within or immediately adjacent to the development site Buddleia (cat 3 species of concern LISI) was present on the northern boundary.	Negligible
Badger	No suitable sett building, foraging and commuting habitat on site but suitable habitats immediately adjacent.	Site
Bats	Buildings and tree provide no opportunities for roosting bats. No vegetation is present to encourage bats to the site but railway embankment to the north provides foraging / commuting opportunities.	Site
Birds	No evidence of Schedule 1 species. Habitats suitable for common and widespread species as listed on the BoCC red list and species associated with nesting in buildings.	Site
Great crested newt	No records within 2km of the site and no ponds within. No suitable terrestrial habitat on site.	Negligible
Hazel dormouse	Absent within 10km, no suitable habitat on site.	Negligible
Invertebrates	Limited natural habitats with limited structural diversity. Unlikely to support a notable assemblage.	Negligible
Reptiles	No suitable habitat on site.	Negligible
Other notable species	Sub-optimal for hedgehog and toad.	Site

4.0 Preliminary Prediction of Impacts, Mitigation & Enhancement Measures

Development Description

4.1 The proposals for the site comprise creation / installation of several small individual units providing delivery-only food, a hydroponic farm, a container providing easy access to test rides, a small retail unit and a charging hub suitable for fleet drivers. See Appendix 7.

Designated Sites

4.2 The proposed development is not a residential development and thus will not require contributions or mitigation for the Lee Valley SPA and Ramsar. No other likely significant impacts to the Lee Valley SPA and Ramsar are predicted given the distance from the site (>9km) and nature / scale of the proposed development.

4.3 Due to the distances of the SSSIs from the site (>2km); direct and indirect impacts are not considered likely significant effects. Furthermore, the Natural England impact risk zone for the SSSIs do not pertain to this type of the development in this instance.

4.4 Due to lack of shared habitats and designations of the protected sites, or in the case of Kentish Town City Farm being designed to accommodate visitors, direct and indirect impacts are not considered likely upon nearby SINCs.

4.5 Given the nature of the work in relation to nearby statutory and non-statutory designated sites as well as the distances involved, the development will have a **neutral** impact on designated sites.

Habitats

4.6 No habitats of principle importance were present on site and little vegetation was present. The buddleia was found to be growing on the northern wall of the site. A specialist contractor should be consulted to remove this species.

4.7 The habitats can be enhanced through the inclusion of native species planting such as trees and bushes. A suitable and appropriate species planting list is provided in Appendix 8.

4.8 The inclusion of native planting within the development plan is predicted to result in a residual **positive** impact on habitats at a **site** level

Protected and notable species

Badgers

4.9 No evidence of badgers was found on site and the site did not contain suitable sett building habitat. However, it is possible the badgers may enter the site from the embankment.

4.10 It is recommended that general precautionary methods that are sympathetic to badgers are undertaken:

- Covering trenches at night or leaving a plank of wood leant against the side to ensure badgers can escape if they were to accidentally fall in;
- Covering open pipework with a diameter of greater than 120mm at the end of the work day to prevent animals from entering and becoming trapped;
- Covering chemicals and appropriately storing them overnight; and
- Regular removal of litter.

4.11 The site could be enhanced for badgers through the planting of species known to benefit wildlife (see Appendix 8) such as native fruit trees.

4.12 The above mitigation and enhancement measures are considered to result in a **positive** residual effect at site level.

Bats

4.13 Given the lack of roosting habitat on site, emergence/re-entry surveys are not required. Additionally suitable commuting habitat is not being lost as part of the development, so activity surveys for bats are not considered necessary.

4.14 It is recommended that sensitive lighting is implemented to avoid impacts of light pollution to the adjacent railway embankment.

4.15 Impacts from the development may include disturbance of foraging/commuting bats through increased site lighting. To mitigate these impacts, it is recommended that site lighting is kept to a minimum during both the construction and operational phases. No lighting should intrude upon areas of potential foraging/commuting habitats. If lighting is necessary, then there are a number of ways to minimise the effect of lighting on bats. The following mitigation strategies have been taken from the Institution of Lighting Professionals and Bat Conservation Trust's Guidance Note 08/18 Bats and artificial lighting in the UK (2018) and other referenced sources:

- In general, light sources should not emit ultra-violet light to avoid attracting insects and thus potentially reducing numbers in adjacent areas, which bats may use for foraging. Metal halide and fluorescent sources should not be used.
- LED luminaires should be used where possible. A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component. Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Limiting the height of lighting columns to eight metres and increasing the spacing of lighting columns (Fure, 2006) can reduce spill of light into unwanted areas such as the retained woodland and hedgerow boundary habitats. Only luminaires with an upward light ratio of 0% and with good optical control should be used. Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
- Other ways to reduce light spill include the use of directional luminaires, shields, baffles and/ or louvres. Flat, cut-off lanterns are best. Additionally, lights should be located away from reflective

surfaces where the reflection of light will spill onto potential foraging/commuting corridors. Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill. Where windows and glass facades etc. cannot be avoided, low transmission glazing treatments may be a suitable option in achieving reduced illuminance targets.

- Lighting that is required for security or access should use a lamp of no greater than 2000 lumens (150 Watts) and be PIR sensor activated on a short timer (1 minute), to ensure that the lights are only on when required and turned off when not in use (Jones, 2000; Hundt, 2012). A control management system can be used to dim (typically to 25% or less) or turn off groups of lights when not in use.

4.16 The site could be enhanced through the inclusion of plant species known to benefit bats and wildlife in general (Appendix 8) such as native trees and bushes. The provision of any brown roofs would also provide habitat for prey species, thus increasing the site's foraging suitability for bats.

4.17 The above mitigation and enhancement recommendations would likely result in a **neutral** residual effect at site level for roosting, foraging and commuting bats

Birds

4.18 Nesting birds can use a variety of habitats including buildings. However, due to the small nature of the site and the ubiquitous nature of the habitats with the surrounding landscape, it is considered unlikely that the development would have a significant impact on local nesting bird populations. As such further survey work is not considered necessary to inform mitigation measures.

4.19 All nesting birds are protected under the WCA 1981. Therefore, if any nesting bird habitat (buildings) is to be lost these should be removed outside of the nesting bird season (March-August inclusive) where possible. If works on these habitats are required during the nesting bird season a nesting bird check is required to ensure that there is no nest disturbance within the site by a suitably qualified ecologist (SQE).

4.20 The above mitigation and enhancement recommendations would likely result in a **neutral** residual effect at site level.

Other Notable Species

4.21 The railway embankment north of the site provides suitable habitat for hedgehog and toad and thus they may commute into the site. The same strategies used to protect badgers during construction should be implemented to safeguard them. Hedgehogs can hibernate under debris, rubble and buildings, clearance is recommended to be undertaken outside the hibernation season (November to February inclusive) when hedgehogs are most vulnerable. If this is not possible, it is recommended that clearance and ground works are undertaken under a method statement which details precautionary measures supervised by an SQE.

4.22 Measures outlined above pertaining the use of plants offering a value to wildlife and sensitive lighting will serve to enhance the site for hedgehogs and toad. This is considered to result in a **positive** residual effect at site level.

5.0 Conclusions

5.1 A summary of likely impacts, mitigation and enhancements proposed is provided in

5.2 Table 5. Through the above mitigation including sensitive layout design (retaining boundary habitats where possible), a wildlife friendly landscaping scheme, sensitive practices/management during construction and occupation and precautionary methods as suggested, it is considered that all significant impacts upon biodiversity, including any potential adverse impacts upon specific protected species and habitats will likely be able to be wholly mitigated in line with relevant wildlife legislation, chapter 15 of the NPPF (MHCLG, 2021); and adopted and emerging local plan policies with regard to biodiversity.

Table 5: Summary of Likely Impacts, Mitigation, Enhancement Measures and Residual Impacts

Feature	Likely Impacts	Mitigation and Enhancement Measures	Further Survey Requirement	Likely Residual Impact
Statutory and Non-Statutory Designated Sites	None	None required.	N/A	Neutral
Habitats	None	Use of native, species-rich plants and seed mixes which offer a benefit to wildlife.	N/A	Positive
Badgers	Death/injury during construction	Standard precautionary measures (see 4.10). Planting of species of known wildlife benefit.	N/A	Positive
Bats	Disturbance	Avoidance of light pollution on adjacent boundary vegetation through sensitive lighting scheme Provision of planting species of known wildlife benefit.	N/A	Neutral
Birds	Loss of nesting habitat (buildings)	Habitat to be removed outside bird nesting season (March to August inclusive) or once an ecologist has checked and confirmed absence of active nests. Provision of trees, shrubs and plants which offer a value to nesting and foraging birds within the soft-landscaping plans.	None	Neutral

Feature	Likely Impacts	Mitigation and Enhancement Measures	Further Survey Requirement	Likely Residual Impact
Hedgehog and toad	Death/injury	As for badger mitigation, to include precautionary measures. Provision of trees, shrubs and plants which offer a value to notable species within the soft-landscaping plans.	None	Positive

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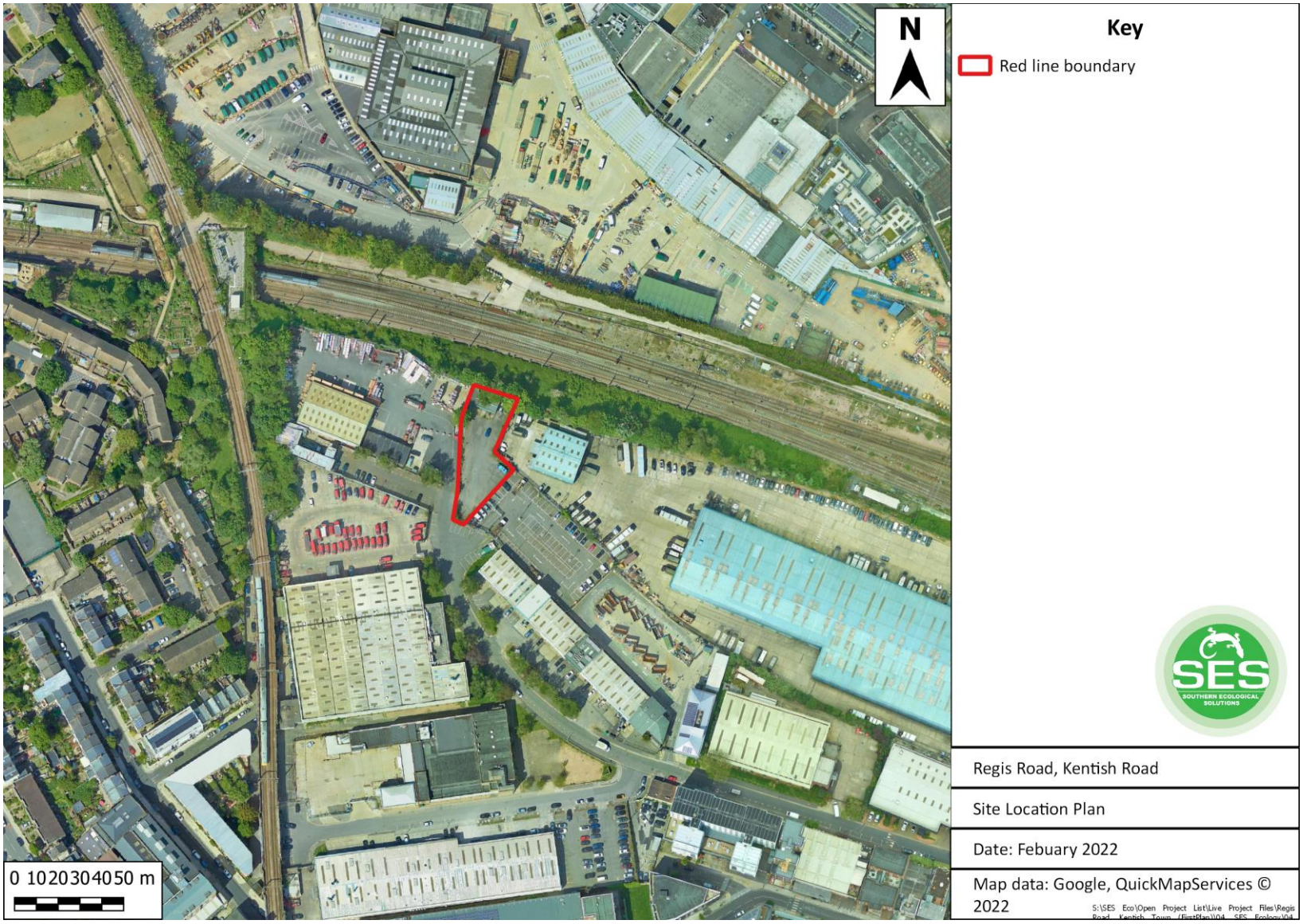
Appendix 1. Site Location Plans



Appendix 2. Legislative and Policy Framework

This document has not been prepared by a legal or planning professional and should be read as an interpretation of relevant statutes and planning policy guidance only. The information presented within this document has been reported in good faith and are the genuine opinion of SES on such matters. SES does not accept any liability resulting from outcomes relating to the use of this information or its interpretation within this document.

National Planning Policy

The NPPF (MHCLG, 2021) states that:

Paragraph 174

Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

Paragraph 180

When determining planning applications, local planning authorities should apply the following principles:

a) 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;
b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and
d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

Local Planning Policy

Policy A3 Biodiversity

The Council will protect and enhance sites of nature conservation and biodiversity. We will:

a. designate and protect nature conservation sites and safeguard protected and priority habitats and species;
b. grant permission for development unless it would directly or indirectly result in the loss or harm to a designated nature conservation site or adversely affect the status or population of priority habitats and species;
c. seek the protection of other features with nature conservation value, including gardens, wherever possible;
d. assess developments against their ability to realise benefits for biodiversity through the layout, design and materials used in the built structure and landscaping elements of a proposed development, proportionate to the scale of development proposed;
e. secure improvements to green corridors, particularly where a development scheme is adjacent to an existing corridor;
f. seek to improve opportunities to experience nature, in particular where such opportunities are lacking;
g. require the demolition and construction phase of development, including the movement of works vehicles, to be planned to avoid disturbance to habitats and species and ecologically sensitive areas, and the spread of invasive species;
h. secure management plans, where appropriate, to ensure that nature conservation objectives are met; and
i. work with The Royal Parks, The City of London Corporation, the London Wildlife Trust, friends of park groups and local nature conservation groups to protect and improve open spaces and nature conservation in Camden.

Trees and vegetation

The Council will protect, and seek to secure additional, trees and vegetation. We will:

j. resist the loss of trees and vegetation of significant amenity, historic, cultural or ecological value including proposals which may threaten the continued wellbeing of such trees and vegetation;
k. require trees and vegetation which are to be retained to be satisfactorily protected during the demolition and construction phase of development in line with BS5837:2012 'Trees in relation to Design, Demolition and Construction' and positively integrated as part of the site layout;
l. expect replacement trees or vegetation to be provided where the loss of significant trees or vegetation or harm to the wellbeing of these trees and vegetation has been justified in the context of the proposed development;
m. expect developments to incorporate additional trees and vegetation wherever possible.

Wildlife Legislation

The two principal wildlife statutes are the **Conservation of Habitats and Species Regulations (Habitats Regulations, 2019)** and the **Wildlife and Countryside Act (WCA, 1981)** that both deal with nationally important sites and species.

Selected habitat and species features within discrete sites are protected as Sites of Special Scientific Interest (SSSSI) under the WCA 1981.

Selected SSSI are more strictly protected as proposed or designated Special Protection Areas (SPA), Special Areas of Conservation (SAC) under the Conservation of Habitats and Species Regulations (2019). Ramsar sites are no longer part of the UK site network but remain designated under the Ramsar Convention and protected under the Habitat Regulations (2019).

The Habitats Regulations, 2019 protect features and resources listed as being of national importance from both direct and indirect effects arising from a range of likely significant effects including proposed development. Development proposals remain subject to the Habitats Regulations Assessment (HRA) process and especially the sequential Screening and Appropriate Assessment tests.

Local Nature Reserves (LNR) are designated by Local Planning Authorities and protected under the **National Parks and Access to the Countryside Act, (1949) Section 21**.

Certain species listed on Schedule 5 of the WCA 1981, including all bat species, great crested newt *Triturus cristatus,* hazel dormouse *Muscardinus avellanarius* and otter *Lutra lutra* are also protected under Schedule 2 of the Habitats Regulations 2010Taken together it is illegal to:

- Deliberately kill, injure or capture any wild animal under Schedule 2;
- Deliberately disturb wild animals of any EPS in such a way to be likely to significantly affect:
- The ability of any significant groups of animals of that species to survive, breed, rear or nurture their young; or
- The local distribution of that species.
- Recklessly disturb an Schedule 2 species or obstruct access to their place of rest;
- Damage or destroy breeding sites or resting places of such animals;
- Deliberately take or destroy the eggs of such an animal;
- Possess or transport any part of an Schedule 2 species, unless acquired legally; and/or
- Sell, barter or exchange any part of an Schedule 2 species.

A range of species other than birds, including water vole *Arvicola amphibius*, are protected from disturbance and destruction under the WCA 1981 through inclusion on Schedule 5.

All breeding birds are protected from deliberate destruction under the WCA 1981. Certain species are further protected from disturbance at their nest sites being listed on Schedule 1 of the WCA 1981.

Common reptiles including common lizard *Zootoca vivipara,* slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus* are protected under the WCA 1981, they are listed as schedule 5 species, therefore part of Section 9(1) and section 9(5) apply; the Countryside and Rights of Way Act 2000 (CRoW) also strengthens their protection.

Badger *Meles meles* is protected from sett disturbance and destruction under the Protection of Badgers Act 1992.

Section 40 of The Natural Environment and Rural Communities Act (NERC) 2006 places a legal duty on Local Authorities to conserve biodiversity. Section 41 (S41) sets out a list of 943 species and habitats of principal importance. These species are known as England Biodiversity Priority (EBP) species and are those identified as requiring action under the former UK Biodiversity Action Plan (BAP) and which continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

Native, species-rich hedgerows that fit certain criteria are protected as being 'important' under the Hedgerow Regulations (1997).

Japanese Knotweed *Fallopia japonica*, along with other introduced and invasive species are listed under Schedule 9 of the WCA 1981. Japanese knotweed is highly invasive and its rhizomes cause damage to built structures. Hence it is also classed as controlled waste under the Environment Protection Act 1990 and has therefore either to be removed or disposed of in a licensed landfill or the rhizomes buried to a depth of at least 5m.

Appendix 3. Detailed Methods

Extended Phase 1 Habitat Survey

Phase 1 Habitat Survey is a standard technique for obtaining baseline ecological information for areas of land, including proposed development sites. Phase 1 Habitat Survey methods are set out in the Handbook for Phase 1 Habitat Survey (Joint Nature Conservation Committee, 2010). Habitat mapping was undertaken using the standard classification to indicate habitat types. Features of ecological interest and value were highlighted using target notes.

Detailed Botanical Survey

As the Phase 1 Habitat Survey was conducted during sub-optimal timings for botanical survey, a further site visit was undertaken in January 2022 to assess the floristic value of the site and compile a peak-season detailed botanical species list.

Plant species identified in each of the various habitat parcels were recorded and their abundances assessed on the DAFOR scale:

- D - Dominant
- A - Abundant
- F - Frequent
- O - Occasional
- R - Rare

These scores represent the abundance within the defined area only and do not reflect national or regional abundances. Plant species nomenclature follows Stace (2010).

Bats

Preliminary Assessment

Habitats on and adjacent site were assessed for their suitability to support roosting, foraging and commuting bats using guidelines issued by the Bat Conservation Trust (Collins, 2016). All potential roosting habitats (existing trees) were assigned a level of suitability according to the descriptions outlined in Table A3.1. Trees were initially assessed from ground level, using binoculars where necessary to identify potential roost features, bat access points and evidence of bat occupation such as droppings, urine staining and mammalian fur oil staining.

The site was also assigned a level of suitability for foraging and commuting bats according to the descriptions outlined in Table A3.1.

Table A3.1. Assessment of the potential suitability of a proposed development site for roosting, foraging and commuting bats (Collins, 2016)

Suitability	Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats	Negligible habitat features on site likely to be used by commuting and foraging bats
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically but not enough space, shelter, protection and appropriate conditions to be used on a regular basis or by larger numbers of bats A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by another habitat Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or patch of scrub
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge High-quality habitat that is well-connected to the wider landscape that is likely used regularly by foraging bats such as broad-leaved woodland, tree-lined watercourses and grazed parkland Site is close to and connected to known roosts

Badgers

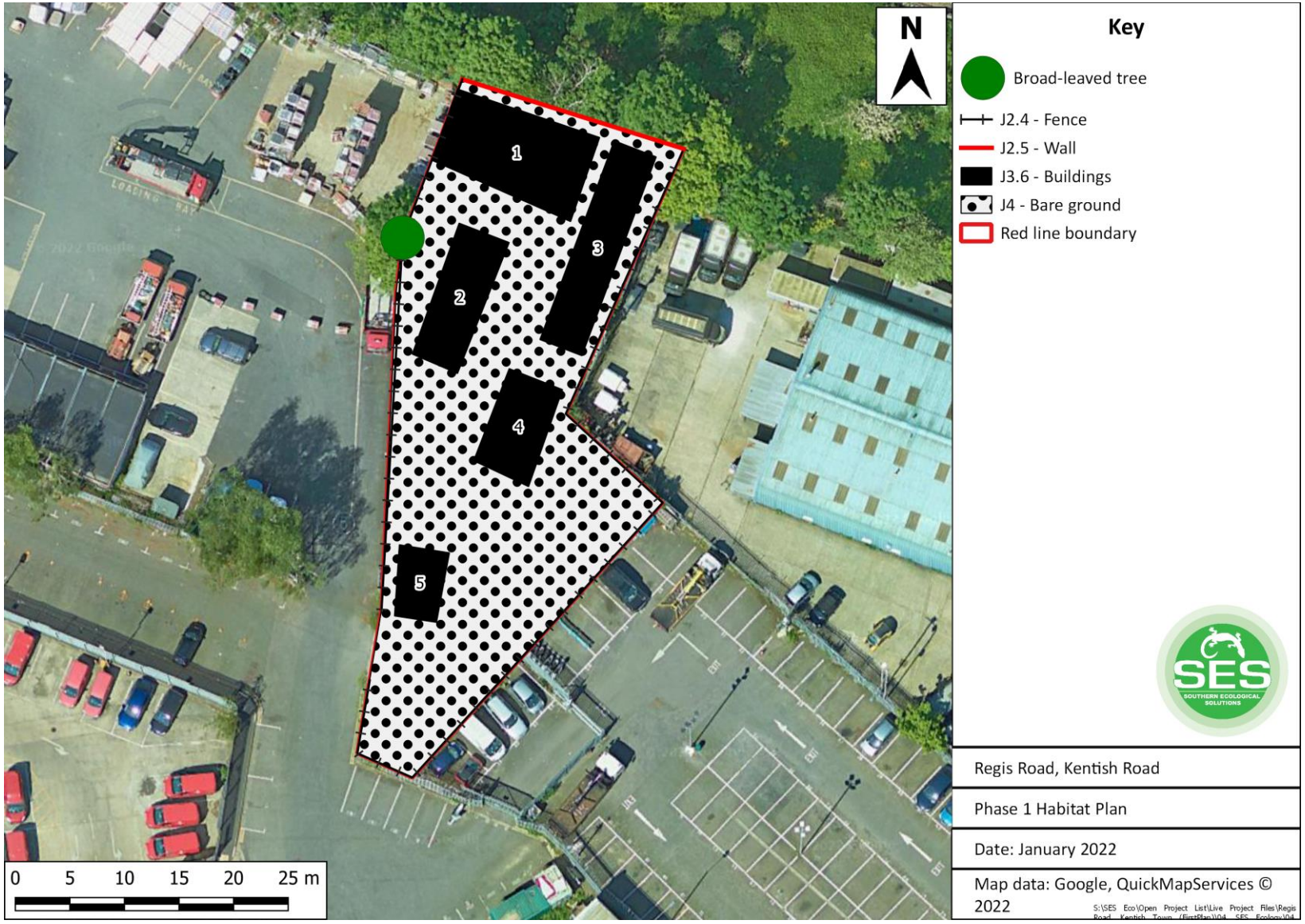
Surveys were carried out using standard guidelines for classifying badger setts (Harris *et al.,* 1989) and categorising entrance holes (Natural England, 2009). All areas within the site were readily accessible.

The survey comprised a detailed systematic walkover survey of the site and known setts. The badger signs looked for were:

- Additional holes/setts;
- Prints;

- Badger runs;
- Hairs;
- Latrines;
- Scratching posts, and;
- Snuffle marks.

Appendix 4. Phase 1 Survey Plan



Appendix 5. Site Photographs

Photo 1: Hardstanding and fence on site.

Photo 2: Example image of three of the buildings on site.

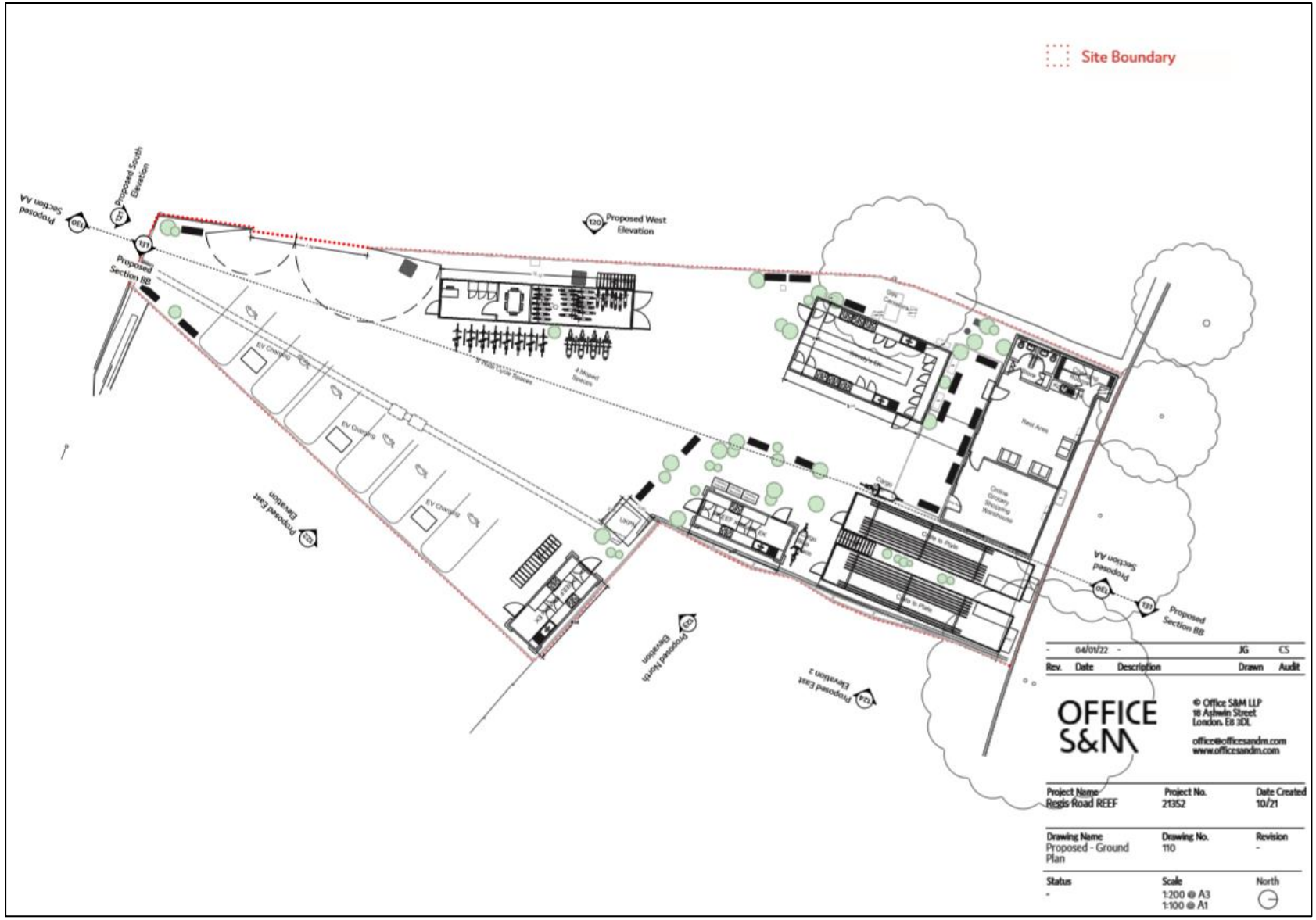
Photo 3: Building on site and sole tree adjacent to the fight.

Appendix 6. Botanical Species Lists

Table A6: Plant assemblages recorded during Phase 1 survey

Common name	Scientific name	Bareground	Wall
Buddleia	*Buddleia davidii*		R
Cleavers	*Galium aparine*	R	
Common nettle	*Urtica dioica*	R	
Dandelion	*Taraxacum officinale*	R	
Herb-Robert	*Geranium robertianum*	R	
Nipplewort	*Lapsana communis*	R	
Sycamore	*Acer pseudoplatanus*	R	

Appendix 7: Proposed Site Layout



Appendix 8*:* Species of Benefit to Bats

The following table is reproduced from *Gunnell, K., Grant, G. and Williams, C. (2012). Landscape and Urban Design for Bats and Biodiversity, Bat Conservation Trust*. This suggests plant species that can provide benefit for bats by either providing a food source for insects and/or roost potential. The plants listed are predominately native to Britain. The small group of non-native plants included for their documented value for wildlife. This list has been checked against Natural England's list of invasive non-native plants.

Plant species	Common name	Native (N)	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain gardens	Hedge/ trees	Beds/ borders
Acer campestre	Field maple	N	T/S	C	Any	Sun/ shade				Y	
Acer platanoides	Norway maple		T	S	Well drained/ alkaline	Sun/ shade				Y	
Acer saooharum	Sugar maple		T	S	Any	Sun/ shade				Y	
Achillea millefolium	Yarrow	N	HP	C,F	Well drained	Sun				Y	
Ajuga reptans	Bugle	N	HP	C,F	Any	Sun/ shade	Y		Y		
Anthyllis vulneraria	Kidney vetch	N	HP	F	Well drained	Sun	Y				
Aubrieta deltoidea	Aubrieta		H	F	Well drained	Sun/shade		Y			
Betula pendula	Sliver birch	N	T	C	Sandy/ acid	Sun				Y	
Cardamine pratensis	Cuckoo- flower	N	HP	F	Moist	Sun/ shade			Y		Y
Carpinus betulus	Hornbeam	N	T	C	Clay	Sun				Y	
Centaurea nigra	Common knapweed	N	HP	C,F	Dry, not acid	Sun	Y				Y
Centranthus ruber	Red valerian		HP	F	Well drained	Sun	Y				Y
Clematis vitalba	Old man's Beard	N	C	F	well drained/ alkaline	Sun				Y	
Corylus avellana	Hazel	N	S	C	Any dry	Sun/ shade		Y		Y	
Crataegus monogyna	Hawthorn	N	S	S,C	Any	Sun/shade				Y	
Daucus carota	Wild carrot	N	Bi	S,C,F	Any	Sun	Y				Y
Dianthus spp.	Pinks	N	A-Bi	F	Well drained	Sun	Y	Y			Y
Digitalis purpurea	Foxglove	N	Bi	C	Well drained	Shade/ partial shade				Y	Y
Erica cinera	Bell heather	N	S	F	Sandy	Full sun					Y
Ersimum cherira	Wallflower		Bi-P	F	Well drained	Sun		Y			Y
Eupatorium	Hemp agrimony	N	H	F	Moist	Sun/ shade			Y		Y
Fagus sylvatica	Beech	N	T	C, R	Well drained alkaline	Sun/shade				Y	
Foeniculum vulgare	Fennel		H	F	Well drained	Sun					Y
Fraxinus excelsior	Common Ash	N	T	C, R	Any	Sun/ shade				Y	
Hebe spp.	Hebe species		S	F	Well drained	Sun /shade				Y	Y

Plant species	Common name	Native (N)	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain gardens	Hedge/ trees	Beds/ borders
Hedera Helix	Ivy	N	C	F,C	Any	Sun/ shade		Y	Y	Y	Y
Hesperis matrionalis	Sweet Rocket		H	F	Well drained/ dry	Sun/ shade					Y
Hyacinthoides non -scripta	Bluebell	N	B	F	Loam	Shade/ partial shade		Y		Y	Y
Ilex aquailfolium	Holly	N	T	C	Any	Sun/ shade				Y	
Jasmine officinale	Common jasmine		C	F	Well drained	Sun		Y			Y
Lavandula spp.	Lavender species		S	F	Well drained / sandy	Sun		Y			Y
Linaria vulgaris	Toadflax	N	HP	C	Well drained/ alkaline	Sun	Y				Y
Lonicera periclymenum	Honeysuckle	N	C	F	Well drained	Sun		Y		Y	
Lotus corniculatus	Bird's foot trefoil	N	HP	F	Well drained/ dry	Sun	Y				Y
Lunaria annua	Honesty		Bi	F	Any	Sun/ partial shade	Y				Y
Malus spp.	Apple		T	C	Any	Sun				Y	Y
Matthiola longipetala	Night - scented stock		A	F	Well drained/ moist				Y		Y
Myosotis spp.	Forget me not species	N	A	F	Any	Sun	Y	Y			Y
Nicotiania alata	Ornamental tobacco		A	F	Well drained moist	Sun /partial shade			Y		Y
Oneothera spp.	Evening primrose		Bi	F	Well drained	Sun	Y				Y
Origanum vulgare	Marjoram	N	HP	F	Well drained / dry	Sun				Y	
Populus alba	White poplar	N	T	C	Clay loam	Sun				Y	
Primula veris	Cowslip	N	HP	F	Well drained/ moist	Sun/ partial shade	Y				Y
Primula vulgaris	Primrose	N	HP	F	Moist	Partial shade	Y	Y		Y	Y
Prunus avium	Wild cherry	N	T	C	Any	Sun				Y	Y
Prunus domestica	Plum		T	C	Well drained/ moist	Sun				Y	Y
Prunus spinosa	Blackthorn	N	S	C	Any	Sun/ partial shade				Y	
Querois petraea	Sessile oak	N	T	C,R	Sandy loam	Sun/ shade				Y	
Quercus robur	Common oak	N	T	R	Clay Loam	Sun/ shade				Y	
Rosa canina	Dog rose	N	S	C	Any	Sun			Y	Y	Y
Salix spp.	Willow species	N	S	S,C	Moist	Sun/ shade			Y	Y	
Sambucus nigra	Elder	N	T	C	Clay loam	Sun				Y	
Saponaria officinalis	Soapwort	N	HP	F	Any	Sun					Y
Saxifraga oppositifolia	saxifage	N	HP	C	Well drained	Sun	Y	Y			Y
Scabiosa columbaria	small scabious	N	HP	F	Well drained/ alkaline	Sun	Y				Y

Plant species	Common name	Native (N)	Type	Benefit	Soil	Light	Extensive green roofs	Living walls	Rain gardens	Hedge/ trees	Beds/ borders
Sedum spectabile	Ice plant		HP	F	Well drained/ dry	Sun	Y				Y
Silene dioecia	Red campion	N	HP	F	Any	Shade/ partial shade		Y	Y	Y	Y
Sorbus aucuparia	Rowan	N	T	C	Well drained	Sun				Y	
Stachys lanata	Lamb's ear		HP	F	Well drained/ dry	Sun					Y
Symphotrichum spp.	Michalemas daisies		HP	F	Any	Sun					Y
Tages patula	French marigold		A	F	Well drained	Sun					Y
Thymus serpyllum	Creeping thyme	N	HP/S	F	Well drained/ dry	Sun	Y	Y			Y
Tilia x europaea	Common lime		T	C	Any	Sun/ shade				Y	
Trifolium spp.	Clover species	N	H	F	Any	Sun	Y				Y
Valerina spp.	Valerian species	N	HP	F	Moist	Sun/ partial shade			Y		Y
Verbascum spp.	Mulliens	N	Bi, HP	C	Well drained	Sun					Y
Verbena bonariensis	Verbena		HP	F	Well drained/moist	Sun					Y
Viburnum lantana	Wayfaring tree	N	S	C	Any	Sun/ shade				Y	Y
Viburnum opulus	Guelder rose	N	S	C	Moist	Sun/ shade			Y	Y	
Viola tricolor	Pansy	N	A	F	Well drained/ moist		Y	Y			Y

Legend

Type		Benefit	
HP	Herbaceous perennial	C	Moth caterpillar food plant
Bi	Biennial	S	Sap sucking insects (e.g. whiteflies)
BiP	Biennial perennial	F	Flowers attract adult moths
T	Tree	E	Good roost potential
S	Shrub		
H	Herb		
A	Annual		
B	Bulb		
C	Creeper/ climber		