



Preliminary Ecological Appraisal

Former Gasholder site, Yarnton
Way, Belvedere

August 2023

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Former Gasholder site, Yarnton Way, Belvedere

17/08/2023

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Document Control:

Project no.:		Project name:		
11792		Belvedere		
Version:	Written by:	Checked by:	Authorised by:	Date:
V1	Livia Dry	Paul Carter	Richard Schofield	14 August 2023
V2	Livia Dry	Paul Carter	Richard Schofield	17 August 2023

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Non-technical Summary

Phlorum Ltd was commissioned by Bellway Homes Limited to undertake a Preliminary Ecological Appraisal which was carried out at Former Gasholder site, Yarnton Way, Belvedere, Bexley, DA17 5DD on the 3rd of August 2023, in order to determine whether any ecological constraints could affect the proposed works for the site.

Current proposals involve the redevelopment of the site to provide residential units including affordable housing (Use Class C3) and commercial floorspace (Class E) in new buildings ranging between 3 to 5 storeys in height, together with associated car parking and cycle storage, landscaping including new areas of public open space and a reptile retention zone, associated infrastructure including new junctions off Yarnton Way, drainage and land raising. The survey area extended over approximately 3.5 hectares (ha).

This version (V2) is to update the local plan details used for this project.

The main findings of the surveys are as follows:

-  The site is not subject to any statutory or non-statutory designations. The closest statutory designated site is Lesnes Abbey Woods Local Nature Reserve (LNR), which sits 490m to the southwest.
-  The site comprised of buildings/ gas holder (u1b5), hardstanding (u1b6 800), ruderal vegetation (u 81), scattered scrub (u 10), scattered bracken, (u 12) scattered trees (u 32), standing open water and canals (r1) and modified grassland (g4).
-  Provided the recommendations are followed and the **reptile fencing** remains in place, no further surveys regarding reptiles are currently recommended.
-  If the site becomes more encroached by dense scrub, then a **breeding bird** survey may be recommended.
-  In addition, a precautionary approach to site clearance in respect to **breeding birds, water voles, hedgehogs** and **stag beetles** is currently recommended to minimise any adverse impacts on these species' groups.

Further information on precautionary working practices and additional surveys together with recommended mitigation and enhancement measures are discussed in Section 5.

1. Introduction

Background

- 1.1 Phlorum Ltd has been commissioned by Bellway Homes Limited to undertake a Preliminary Ecological Appraisal, to inform the potential ecological constraints of proposed future development of Former Gasholder site, Yarnton Way, Belvedere, London borough of Bexley, DA17 5DD (hereafter referred to as “the site”).
- 1.2 The purpose of the Preliminary Ecological Appraisal was:
 - to identify the major habitats present;
 - to identify the potential for any legally protected species to be present; and
 - to recommend any additional ecological surveys, if required.
- 1.3 As part of the assessment, a desktop review and a site visit were carried out on the 3rd of August 2023. The results of which were used to assess the nature conservation importance of the site and the potential of the site to support protected species.
- 1.4 This report has been compiled in accordance with current guidelines (British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development, 2013 and CIEEM, 2017 and 2018).
- 1.5 Current proposals involve the redevelopment of the site to provide residential units including affordable housing (Use Class C3) and commercial floorspace (Class E) in new buildings ranging between 3 to 5 storeys in height, together with associated car parking and cycle storage, landscaping including new areas of public open space and a reptile retention zone, associated infrastructure including new junctions off Yarnton Way, drainage and land raising.

Site Location






- 1.6 The site is located in the northern extent of Belvedere in the London Borough of Bexley. The site is dominated by hardstanding, ruderal vegetations, areas of scrub regrowth and scattered trees together with one remaining gasholder. Two small buildings were also present together with discrete areas of bracken and grassland and standing water. There is one remaining gas holder on site, this no longer in use.
- 1.7 The National Grid Reference for the centre of the site is TQ 49224 79365. The survey area extended over approximately 3.5 hectares (ha).

2. Methodology

Desk Study & Consultations





Database and Map Search

2.1 The desktop study involved conducting database searches for statutory and non-statutory designated sites, legally protected species and features of interest within a 1km radius of the site. The database and map search was based on available information provided by the following sources:

-  Greenspace Information for Greater London (GIGL, 2023);
-  Multi-Agency Geographical Information for the Countryside (MAGIC, 2023);
-  Ordnance Survey mapping;
-  Aerial photography; and
-  The Woodland Trust online Ancient Tree Inventory.

Review of Previous Report

2.2 The desk study has involved the review of the following previous reports carried out for the site:







-  Habitat Scoping Report (CT Ecology, 2018);
-  Reptile Report (CT Ecology, 2020);
-  Updated Preliminary Ecological Appraisal (CT Ecology, 2022); and
-  Reptile Post Translocation Report (CT Ecology, 2022).

Habitat Survey and Assessment

2.3 Phlorum Limited carried out an ecological survey of the site on 3rd of August 2023. The survey was carried out by a suitably qualified ecologist, Livia Dry, who has over 2 years' professional experience of undertaking ecological surveys. The survey results and assessment was reviewed by Paul Carter (BSc (Hons), MBA and awaiting MCIEEM application), an ecologist with over 20 years of experience of managing ecological and landscaping projects, and by the project director Richard Schofield (BSc (Hons), MSc, CSJK, MCIEEM, MIEMA, CEnv), with over twenty years of experience in managing projects. The weather conditions during the survey were warm and sunny.

- 2.4 The field survey comprised a walkover inspection of the land and habitats present. The survey followed standard Phase 1 survey methodology (JNCC, 2010) and covered all accessible parts of the site, including boundary features. The description of the site habitats has used the code/referencing from The UK Habitat Classification User Manual 2.0 (UKHab 2023). UKHab uses primary habitat codes, either on their own or followed by one or more secondary codes. Each individual code is separated by a space. Habitats were described and mapped (Figure 1: Appendix A). A list of plant species was compiled, together with an estimate of abundance made according to the DAFOR scale. The DAFOR scale provides an estimate of the relatively abundance of plant species within the Survey Area (Appendix D).
- 2.5 This assessment provides information on the habitats in the survey area and identifies actual or potential presence of legally protected or otherwise notable species/habitats in or immediately adjacent to the site.
- 2.6 Target notes highlighting a particular feature of ecological interest are provided in Appendix B, with associated photographs.
- 2.7 Scientific names are given after the first mention of a species, thereafter, common names only are used. Nomenclature follows Stace (2010) for vascular plant species.

Protected Species Assessment

- 2.8 The potential for the site to provide habitat for protected species was assessed from field observations in conjunction with results of the desk study. The site was inspected for indications of the presence of protected species including:
-  Habitat considered suitable to support widespread reptile species including areas with a scrub/grassland mosaic and potential hibernation sites;
 -  On-site ponds offering potential breeding opportunities for great crested newts (*Triturus cristatus*) and the presence of suitable terrestrial habitat including hedgerows and rough grassland;
 -  The presence of features in and on trees indicating potential for roosting bats (Chiroptera), including knot and rot holes and loose bark. Secondary evidence of bats including staining, droppings, and feeding remains were also looked for;
 -  The presence of nesting habitat for breeding birds, including mature trees, dense scrub, and hedgerows, and direct evidence of bird nesting including bird song, old nests etc.;
 -  Habitats considered suitable to support badger (*Meles meles*) setts, and evidence in the form of hair, pathways, and latrines;
 -  Presence of woodland and/or hedgerows providing suitable habitat to support hazel dormice (*Muscardinus avellanarius*);

- 🌿 Riparian habitat supporting suitable features for water voles (*Arvicola amphibius*) and otters (*Lutra lutra*), and the
 - 🌿 Presence of nationally protected and/or invasive plants.
- 2.9 The potential presence for protected species is categorised as **Negligible, Low, Moderate, High, or Present**, based on the findings of the field survey and on the evaluation of existing data.
- 2.10 The purpose of this assessment is to identify whether more comprehensive Phase 2 surveys for protected species or mitigation should be recommended.

Caveat

Data Search Constraints

- 2.11 It is important to note that, even where data is held, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest; the area may be simply under-recorded.

Survey Constraints

- 2.12 Ecological surveys are limited by factors that affect presence of plants and animals such as seasonality. Whilst every effort has been made to provide a comprehensive description of the site, no investigation can ensure the complete characterisation of the environment.
- 2.13 The survey was carried out during the growing season and therefore many species would be expected to be visible and identifiable.
- 2.14 The appraisal does not constitute a full botanical survey, or a Phase 2 pre-construction survey that would include accurate GIS mapping for invasive or protected plant species. This survey provides a preliminary view of the likelihood of protected species occurring on the site based on the suitability of the habitat, known distribution of the species in the local area, and any direct evidence on the site. It is therefore used as a tool to recommend further protected species surveys (or other species of significant nature conservation interest) if on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.
- 2.15 It is however considered that the survey was sufficiently rigorous to assess the ecological value of the site.

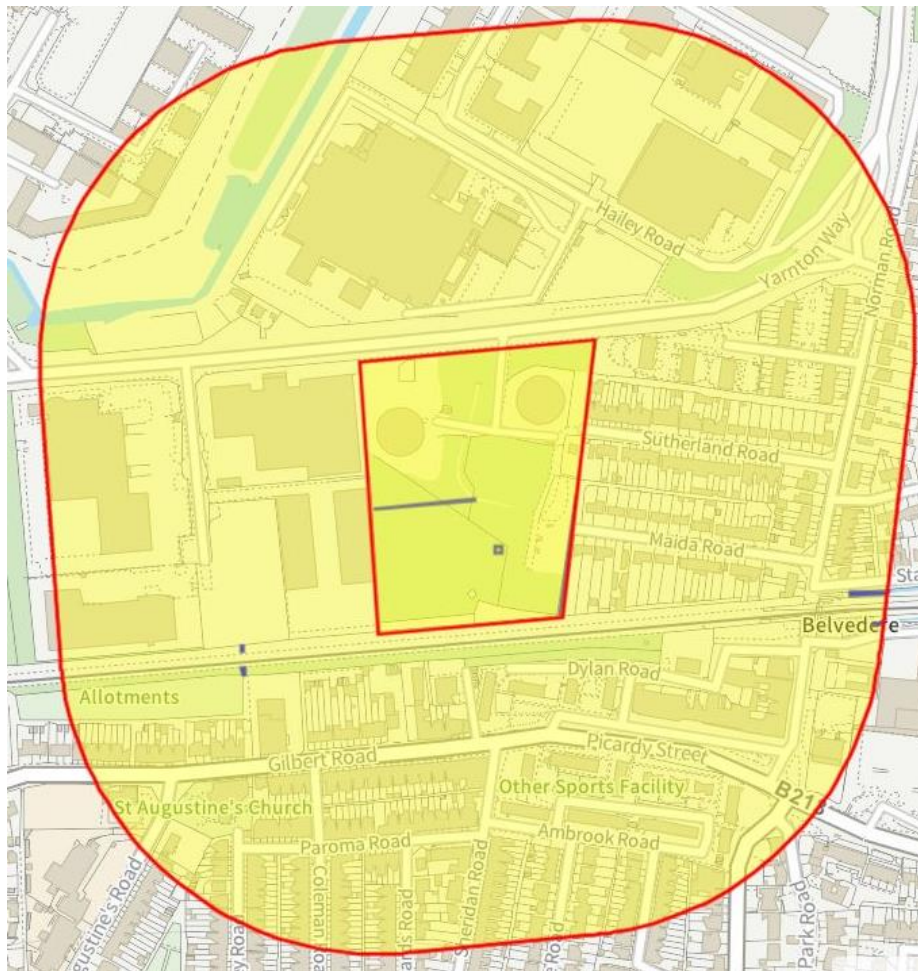
Limitations

- 2.16 This appraisal also does not constitute as a full invasive species survey. All surveys are subject to the conditions on site at the time of the survey. Site surveys are non-intrusive and rely on the visual identification of aboveground growth. If parts of a site are inaccessible, then these areas can often not be surveyed unless they can be viewed from other areas. If any aboveground growth is being managed or has been disturbed or covered, or the below ground growth is dormant, then it may be impossible for us to identify invasive plants in these areas during our non-intrusive survey.

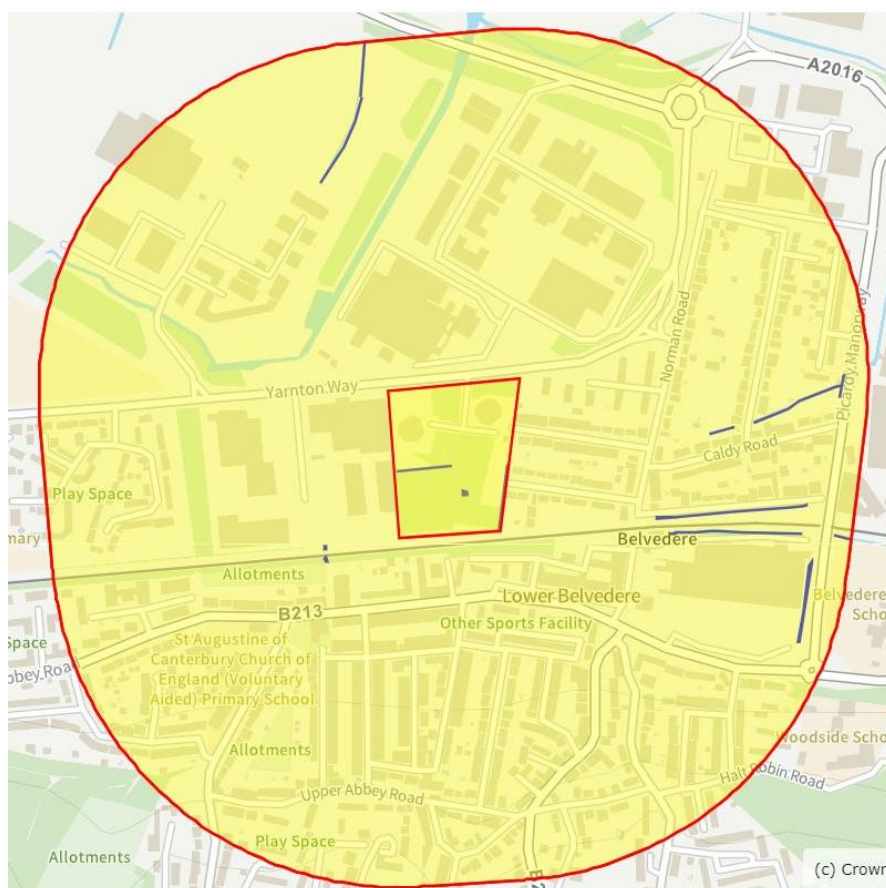
3. Baseline Conditions

Aerial Photography and OS Maps

- 3.1 Aerial photographs and OS maps show the site to be predominantly a disused gas holder site with the surrounds constituting of buildings and hardstanding in an urban area. There appear to be 1 concrete pond, and 1 ditch on site and a number of drainage ditches within 500m of the site.



Drawing 1: Showing the site with a 250m buffer and water bodies marked.



Drawing 1: Showing the site with a 500m buffer and water bodies marked.

Statutory and Non-Statutory Designated Sites

Statutory Sites

- 3.2 The closest statutory designated site is Lesnes Abbey Woods Local Nature Reserve (LNR). Table 1 provides a list of statutory sites within 1km of the site.

Table 1: Statutory sites within 1km of the site

Site Name	Reason for Designation	Area (ha)	Distance from the Site
Lesnes Abbey Woods LNR	Ancient woodland and coppice with amazing wildflowers and spring bulbs with one of the most important populations of wild daffodils in the south east. Other habitats include parks and open spaces, heathland, wetlands and hedgerows.	73.13	490m to the southwest
Crossness LNR	A network of ditches and open water, scrub and rough grassland. The reserve is a water vole stronghold, and over 130	25.52	0.5km to the northeast

	different species of bird have been recorded at Crossness Nature Reserve. A number of rare aquatic and terrestrial invertebrates are present, as well as some important flora species.		
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Non-Statutory Sites

- 3.3 The closest non-statutory designated site is Erith Marshes Site of Importance for Nature Conservation (SINC). Table 2 provides a list of non-statutory sites within 1km of the site.

Table 2: Non-statutory sites within 1km of the site

Site Name	Reason for Designation	Area (ha)	Distance from the Site
Erith Marshes SINC	One of the few remaining areas of Thames-side grazing marsh in London, supporting scarce birds, plants and insects.	88.59	125m to the northwest
Belvedere Dykes SINC	A number of drainage dykes, which support some rare plants and animals.	10.02	215m to the east
Southmere Park & Yarnton Way / Viridion Way	A large lake used for recreation, with surrounding parkland, an area of woodland and an accessible corridor of greenspace.	39.35	285m to the east
Lesnes Abbey Woods and Bostall Woods	Habitats include acid grassland, amenity grassland, ancient woodland, heathland, scattered trees, secondary woodland, and semi-improved neutral grassland.	159.41	450m south
Franks Park, Belvedere	An area of mature woodland, with acid grassland, containing regionally important plants.	17.84	496m southeast

Ancient Woodland

- 3.4 There is no ancient woodland covering any part of the site or immediately adjacent to the site. No trees on or adjacent to the site are listed on the Woodland Trusts' Ancient Tree Inventory.

- 3.5 The closest area of ancient woodland is Lesnes Abbey Woods situated 460m to the south.

Review of Previous Reports

- 3.6 The Habitat Scoping Report (CT Ecology, 2018) concluded that the site was dominated by hardstanding, continuous scrub, scattered trees, ruderal vegetation, buildings, grassland, and a water body.
- 3.7 The Reptile report (CT Ecology, 2020) concluded that there was a low population of slow worm (*Anguis fragilis*) and a low population of common lizard (*Zootoca vivipara*) found onsite. As a result, reptile translocation on site was considered the best option.
- 3.8 The Reptile report also stated (CT Ecology, 2020)
- 3.8.1 *“Following scrub clearance in February 2020, it is recommended that habitats are managed regularly throughout the 2020 growing season in order to maintain the current baseline conditions in order to restrict the movement of reptiles throughout the wider site and control the development of breeding bird habitat throughout the site. This should comprise monthly or bimonthly strimming and/or brush cutting throughout areas of scrub re-growth in the south-western site extent and areas of grassland throughout the north of the site.”*
- 3.9 Updated Preliminary Ecological Appraisal (CT Ecology, 2022), concluded reptiles and breeding birds pose a constraint to works. Provided that reptile translocation and mitigation is followed and a precautionary approach adopted for breeding birds no further surveys were required.
- 3.10 Reptile Post Translocation Report (2022), reptiles were translocated to an area which was fenced off to the south of the site. A total of 37 slow worms were translocated in October 2022.

Habitats

Site Summary

- 3.11 The main habitats recorded within the site are described below. The UKHab code is shown in the bracket after the habitat type (UKHab 2023). Additional details are shown on the habitat survey plan in Appendix A, and the target notes are listed in Appendix B.
- 3.12 In February 2020 the site was cleared of scrub and it was recommended that habitats were managed regularly throughout the 2020 growing season to restrict movement of reptiles (CT Ecology, 2020).

- 3.13 As of August 2023, the site comprised of buildings/ gas holder (u1b5), hardstanding (u1b6 800), ruderal vegetation (u 81), scattered scrub (u 10), scattered bracken, (u 12) scattered trees (u 32), standing open water and canals (r1) and modified grassland (g4).

Buildings (u1b5)

- 3.14 There were two buildings on site. Building 1 appeared to be made of brick with a flat concrete roof. The other Building 2 appeared to be entirely metal. Both of these buildings were assessed at having negligible potential to support bats.
- 3.15 There was also a disused gasholder on site. This was on the western side of the site. The previous gasholder has been removed since the updated PEA (CT ecology, 2022). The gasholder comprised of a metal structure which was sunk into the ground with an associated above ground metal framework. This structure was not assessed on the inside.

Hardstanding (u1b6 800)

- 3.16 There were areas of concreted surfaces and footpaths that could have previously been offered as a transport route.

Ruderal vegetation (u 81)

- 3.17 A majority of the site appeared to be ruderal vegetation. There were multiple species that appeared to be scattered throughout the site. However, there was a consistent mixture of species roughly <25cm tall. This included, ribwort plantain (*Plantago lanceolata*), bristly oxtongue (*Helminthotheca echioides*), white clover (*Trifolium repens*) red clover (*Trifolium pratense*) creeping buttercup (*Ranunculus repens*), hedge mustard (*Sisymbrium officinale*). Other species that were identified were nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*), dock (*Rumex obtusifolius*), spear thistle (*Cirsium vulgare*), herb Robert (*Geranium robertianum*), yarrow (*Achillea millefolium*), teasle (*Dipsacus fullonum*), meadow vetchling (*Lathyrus pratensis*), common toadflax (*Linaria vulgaris*), birdsfoot trefoil (*Lotus corniculatus*), lesser trefoil (*Trifolium dubium*), scentless mayweed (*Tripleurospermum inodorum*), creeping cinquefoil (*Potentilla reptans*), white campion (*Silene latifolia*) and red campion (*Silene dioica*), dandelion (*Taraxacum officinale*) and mullien (*Verbascum sp.*).

Scattered Scrub (u 10)

- 3.18 At the northern extent and the southeastern corner around the site boundaries there was the follow species present. Bramble (*Rubus fruticosus*) was dominant together with occurring buddleia (*Buddleja davidii*), elder (*Sambucus nigra*), ivy (*Hedra helix*), hedge bindweed (*Calystegia sepium*) and hawthorn (*Crataegus monogyna*).

Scattered Bracken (u 12)

- 3.19 Adjacent to the reptile translocation zone there was a small area of bracken (*Pteridium aquilinum*). This area was less than 0.04ha big.

Scattered Trees (u 32)

- 3.20 Here there was a mixture of young self-seeded, semi-mature and mature trees were scattered throughout the site. Species included sycamore (*Acer pseudoplatanus*), oak (*Quercus robur*), ash (*Fraxinus excelsior*), silver birch (*Betula pendula*).

Standing open water and canals (r1)

- 3.21 On site there were two water bodies present. The first was a ditch which ran from the middle of the west of the site east. Areas of scrub and trees lined the ditch with species such as common reed (*Phragmites australis*) and white willow (*Salix alba*) present.
- 3.22 The second was an open area of standing water. The water was contained within a rectangular concrete structure with steep sides and sunk into the ground.


Modified Grassland (g 4)

- 3.23 There was a small area of grassland to the north of the remaining gas holder, here species such as cocks foot (*Dactylis glomerata*), perennial rye grass (*Lolium perenne*), and fescues (*Festuca sp.*) were present.

Reptile Fencing

- 3.24 There was also reptile exclusion fencing present from the translocation which was undertaken in 2022.

Target Note (TN)

- 3.25 The following features of interest were noted during the survey and have been marked on Figure 1:
-  **TN1 Buddleja – this was seen growing in the scattered scrub to the south of the site and next to building 1.**

Protected Species

- 3.26 Legislation relating to the protected species referred to in this section is included in Appendix C.
- 3.27 The following paragraphs detail the suitability of the on-site habitats to support protected species and include information from the data search for protected, rare and otherwise notable species returned within a 1km radius.

Bats

- 3.28 The data search showed records of bats of at least seven species of bat have been recorded within 1km of the site boundary. This includes pipistrelle species (*Pipistrellus sp.*); soprano pipistrelle (*P. pygmaeus*); common pipistrelle (*P. pipistrellus*); Nathusius's pipistrelle (*P. Nathusii*); noctule (*Nyctalus noctula*); lesser noctule (*N. leisleri*); Daubenton's bat (*Myotis daubentonii*); and serotine (*Eptesicus serotinus*). No records were returned within the site.

- 3.29 Within the updated preliminary ecological appraisal (CT ecology, 2022) it was noted that a preliminary roost assessment was undertaken in 2019 where all the buildings on site were assessed at having negligible potential for roosting bats. During the site visit only two of the original buildings addressed in the updated PEA (CT ecology, 2022) were present. One of these was brick with flat concrete roof. The other appeared to be entirely metal with no points of egress. These were assessed at being negligible for roosting bats.
- 3.30 The trees onsite were a mixture of young, semi-mature and mature planted and self-seeded specimens. No potential roosting features were identified during the site visit.
- 3.31 Therefore, it was considered that the site offered **negligible** potential for roosting bats/

Amphibians

- 3.32 The data search showed no records of great crested newt within 1km of the site within the past 15 years. A small number of records were returned for common toad (*Bufo bufo*) and common frog (*Rana temporaria*).
- 3.33 There were onsite water bodies in the form of one ditch and one concrete water tank. There is one pond and a series of ditches located within 250m of the site however these are located to the north of a busy road which serves to create a significant barrier to dispersal by amphibians including great crested newt.
- 3.34 The on-site water bodies were considered to provide sub-optimal conditions for great crested newt during the breeding season. The water tank supported steep sides and had limited vegetation cover for egg laying and the ditches were choked with vegetation, resulting in limited opportunities for displaying by males during the breeding season however the water bodies may support more widespread amphibians including common frog (*Rana temporaria*) and smooth newt.
- 3.35 Overall, the site was considered to provide **negligible** potential to support great crested newt due to poor suitability of on-site water bodies and an absence of a connected network of ponds in the locality.

Reptiles

- 3.36 The data search showed records of slow worm (*Anguis fragilis*), grass snake (*Natrix helvetica*) and common lizard (*Zootoca vivipara*) within 1km of the site within the past 15 years.
- 3.37 During the survey no reptiles or signs of reptiles were seen, however the habitat contained features that support widespread reptile species. This was previously addressed during CT ecology reptile survey which found a low population of slow worms and common lizard on site (CT Ecology, 2020). Therefore, translocation was undertaken into a designated area at the south of the site (CT Ecology, 2022).
- 3.38 Therefore, reptiles have been confirmed as being **present** within the site.

Birds

- 3.39 Several Red or Amber listed Birds of Conservation Concern¹ (BoCC), and notable² bird species were returned by the data search that may utilise habitats within the site. Species include dunnock (*Prunella modularis*), herring gull (*Larus argentatus*); starling (*Sturnus vulgaris*); and house sparrow (*Passer domesticus*).
- 3.40 Areas of scrub and the scattered trees were identified to have potentially suitable breeding habitat for a number of widespread species.
- 3.41 Overall, it was considered that the site offered **high** potential for breeding birds.

Badgers

- 3.42 Records for this species are kept confidentially and were not returned by the data search.
- 3.43 No evidence of badgers in the form of setts or secondary evidence was found while on site. There were some areas of isolated dense scrub within the north section of the site.
- 3.44 Overall, the topography of the site offered some potential for sett building however the presence of a busy road to the north and extensive areas of gas holder, a building and hardstanding serve to isolate the site. The site was securely fenced with high grade wire fencing buried into the ground which would also serve to discourage use of the site by badgers and other large mammals.
- 3.45 Overall, the site offered **negligible** potential for breeding badgers and **negligible** potential for foraging and commuting badgers.

Hazel Dormice

- 3.46 The data search showed no records of dormice within 1km of the site within the past 15 years.
- 3.47 The site did not contain vegetation of a density and type that would support breeding dormice. It did however seem to be suitable for commuting dormice. However, due to the lack of connecting habitat to the surrounding areas it appears unlikely that dormice would utilise this site.
- 3.48 Overall, it was considered that the site offered **negligible** potential to support breeding dormice and **negligible** potential to support commuting dormice.

¹ Birds of Conservation Concern status is prioritised into high concern (Red), medium concern (Amber) and low concern (Green) (Eaton et al, 2009). Red-list species are those that are globally threatened according to the IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and have not shown a substantial recent recovery. Amber-list species are those with an unfavourable conservation status in Europe; those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations. Green-list species are those that fulfil none of the criteria.

² Notable Birds are based on a list of birds that are particularly scarce or vulnerable either at national or a regional level. The majority of these bird species are designated as Schedule 1 species, under the Wildlife and Countryside Act 1981 (as amended), or listed as red or amber-listed BoCC.

Water Voles

- 3.49 The data search showed a number of records of water vole within the 1km search area in the past 15 years.
- 3.50 The onsite ditch was considered to be unsuitable for water voles. Common reed was dense in areas and sediment building up and the bank structure appeared unsuitable for the construction of burrows. The ditch was also isolated in both directions which further reduces the potential for a viable population of water voles to persist on site.
- 3.51 Overall, it was considered that the site offered **negligible** potential to support breeding water voles and **low** potential to support commuting and foraging water voles.

Otters

- 3.52 The data search showed no records of otter within 1km of the site within the past 15 years.
- 3.53 The site did not contain the aquatic habitat and vegetation types that would support breeding, foraging or commuting otters.
- 3.54 Overall it was considered that the site offered **negligible** potential to support breeding otter and **negligible** potential to support foraging and commuting otter.

Hedgehogs

- 3.55 The data search showed some records of hedgehogs (*Erinaceus europaeus*) within 1km of the site within the past 15 years.
- 3.56 Although no direct evidence of hedgehogs was seen during the survey, the habitats on site, such as the ruderal vegetation and scrub seen on site would provide suitable habitat for them to forage and/or hibernate.
- 3.57 Overall, the site offered **low** potential for hedgehogs.

Stag Beetles

- 3.58 The data search showed records of stag beetle (*Lucanus cervus*) within 1km of the site within the past 15 years.
- 3.59 No direct evidence of stag beetles was seen on the site. However, the presence of dense vegetation could have provided the dead wood required for this species.
- 3.60 Overall, the site offered **low** potential for stag beetle.

Invasive Plants

- 3.61 The data search showed records of plant species including Buddleja (*Buddleja davidii*), cotoneaster, and Japanese knotweed (*Reynoutria japonica*) occurring within the 1km search area in the past 15 years. These plants are listed as invasive in Schedule 9 Part II of the Wildlife and Countryside Act (1981 amended).

- 3.62 Buddleia, listed on The London Invasive Species Initiative (LISI) (as a Category 3 species of high impact or concern which are widespread within London and require concentrated, coordinated, and extensive action to control/eradicate) was recorded within areas of scrub during the survey (See Appendix B, Photograph 1)

4. Evaluation

- 4.1 On the basis of the information available from the habitat survey and desk study, the site has been evaluated in terms of its potential for biodiversity, support of protected species and habitats, and the contribution the area makes as part of the wider landscape. The nature conservation value of the site has been assessed following standard criteria developed by CIEEM (2017 and 2018) and in accordance with BS 24040:2013 Biodiversity – code of practice for planning and development. This is provided below.
- 4.2 The biodiversity value of protected species within the site is a preliminary evaluation based upon the desk study records, habitat suitability, and the conservation status of the species in question. It should be noted that where European Protected Species (EPS) or species of Principle Importance for the Conservation of Biodiversity are present on-site they may be valued at a lower level/scale where it is considered likely that populations would not be of sufficient importance to justify designation at a higher level. However, regardless of their biodiversity value, such species are still subject to national and/or European legislation.
- 4.3 Key aspects of relevant planning policy regarding conservation, including an explanation of species referred to as being of 'Principal Importance for Conservation of Biodiversity' and European Protected Species and habitats, are provided in the Legislation section in Appendix C.

Geographic Evaluation

Features of International Importance

- 4.4 Features of International Importance are principally sites covered by international legislation or conventions. The Conservation of Habitats and Species Regulations 2017 (as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019) implements the Natural Habitats and Wild Fauna and Flora (92/43/EC) (Habitats Directive) in England and Wales. The Regulations mainly deal with the protection of sites with certain habitats and populations of species that are important for nature conservation in a European context, i.e. Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).
- 4.5 The site is not subject to any international statutory nature conservation designations. The closest site of International Importance is Epping Forest Special Area of Conservation (SAC) located approximately 13km to the northwest. This site is designated for the important Atlantic beech (Fagus sp.) forests. The site does not provide any supporting habitat for this designated site and based on the distance from the survey area, works are not considered likely to have any impact on this designated site.

Features of National Importance

- 4.6 Features of national importance include Sites of Special Scientific Interest (SSSIs) which are designated under the Wildlife and Countryside Act 1981 (as amended). The site is not subject to any national statutory nature conservation designations and it is not considered that any habitats or populations or assemblages of species within the site would meet the criteria for the designation of SSSIs at an appropriate geographic level³.
- 4.7 The closest designated site of national importance for nature conservation is Lesnes Abbey Wood SSSI located approximately 1km to the southwest. The SSSI is designated for its geological value, containing some of the most fossiliferous deposits in the Greater London area, providing remains of a diverse mammal assemblage of early Tertiary age. The survey area does not provide any supporting features or habitat for this designated site and based on the distance from the site, the proposed re-development is not considered to have any significant effect on the characteristics of the SSSI.

Features of Regional Importance

- 4.8 The site does not include any features of value at this level neither is it likely to be selected as a SINCC based on the results of the current survey.

Features of District Importance

- 4.9 The survey area is a gas site which has been managed to varying extents over a prolonged period. The highest value semi-natural habitats are restricted to areas of scattered trees, the central ditch and areas of ruderal vegetation and scrub, all of which are common and widespread features and habitats in the district. The site does not support any features that were considered to be of value at this level.

Features of Local Importance

- 4.10 The site supports extensive areas of hardstanding. Semi-natural habitats include areas of scrub and scattered trees, ruderal vegetation and discrete areas of standing water, all of which are common and widespread in the locality. The site does not support any features that were considered to be of value at this level.

Features of Value Immediate Vicinity (c. 250m) of the Project

- 4.11 The on-site building, areas of scattered trees and scrub together with areas of ruderal vegetation are of value within the immediate vicinity, providing potentially suitable habitat to support small numbers of breeding birds. Reptiles are present within the site. However, more extensive, and better examples of these features are available in the wider landscape.

³ JNCC Guidelines for selection of biological SSSIs (see <http://jncc.defra.gov.uk/page-2303#download>).




Summary

- 4.12 The survey area is a gasholder site which has been subject to varying levels of management and interference over the last few decades. The area is dominated by hardstanding and ruderal vegetation. However, the site does provide discrete areas of suitable habitat to support small numbers of protected BAP species including **breeding birds**. However, populations of these are unlikely to be significant at a local scale. A small population of reptiles have been confirmed as being present within the site.





Local Plan Evaluation

- 4.13 It is considered that the London Borough of Bexley's Core Strategy (Adopted 2012) and Unitary Development Plan 2004 in addition to Chapter 8 of the London Plan (2021) contain nature conservation policies relevant to the site. The full text of the relevant policies is contained in the Legislation section in Appendix C and this should be referred to.

London Borough of Bexley Core Strategy (2012)

-  Policy SP9 Protecting and Enhancing Biodiversity and Geological assets
-  Policy DP20 Biodiversity and geology in developments.
-  Policy DP21 Greening of Development sites

London Plan (2021) Chapter 8

-  Policy G1: Green Infrastructure.
-  Policy G5: Urban Greening
-  Policy G6: Biodiversity and access to nature.
-  Policy G7 Trees and woodlands.

5. Discussion and Recommendations

Discussion

- 5.1 The survey site is located at Former Gasholder site, Yarnton Way, Belvedere, London borough of Bexley, DA17 5DD. The survey area extended over approximately 3.5 hectares (ha). Habitats to be impacted by the development proposals include buildings (u1b5), hardstanding (u1b6 800), ruderal vegetation (u 81), scattered scrub (u 10), scattered bracken, (u 12) scattered trees (u 32), standing open water and canals (r1) and modified grassland (g4).
- 5.2 Current proposals involve the redevelopment of the site to provide residential units including affordable housing (Use Class C3) and commercial floorspace (Class E) in new buildings ranging between 3 to 5 storeys in height, together with associated car parking and cycle storage, landscaping including new areas of public open space and a reptile retention zone, associated infrastructure including new junctions off Yarnton Way, drainage and land raising.
- 5.3 The review of previous reports has shown that reptiles are present on site. As a result, a reptile translocation was taken on site (CT Ecology, 2022).
- 5.4 Habitats within the proposed development area were assessed as being of value to wildlife within the local vicinity with potential to support **reptiles, breeding birds, water voles, hedgehogs and stag beetles**, and these species may pose a constraint to works.
- 5.5 If the area becomes dense and scrubby then a **breeding bird survey** may be required.
- 5.6 On condition that the **reptile translocation and mitigation** plans continue to be followed, no further targeted surveys are recommended at this time for the site.
- 5.7 In addition, a precautionary approach to site clearance in respect to **breeding birds, hedgehogs, water voles, and stag beetles** is recommended to minimise any adverse impacts on these species' groups.
- 5.8 Details regarding specific mitigation, including further surveys and precautionary working practices together with habitat enhancement measures are provided below.

Recommendations

Breeding Birds

- 5.9 The on-site trees, scrub, and buildings provide suitable nesting habitat for a range of bird species. All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended).

- 5.10 In order to avoid any potential impact on breeding birds, the clearance of any trees and scrub/ demolition of buildings/ removal of the remaining gas holder should be undertaken outside the main bird nesting season which runs from March to August inclusive⁴, with clearance works possible between September and February. Where this is not possible, an ecologist would need to check the vegetation for active nests and signs of bird breeding activity.
- 5.11 In the event that a nest is found, an exclusion zone around the nest would be established. Works would have to cease within this buffer area until the young birds have fledged.
- 5.12 If the area becomes further encroached by dense scrub a **breeding bird survey** may be recommended.

Reptiles

- 5.13 All reptiles are protected under the Wildlife and Countryside Act 1981 (as amended).
- 5.14 The site provides a vegetation structure suitable for widespread reptiles. Previously a reptile survey and translocation were undertaken on site.
- 5.15 This translocation was undertaken in 2022 and therefore remains valid. Provided the recommendations are followed and the reptile fencing remains in place, no further surveys regarding reptiles are currently recommended.

Water Voles

- 5.16 Water voles are protected under the Wildlife and Countryside Act 1981 (as amended).
- 5.17 The onsite habitats were considered to provide limited potential for water vole and therefore, at this stage, no further survey is considered necessary. It is however considered necessary to adopt a precautionary approach to works to safeguard this protected species. This will require a suitably qualified ecologist carrying out an updated walkover survey of the site immediately prior to works starting on the site. The ecologist will then give a toolbox talk to the on-site contractors prior to the start of works to discuss a precautionary approach to works.
- 5.18 It is also recommended that any on-site bankside vegetation is cut to ground level using handheld trimmers or similar prior to ground works commencing in order to make the ditch unsuitable for this species group and discourage use of this feature during works. These works should be overseen by a suitably qualified ecologist.

⁴ It should be noted that this is the main breeding period. Breeding activity may occur outside this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

Stag Beetles

- 5.19 Stag beetles are a Species of Principle Importance for the UK, therefore a precautionary approach to the clearance of all dead wood should be taken during works. Where possible the any dead wood around the site boundaries should be retained as part of the works. Where dead trees pose a health and safety risk, the above ground section should be felled and the arisings stacked on the ground. The tree base and root system of these trees should be retained where possible.
- 5.20 Where it is not possible to retain these areas, the root system of the dead trees should be removed under an ecological watching brief and any larvae encountered should be removed to suitable retained deadwood habitat elsewhere around the site boundaries.

Hedgehogs

- 5.21 Hedgehogs are listed on the Natural Environment and Rural Communities (NERC) Act 2006 Section 41 as a Species of Principal Importance and a London BAP Priority Species. They are a rapidly declining species.
- 5.22 Hedgehogs need short grass areas to search for invertebrate prey. Log piles and decaying vegetation are used to forage and hibernate in. Areas of leaf litter can be collected and used in nests. Dense scrub areas are also useful to build hibernation nests during winter. Wildlife friendly corridors allow hedgehogs and other wildlife to migrate across a site. These are discussed in the Wildlife Friendly Pathways Section below.

Habitat Retention

- 5.23 All retained trees, including all adjacent off-site trees should be protected in accordance with British Standards (BS 2012) 5837:2012 Trees in Relation to Design, Demolition and Construction. The root protection areas of any retained trees must be left free from excavation and disturbance and protected during any proposed works. Protection should be in the form of fencing and signs installed for the duration of the works.

Habitat Enhancement

- 5.24 New development offers the opportunity for habitat enhancement in accordance with national and local planning policy and some recommendations are included below.

Control of Invasive Non-Native Species (INNS)

- 5.25 Although it is not illegal to have species listed under the Schedule 9 Part II of the Wildlife and Countryside Act 1981 (as amended), it is illegal to permit these species to spread and grow in the wild.
- 5.26 We recommend that a member for the Property Care Association Invasive Weed Control Group (PCA IWCG) is contacted to manage the invasive weed buddleia (*Buddleia davidii*).

Bird and Bat Boxes

- 5.27 Additional bird nesting and bat roosting provision could be incorporated into new design proposals. These could either be installed on trees or incorporated into the new building design. Some recommendations are made below as a guide.
- 5.28 Bat roosting opportunities could be provided through the installation of boxes on the outside of the walls or remaining trees, such as the Schwegler 2F, or other makes of a similar design, such as Chavenage Bat box. There are a range of bat boxes available, and these can be selected to suit the development and bat species in the locality.
- 5.29 Bird boxes could be installed on the walls of the new building or in the remaining trees which could include the following Schwegler bird house or 1B makes, or similar designs from alternative suppliers. If the client is happy for bird boxes to be installed on the walls of the new building, then a Schwegler sparrow terrace 1SP could also be used.
- 5.30 Further details of the bird and bat boxes are provided in Appendix F.
- 5.31 Bat boxes should be installed at appropriate locations ideally with south-east, south, or south-west facing aspects at least 3m from ground level. Ideally, they need to be exposed to 6-8 hours of direct sunlight but sheltered from strong winds. If installed on the building, these should ideally be positioned directly below the eaves.
- 5.32 Bird Boxes should be located out of prevailing wind, rain, and strong sunlight, ideally with a clear flight path to the entrance. Ideally, they should be installed two to four metres from the ground facing north or north-east.









Wildlife Friendly Pathways

- 5.33 The increase in building can result in ecological areas which are unconnected. Effectively these are ecological islands, and often there is no way for wildlife to migrate to and from these areas. One way to reduce the impact and allow wildlife, including hedgehogs, to migrate across sites is to install wildlife friendly pathways across a site. This can include a range of things such as wildlife corridors, such as hedgerows and scrub or rough grassland corridors, but also installing holes in fences. Wildlife holes, often referred to as hedgehog holes, help wildlife migrate through areas. The holes need to be at least 13cm by 13cm, at ground level.

Compensatory Planting

- 5.34 Additional tree and shrub planting could be incorporated into the landscape proposals to compensate for any removal to facilitate the works. Planting should include a high proportion of native species and be of local provenance where possible. These should be carefully selected to ensure they contain species suitable for the area. Some species of known wildlife value are listed in Appendix E.

6. Conclusions

- 6.1 The site survey revealed the following habitats:
- 6.2 The site comprised buildings (u1b5), hardstanding (u1b6 800), ruderal vegetation (u18), scattered scrub (u 10), scattered bracken, (u 12) scattered trees (u 32), standing open water and canals (r1) and modified grassland (g4).
-  Buildings (u1b5);
 -  Hardstanding (u1b6 800);
 -  Ruderal vegetation (u 81);
 -  Scattered scrub (u 10);
 -  Scattered bracken (u 12);
 -  Scattered trees (u 32);
 -  Standing open water and canals (r1); and
 -  Modified grassland (g4).
- 6.3 The site is not subject to any statutory or non-statutory designations. The closest statutory site is Lesnes Abbey Woods Local Nature Reserve (LNR) located approximately 490m to the southwest at its closest point and the survey area does not support any features that contribute to the designation of this site.
- 6.4 Provided the recommendations are followed and the reptile fencing remains in place, no further surveys regarding reptiles are currently recommended.
- 6.5 If the site becomes more encroached by dense scrub, then a **breeding bird survey** may be recommended.
- 6.6 In addition, a precautionary approach to site clearance in respect to **breeding birds, water voles, hedgehogs and stag beetles** is currently recommended to minimise any adverse impacts on these species' groups.
- 6.7 It has been recommended that the site is enhanced by introducing some compensatory planting and installing bat and bird boxes.

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8. Glossary of Terms

BAP	Biodiversity Action Plan
BRC	Biological Records Centre
CIEEM	Chartered Institute of Ecology and Environmental Management
Habitats Directive	Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora
INNS	Invasive Non-native Species
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MAGIC	Multi-Agency Geographical Information for the Countryside
NNR	National Nature Reserve
Nomenclature	The system of devising of names for plants
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal- formerly referred to as a Phase 1 Habitat Survey
PCA IWCG	Property Care Association Invasive Weed Control Group
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

Figures and Appendices

Appendix A

Habitat Map and Target Notes



Figure 1: Belvedere Habitat Survey Map

Drawn by: LD
 On the: 11/08/2023
 Not to Scale
 Ref: 11792








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Appendix B



Photographs

Photographs

Photo No.	Feature (Target Note No.)	Photograph of Feature
1	Showing building 1 on site. Target note: Buddleia	 <p>3 Aug 2023 14:47:03</p>
2	Showing the northern extent of the site with ruderal vegetation and scattered trees and scrub.	 <p>3 Aug 2023 15:06:03 68 Sutherland Road Greater London England</p>

<p>3</p>	<p>Showing the northern extent of the dense scrub with scattered trees behind.</p>	 <p>3 Aug 2023 15:20:02 27 Hailey Road Greater London England</p>
<p>4</p>	<p>Showing the ditch and trees.</p>	 <p>3 Aug 2023 15:27:48 Dylan Road Greater London England</p>
<p>5</p>	<p>Showing the remaining gas holder and ruderal vegetation</p>	 <p>3 Aug 2023 15:31:40 Greater London England</p>

<p>6</p>	<p>Showing the standing open water concrete pond.</p>	 <p>3 Aug 2023 15:35:19 Greater London England</p>
<p>7</p>	<p>Showing area of ruderal vegetation and scrub, as well as the reptile execution fencing.</p> <p>Target note: Buddleia</p>	 <p>3 Aug 2023 16:14:48 36 Maida Road Greater London England</p>

<p>8</p>	<p>Showing reptile exclusion fencing to the left and the area of bracken.</p>	 <p>3 Aug 2023 15:45:11 Greater London England</p>
<p>9</p>	<p>Showing hardstanding and areas of scattered trees.</p>	 <p>3 Aug 2023 16:25:16 70 Sutherland Road Greater London England</p>

Appendix C

Legislation

Legislation

This section contains information pertaining to the legislation and planning policy applicable in Britain. This information is not applicable to Northern Ireland, the Republic of Ireland the Isle of Man or the Channel Islands. Information contained in the following appendix is provided for guidance only.






Species

The objective of the EC Habitats Directive⁵ is to conserve plants and animals which are considered to be rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 (as amended) (formerly The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended) and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and also implements the obligations set out for species protection from the Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Various amendments have been made since the Wildlife & Countryside Act came into force in 1981. Further details pertaining to alterations of the Act can be found on the following website: www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000) and Nature Conservation (Scotland) Act 2004.

There are a number of other legislative Acts affording protection to species and habitats. These include:

-  Countryside and Rights of Way (CRoW) Act 2000;
-  Deer Act 1991;
-  Natural Environment & Rural Communities (NERC) Act 2006;
-  Protection of Badgers Act 1992; and
-  Wild Mammals (Protection) Act 1996.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act (1992), which consolidated and added to the previous Badger Acts of 1973 and 1991. Under this legislation it is an offence to:

-  cruelly ill-treat a badger, including use of tongs and digging;

⁵ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

- ☞ intentionally or recklessly cause a dog to enter a badger sett;
- ☞ intentionally or recklessly damage, destroy or obstruct access to a badger sett⁶ or any part thereof;
- ☞ intentionally or recklessly disturb⁷ a badger when it is occupying a badger sett;
- ☞ possess or control a dead badger or any part of a badger;
- ☞ sell or offers for sale, possesses, or has under his control, a live badger; and
- ☞ wilfully kill, injure, take, or attempt to kill, injure, or take a badger.

A Development Licence will be required from Natural England for any development works affecting an active badger sett, or to disturb badgers while individuals are occupying the sett. Depending on the nature of the works and the specifics of the sett, badgers could be disturbed by work near the sett even if there is no direct interference or damage to the sett itself. Natural England has issued guidelines on what constitutes a licensable activity. There is no provision in law for the capture of badgers for development purposes and therefore it is not possible to obtain a licence to translocate badgers from one area to another.

Bats

Bats are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). This act protects individuals from:

- ☞ intentional or reckless disturbance (at any level);
- ☞ intentional or reckless obstruction of access to any place of shelter or protection; and
- ☞ selling, offering, or exposing for sale, possession or transporting for purpose of sale.

In addition, all species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- ☞ deliberate killing, injuring, or capturing of Schedule 2 species (all bats);
- ☞ deliberate disturbance of bat species as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.

⁶ A badger sett is defined in the legislation as "any structure or place which displays signs indicating current use by a badger". This includes seasonally used setts. Natural England (2009) have issued guidance on what is likely to constitute current use of a badger sett: www.naturalengland.org.uk/Images/WMLG17_tcm6-11815.pdf

⁷ For guidance on what constitutes disturbance and other licensing queries, see Natural England (2007) Badgers & Development: A Guide to Best Practice and Licensing. www.naturalengland.org.uk/Images/badgers-dev-guidance_tcm6-4057.pdf, Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett www.naturalengland.org.uk/Images/WMLG16_tcm6-11814.pdf, Scottish Natural Heritage (2002) Badgers & Development. www.snh.org.uk/publications/online/wildlife/badgersanddevelopment/default.asp and Countryside Council for Wales (undated) Badgers: A Guide for Developers. www.ccw.gov.uk.

- 🌿 deliberate disturbance of bat species as to affect significantly the local distribution or abundance of the species;
- 🌿 damage or destruction of a breeding site or resting place; and
- 🌿 keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part thereof.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake activities listed above. A licence is required to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Breeding Birds

Under the Wildlife & Countryside Act, 1981 (as amended), a wild bird is defined as any bird of a species that is resident in or is a visitor to the European Territory of any member state in a wild state. Game birds, however, are not included in this definition (except for limited parts of the Act). They are covered by the Games Acts, which fully protect them during the closed season.

Under the Wildlife & Countryside Act, 1981 (as amended), all birds, their nests and eggs are protected under Sections 1-8 of the Act and it is an offence, with certain exceptions, to:

- 🌿 intentionally (or recklessly in Scotland) kill, injure, or take any wild bird;
- 🌿 intentionally (or recklessly in Scotland) take, damage or destroy (or, in Scotland, otherwise interfere with) the nest of any wild bird while it is in use or being built;
- 🌿 intentionally take or destroy the egg of any wild bird;
- 🌿 have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act;
- 🌿 have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act;
- 🌿 use traps or similar items to kill, injure or take wild birds;
- 🌿 have in one's possession or control any bird (dead or alive) unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations; and
- 🌿 in Scotland only, intentionally or recklessly obstruct or prevent any wild bird from using its nest.

Certain rare species receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- 🌿 intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- 🌿 intentional or reckless disturbance of dependent young of such a bird;

- in Scotland only, intentional or reckless disturbance whilst lekking; and
- in Scotland only, intentional or reckless harassment.

The British Trust for Ornithology (BTO) has a list of birds that are Species of Conservation Concern. These birds are not legally protected but where they are found on site they should be given planning consideration. The criteria for birds listed as amber (medium conservation concern) include:

- historical population decline during 1800-1995, but recovering: population has more than doubled over last 25 years;
- moderate (25-49%) decline in UK breeding population over last 25 years;
- moderate (25-49%) contraction of UK breeding range over last 25 years;
- moderate (25-49%) decline in UK non-breeding population over last 25 years;
- species with unfavourable conservation status in Europe (Species of conservation Concern);
- five year mean of breeding pairs in the UK;
- ≥50% of UK breeding population in 10 or fewer sites;
- ≥50% of UK non-breeding population in 10 or fewer sites;
- ≥20% of European breeding population in UK; and
- ≥20% of NW European (wildfowl), East Atlantic Flyway (waders) or European (others) non-breeding populations in UK.

Hazel Dormice

The hazel dormouse (*Muscardinus avellanarius*) is fully protected under The Conservation of Habitats and Species Regulations 2017 through its inclusion on Schedule 2. Regulation 41 prohibits:

- deliberate killing, injuring, or capturing;
- deliberate disturbance as to impair its ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of this species.

The hazel dormouse is also currently protected under the Wildlife and Countryside Act 1981 (as amended) through its inclusion on Schedule 5. Under this Act, this species is additionally protected from:

- intentional or reckless disturbance;

- intentional or reckless obstruction of access to any place of shelter or protection; and
- selling, offering or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect dormouse breeding or resting places (N.B. this is usually taken to mean dormouse 'habitat') or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence will allow derogation from the relevant legislation but will also to enable appropriate mitigation measures to be put in place and monitored.

Herpetofauna (Reptiles and Amphibians)

The following species receive full protection under the Conservation of Habitats and Species Regulations 2017 (as amended) through their inclusion on Schedule 2.

- sand lizard (*Lacerta agilis*);
- smooth snake (*Coronella austriaca*);
- natterjack toad (*Epidalea calamita*);
- great crested newt (*Triturus cristatus*); and
- pool frog (*Pelophylax lessonae*).

Under this legislation, Regulation 41 prohibits:

- deliberate killing, injuring or capturing of species listed on Schedule 2;
- deliberate disturbance of any Schedule 2 species as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- deliberate disturbance of any Schedule 2 species as to affect significantly the local distribution or abundance of the species;
- deliberate taking or destroying of the eggs of a Schedule 2 species;
- damage or destruction of a breeding site or resting place; and
- keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of a species.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act, they are additionally protected from:

- intentional or reckless disturbance (at any level);
- intentional or reckless obstruction of access to any place of shelter or protection; and

- ☞ selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). These species include:

- ☞ adder (*Vipera berus*);
- ☞ grass snake (*Natrix natrix*);
- ☞ common lizard (*Zootoca vivipara*); and
- ☞ slow-worm (*Anguis fragilis*).

Under this legislation, for these species it is prohibited under Section 9(1) & (5) to:

- ☞ intentionally (or recklessly in Scotland) kill or injure these species; or
- ☞ sell, offer, or expose for sale, possess, or transport for purpose of sale these species, or any part thereof.

The following species are listed in respect to Section 9(5) of Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) which only affords them protection against sale, offering or exposing for sale, possession, or transport for the purpose of sale:

- ☞ common frog (*Rana temporaria*);
- ☞ common toad (*Bufo bufo*);
- ☞ smooth newt (*Lissotriton vulgaris*); and
- ☞ palmate newt (*L. helveticus*).

Water Voles

The water vole (*Arvicola amphibius*) (= *terrestris*) is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- ☞ intentionally kill, injure, or take (capture) this species;
- ☞ intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- ☞ intentionally or recklessly disturb water voles while they are occupying a structure or place used for shelter or protection; and
- ☞ sell, offer, or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead water vole or part of this species.

Where development works are liable to affect habitats known to support water voles, Natural England must be consulted. All alternative design options must have been explored and communicated to Natural England in order to demonstrate that works have tried to avoid contravening the legislation e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable etc. Conservation licences for the capture and translocation of water voles may be issued by Natural England for the purpose of development activities if it can be shown that the

activity has been properly planned and executed and thereby contributes to the conservation of the population.

Otters

Otters (*Lutra lutra*) are fully protected under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. Regulation 41 prohibits:

- 🌿 deliberate killing, injuring, or capturing of otters;
- 🌿 deliberate disturbance as to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young; and
 - (ii) to hibernate or migrate.
- 🌿 deliberate disturbance as to affect significantly the local distribution or abundance of the species;
- 🌿 damage or destruction of a breeding site or resting place; and
- 🌿 keeping, transporting, selling, exchanging, or offering for sale whether live or dead or of any part of this species.

Otters also receive protection under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- 🌿 intentional or reckless disturbance (at any level);
- 🌿 intentional or reckless obstruction of access to any place of shelter or protection; and
- 🌿 selling, offering, or exposing for sale, possession or transporting for purpose of sale.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect breeding or resting places or for activities likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above. The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and monitored.

Wild Mammals

All wild mammals are protected against intentional acts of cruelty under the Wild Mammals (Protection) Act 1996. Under this legislation it is an offence to:

- 🌿 mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention of this legislation, due care and attention should be taken when carrying out works that have the potential to impact any wild mammal as described above.

Plants

Wild plants are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence for an 'unauthorised' person to intentionally (or recklessly in Scotland) uproot wild plants. An authorised person can be the owner of the land on which the action is taken, or anybody authorised by them.

Some rare plant species also receive full protection under Schedule 8 of the Wildlife and Countryside Act 1981 (as amended). This prohibits:

- 🌿 intentionally (or recklessly in Scotland) picking, uprooting, or destruction of any wild Schedule 8 species (or seed or spore attached to any such wild plant in Scotland only); and
- 🌿 selling, offering, or exposing for sale, or possessing or transporting for the purpose of sale, any wild live or dead Schedule 8 plant species or parts.

In addition to the legislation outlined above, several plant species are fully protected under Schedule 5 of The Conservation of Habitats and Species Regulations 2017. Regulation 45 makes it an offence to:

- 🌿 deliberately pick, collect, or destroy a wild Schedule 5 species; and
- 🌿 be in possession of, or control, transport, sell, or exchange any wild live or dead Schedule 5 species or anything derived from it.

A European Protected Species Mitigation (EPSM) Licence issued by Natural England will be required for works liable to affect species of plant listed under The Conservation of Habitat and Species Regulations 2017.

Invasive Plant Species

Certain plants are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Species include:

- 🌿 Japanese knotweed (*Reynoutria japonica*);
- 🌿 giant hogweed (*Heracleum mantegazzianum*);
- 🌿 Himalayan balsam (*Impatiens glandulifera*);
- 🌿 certain species of rhododendron (*Rhododendron* sp.); and
- 🌿 certain species of cotoneaster (*Cotoneaster* sp.).

Species listed are non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to:

- 🌿 plant or otherwise cause these species to grow in the wild.

This legislation makes it is an offence to cause species listed to grow in the wild. Therefore, if they are present on site and development activities have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this.

Habitats

International Statutory Designations

- Special Protection Areas (SPAs): Terrestrial SPAs are afforded protection by The Conservation (Natural Habitats, &c.) Regulations 1994 ((as amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019) and offshore SPAs are afforded protection under The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended by EU Exit Regulations 2019). SPAs are designated under the EC Birds Directive (Council Directive 2009/147/EC on the Conservation of Wild Birds). SPAs are areas recognised as important habitat for rare and migratory birds within the European Union (rare birds as listed on Annex I of the Directive).
- Special Areas of Conservation (SACs): These areas are designated under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora), designated for the habitats and (non-bird) species listed on Annexes I and II to the Directive under the same regulations as detailed for SPAs.
- Ramsar sites: These areas are wetlands designated under the Convention on Wetlands of International Importance (1971). Wetlands can include areas of marsh, fen, water, or peatland and may be natural or artificial, permanent, or temporary. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CRoW) Act 2000.

National Statutory Designations

- Sites of Special Scientific Interest (SSSIs): These sites are designated by the countryside agencies (for example Natural England) under the Wildlife & Countryside Act 1981 (as amended). Prior to 1981 these were designated under the National Parks and Access to the Countryside Act 1949. Improved mechanisms for the protection of SSSIs have also been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).
- National Nature Reserves: These sites are also designated by the countryside agencies under the Wildlife & Countryside Act 1981 (as amended).

Local Statutory Designations

- 1949 Local Nature Reserves (LNRs): These sites are designated by local authorities under the National Parks and Access to the Countryside Act 1949. These are sites recognised for their wildlife or geological interest at a local level and are managed for nature conservation.

Non-Statutory Designations

- Local Wildlife Sites: Areas of local conservation interest may be designated by local authorities. The terminology for these sites varies depending on the county. They can be called Sites of Nature Conservation Importance (SNCI's), Sites of Importance for Nature Conservation (SINCs), County Wildlife Sites (CWS), Listed Wildlife Sites (LWS), Local Nature Conservation Sites (LNCS), and Sites of Biological Importance (SBIs). The designation criteria may vary between counties. Local Wildlife Sites are of material consideration when planning applications are being determined.
- The Hedgerow Regulations 1997: These have been compiled to protect 'important' countryside hedgerows from damage or removal. A hedgerow is considered important if it (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Hedgerows covered by these regulations include those on or adjacent to common land, SSSIs (including all terrestrial SACs, NNRs and SPAs), LNRs, land used for agriculture or forestry, and land used for the keeping or breeding of horses, ponies, or donkeys.

National Planning Policy

- The National Planning Policy Framework (NPPF) (2021) replaces the former NPPF 2019, 2018 and 2012, and the former PPS9 document and emphasises the need for sustainable development. The Framework specifies the need to protect and enhance biodiversity and geodiversity, identify and safeguard components of local wildlife-rich habitats and wider ecological networks including the hierarchy of international, national, and locally designated sites of importance for biodiversity; wildlife corridors; and stepping that connect them. Plus partnerships for habitat management, enhancement, restoration, or creation. The Framework aims to promote the conservation, restoration, and enhancement of priority habitats, ecological networks, and the protection and recovery of priority species. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; appropriate mitigation or compensation measures are in place where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; and planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

Regional and Local Planning Policy

The London Borough of Bexley's Core Strategy (2023) Chapter 8 of the London Plan (2021) contain the following nature conservation policies that are considered relevant to the site.

POLICY SP9 Protecting and enhancing biodiversity and geological assets

In its planning decisions, planning policies and action plans, the Council will protect and enhance the borough's biodiversity and geodiversity assets, in line with national and regional policy, by:

- a. ensuring development in Bexley does not adversely affect the integrity of any designated European site of nature conservation importance;
- b. recognising the value of landforms, landscapes, geological processes and soils as contributors to the geodiversity of the borough by protecting designated Sites of Special Scientific Interest (SSSI), and Regionally Important Geological sites (RIGs) and Locally Important Geological sites (LIGs) and supporting their sustainable conservation and management;
- c. establishing clear goals for the management of identified geological sites, in order to promote public access, appreciation and interpretation of geodiversity;
- d. protecting, conserving, restoring, and enhancing ecological networks, Sites of Importance for Nature Conservation (SINC), Local Nature Reserves, Strategic Green Wildlife Corridors and local wildlife corridors, thus securing measurable net gains for biodiversity, recognising and promoting those sites where ecological value has increased to a higher grade of nature conservation importance;
- e. resisting development that will have a significant adverse impact on the population or conservation status of protected or priority species as identified by legislation or in biodiversity action plans prepared at national, regional or local level;
- f. protecting and enhancing the natural environment, seeking biodiversity enhancements, net gains for biodiversity and improved access to nature, particularly in areas of deficiency as illustrated by Figure 8, through new development and projects that help deliver opportunities for green infrastructure with preference given to enhancements that help to deliver the targets for habitats and species set out in the London Plan and local biodiversity action plans and strategies;
- g. enabling environmental education opportunities at the borough's schools, and investigating opportunities to involve the wider community in biodiversity or geodiversity restoration and enhancement through projects;
- h. ensuring landscaping schemes in development proposals use native plant species of local provenance; and,
- i. seeking opportunities to provide for greening of the built environment.

Policy implementation 5.107 Internationally protected sites include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar Sites (collectively referred to as Natura 2000 sites) and form part of an international network of protected areas for nature conservation. There are no Natura 2000 sites within the borough. However, possible pathways whereby development within the borough proposed by the Local Plan that may affect sites outside the borough have been assessed in the Habitat Regulations Assessment. 5.108 London's geological sites are protected through their designation as sites of special scientific interest (SSSI), regionally important geological sites (RIGS) or locally important geological sites (LIGS). SSSI have statutory protection and are nationally recognised for their flora and fauna, geological, or physiographical (landform) features. In Bexley, there are two SSSI: Abbey Wood in Belvedere, and Wansunt Pit in Crayford. 5.109 RIGS and LIGS complement the SSSI coverage and are the most important places for geology and geomorphology outside the statutory network. These are geological sites of particular importance in London and the borough that are identified by the London Geodiversity Partnership, working with the Greater London Authority (GLA). Much of our geological knowledge has come from the study of exposed rock faces and the fossil remains found in the rock strata, making geological sites a vital part of our historical

heritage. The list of sites may be updated periodically by the London Geodiversity Partnership. 5.110 There are three RIGS in Bexley: North End Pit in Erith Park; Chalky Dell; and the Erith Submerged Forest. In addition, Parish's Pit has been designated as a LIGS. Sustainable conservation, management and interpretation of Bexley's underlying geology is important as they provide an important resource for education and research. 5.111 Chapter 10 of the Bexley Green Infrastructure Study presents an overview of the ecological networks in Bexley, including Strategic Green Wildlife Corridors, Sites of Importance for Nature Conservation (SINC) and stepping stones between sites. There are also smaller unidentified local wildlife corridors within and between sites that support the functioning of the network. The boundaries and hierarchy of all designated SINC in the borough can be found on the adopted Policies Map. 5.112 The Bexley SINC Report provides additional details of SINC and Strategic Green Wildlife Corridors that are of the highest importance within the borough. The SINC Report will be updated following periodic reviews of the borough's SINC, recognising new SINC boundaries, updating site information and promoting those sites where ecological value has increased to a higher grade of nature conservation importance in the SINC hierarchy. The London Wildlife Sites Board offers help and guidance to boroughs on the selection of SINC. 5.113 Biodiversity and geodiversity are material considerations in determining planning applications regardless of whether ecological or geological features benefit from statutory protection. It must be recognised that important habitats and protected or notable species are not confined to designated sites but can be found on almost any site. 5.114 Applicants preparing development proposals that might have the potential to adversely impact a European site of importance for nature conservation outside the borough should seek advice from Natural England as to whether a Habitat Regulations Assessment will be required. Consideration should also be given to any potential adverse impacts on the Thames Estuary and Marshes SPA through increased visitor pressure and reduced water quality, and on Epping Forest SAC through reduced air quality. 5.115 Applicants should consider whether their development proposal is likely to affect an SSSI and choose whether to seek pre-application advice from Natural England. This will allow any potential impacts to be considered within the planning application and so minimise the risk of delays at the formal planning stage. Natural England's impact risk zone assessment tool helps inform whether the development proposal is likely to affect an SSSI. This uses a geographic information system to define potentially damaging developments and activities in order to help provide an important first line of defence for conserving natural features. 5.116 Development proposals, especially those that are within or adjacent to a designated Strategic Green Wildlife Corridor will be expected to protect, conserve, restore and enhance wildlife movement by creating and enhancing ecological network linkages including the protection and creation of dark corridors for nocturnal species, and/or enhancements between and through the development site and the corridor, where appropriate. 5.117 Notwithstanding the extensive network of biodiversity sites, parts of the borough are deficient in access to nature (see Figure 8). Development proposals should maximise opportunities for biodiversity enhancements; including pursuing opportunities to improve biodiversity in and around other developments as an integral part of design, especially where this can secure measurable net gains for biodiversity and enhance public access to nature. A biodiversity action plan, as part of a green infrastructure strategy for the borough, will provide further information. 5.118 The Council is committed to reducing habitat fragmentation from new development and increasing ecological connectivity. Development proposals should consider features such as living walls and roofs, hedgerows, tree networks, wildlife corridors and wildlife crossing points to improve connectivity for wildlife through developments. Taking action at a local level and through specific developments is supported. The introduction of features such as green roofs can provide insulation as well as improving the biodiversity value of a development.

DP20: Biodiversity and geodiversity in developments

Bexley contains a wide variety of wildlife habitats, including woodland, heathland, reed beds, rivers and streams, ponds, lakes, marshes, grassland and "open mosaic" – the latter a term usually given to the open, flower-rich habitat that develops on brownfield sites. Geology has strong ties with biodiversity, in that the nature of the substrate, as usually determined by the nature of the underlying rock, is a key factor in determining the distribution of habitats and species. 5.120 Bexley is home to a number of different plant and animal species. Some of these are rare or declining and are of regional or national importance. However, a species does not have to be rare or threatened to be interesting and important. They may have strong cultural significance, or simply look or sound beautiful. For example, key species in Bexley include black poplar, lesser calamint, bluebells, wild daffodil, common lizard, kingfisher, newts, skylark, stag beetle and water vole. 5.121 The richness of Bexley's natural environment also includes wildlife corridors along waterways and railways as well as on the River Thames and its tributaries, private gardens including residential front or back gardens that are of importance in terms of providing habitat and wildlife corridors or stepping stones, and contribute extensively, especially in outer London, to green infrastructure and the ability of wildlife to move between larger sites and extend their distribution into parts of London where they would otherwise not be present.

POLICY DP20 Biodiversity and geodiversity in developments Protection for biodiversity 1.

Development proposals will only be permitted where it can be demonstrated that: a. a strict approach to the mitigation hierarchy has been taken (i.e. avoid, mitigate, compensate and net gain) and all unavoidable impacts on biodiversity can be justified; b. completion of the development will result in a measurable long-term net gain for biodiversity, as demonstrated through the application of an acceptable method of measurement, and/or impact assessments; c. biodiversity enhancement measures and where appropriate mitigation measures have been incorporated within the design, layout and materials used in the built structure and landscaping; d. opportunities to help connect and improve the wider ecological networks, wildlife corridors and stepping stones for wildlife have been taken by creating linkages through the development site; e. deficiencies in access to nature conservation are reduced, where possible; and, f. opportunities to increase wildlife aesthetic value and visual connections with important features have been considered. Protection of designated sites and habitats 2. Development proposals that would have a direct or indirect impact on a site designated for its nature conservation or geological interest should protect and enhance the designated site's value, and will not be permitted unless all of the following criteria are met: a. there are no reasonable, less damaging, alternative solutions, locations or sites; b. ecological buffer zones have been incorporated into the scheme, where appropriate, to protect and enhance the designated site's intrinsic value; c. the continuity of wildlife habitat within wildlife corridors is maintained; and, d. access to the designated site is not compromised and where possible, access and/or interpretation is improved. Protection of Ancient Woodland and veteran trees 3. Irreplaceable habitats, including Ancient Woodland and aged or veteran trees found outside of Ancient Woodland will be protected from loss or deterioration resulting from development. Where development proposals may affect irreplaceable habitats and their immediate surroundings, the following principles of good practice shall be used to guide the site assessment and design of development: a. establishment of the likelihood and type of any impacts; b. implementation of appropriate and adequate mitigation, compensation, and management measures that respect the features and characteristics of the veteran trees and/or Ancient Woodland; c. provision of adequate buffers; and d. provision of adequate evidence to support development proposals.

Policy implementation Protection for biodiversity 5.122 Before starting a project, all applicants including householders and smaller developers should consider what current value their site has for wildlife, whether ecological surveys are needed, and what opportunities exist to enhance or create wildlife value through good design. The Design Guide SPD will provide additional information. Additionally, the Partnership for Biodiversity in Planning has created the Wildlife Assessment Check for householders and small to medium-scale developers. This tool considers whether there are any protected and priority wildlife species and statutory designated sites that may be impacted by a development project. Developers and ecological consultants can seek additional information from Greenspace information for Greater London (GiGL). GiGL manages and provides easy access to the most comprehensive source of environmental data in Greater London. 5.123 Natural England's guidance for developers preparing a planning proposal aims to help developers assess impacts on protected species and sets out what must be considered when planning a development on or near a site used by protected species. 5.124 All checks must be carried out at the pre-planning application stage to help clarify whether a possible development site needs professional ecological advice and further assessment, so that any outcomes from such assessments can inform the parameters and design of a project prior to the submission of a planning application. 5.125 Any development has the potential to impact, both negatively and positively, on local biodiversity through its effects on nature conservation features. Therefore, development proposals should demonstrate how each step of the mitigation hierarchy has been considered within the design, ensuring measures for mitigation, compensation, and biodiversity net gains are appropriate, in terms of design and location, and are secured for the lifetime of the development. Where appropriate, future maintenance, monitoring, and funding mechanisms will need to be secured. 5.126 Ecological assessments supporting development proposals should take into consideration the potential impacts of both the proposal itself and the potential cumulative impacts of wider development, including growth identified in this plan. If any species or habitat translocations are proposed, which should only be as a last resort, then this will need to be fully justified in the mitigation strategy submitted with the planning application. Translocations should be made within the borough, as close to the development site as possible, subject to the availability of suitable receptor sites. 5.127 To achieve net gain for biodiversity a development must leave biodiversity in a better state than it was before development took place, and proposals should address policy requirements at early stages of design. The Design Guide SPD will provide further guidance on net gain for biodiversity. Natural England's Biodiversity Metric can be used as a quantitative metric to calculate the biodiversity of a site before and after development. 5.128 Development proposals should demonstrate within the design and access statement and other material submitted with the planning application how biodiversity has informed the design. Major development, and where applicable smaller developments, will be expected to submit an ecological assessment that has informed the design, layout and type of enhancements incorporated in the proposal. Development proposals that cannot satisfy the requirements of the mitigation hierarchy will be refused planning permission in accordance with the NPPF.

Developments should contribute to the wider ecological network by reducing artificial light spill and including simple features such as permeable boundary walls and fencing for small mammals, or vegetative crossing points and eco-passages under roads to help maintain, create and enhance existing and new wildlife commuting routes. Additional small features such as 'swift bricks' and bat boxes in developments and safe routes for hedgehogs can further achieve important benefits for wildlife. 5.130 Features such as artificial nest sites, which are of particular relevance and benefit in an urban context, should be incorporated within the built structure. Where biodiversity features are incorporated within development proposals, conditions will be set that will seek to

protect the features to ensure their long-term retention and replacement if needed. 5.131 Nature conservation is not restricted to the preservation of wildlife but goes hand in hand with the enjoyment of it by all people. During the design process, consideration should be given to the visual qualities of nature conservation features, both on and offsite; and how views of them can be enhanced. 5.132 Access to nature is an important consideration, especially in areas where deficiencies have been identified (Figure 8). In these areas, it is particularly important that opportunities be taken to preserve, enhance or create areas of nature conservation value, so that people are able to have access to enjoy nature. 5.133 For those sites not within nature conservation deficiency areas, it is also important to consider opportunities to further improve accessibility to nearby SINC. Some access is desirable to all but the most sensitive of SINC. Therefore, improving access to protected sites must first be subject to an assessment of potential impacts. Opportunities to improve biodiversity in and around other developments should be pursued as an integral part of their design, especially where this can secure measurable net gains for biodiversity and enhance access to nature. Protection of designated sites and habitats 5.134 Designated sites and habitats are set out in Policy SP9 and identified on the adopted Policies Map. The identification of direct and indirect impacts of a development proposal that is adjacent to or incorporates a designated site within its site boundary should be informed by an impact assessment. Proposals will need to demonstrate how the overall spatial design has avoided and minimised negative impacts on the designated site and maximised opportunities to benefit the designated site's intrinsic value. Protection of Ancient Woodland and veteran trees 5.135 Most of the woodland areas within the borough lie within designated SINC and comprise broadleaved woodland with some small pockets of coniferous woodland scattered across Bexley, including 134 acres of Ancient Woodland. All areas of Ancient Woodland within the borough are also covered by a SINC designation. Several areas of Ancient Woodland are of a notable size, including Lesnes Abbey Woods, which adjoins Bostall Woods in Greenwich, and Joyden's Wood, which crosses the boundary into Dartford. Several smaller fragmented areas of Ancient Woodland are distributed throughout the borough, either within residential areas or included within other open spaces. Locations of Ancient Woodland identified in the Bexley Green Infrastructure Study are shown on the adopted Policies Map. 5.136 Development must be designed to avoid the loss of, or in the case of adjacent development detrimental impact on, irreplaceable habitat. If a development is likely to harm Ancient Woodland or veteran trees, unequivocal and credible evidence should be prepared to justify the exceptional need and benefits and submitted alongside the planning application. The need for housing, or need for new transport infrastructure, does not constitute exceptional circumstances. 5.137 Natural England and Forestry Commission Standing Advice on Ancient Woodlands and Veteran Trees should be considered when assessing planning applications. Further guidance on how to adopt principles of good practice is detailed within the Woodland Trust's Practical guide on planning for Ancient Woodland. Natural England and the Woodland Trust provide inventories of Ancient Woodland. Smaller areas of Ancient Woodland may not appear on these inventories and therefore GiGL, London's local record centre, may hold data on these smaller areas.

Policy DP21 Greening of Development sites

The 'greening' of Bexley's streets, buildings and other public spaces does more than change the look of these places. Roofs and walls covered in plants, street trees and small pocket parks in between buildings make the borough a better place to live, work and invest. These greening features function as an important part of Bexley's green infrastructure network: cleaning the air, reducing the risk of flooding; helping to cool the borough; and providing important habitats for species. Certain habitats such as wetlands can reduce the impacts of water run-off and hence reduce flood risk and pollution of waterways. 5.139 Wildlife habitats and access to them also play a vital part in human wellbeing. The benefits to local people provided by nature conservation features can be far ranging. They include valuable ecosystem services such as mitigating the damaging effects of air pollution and climate change, as well as aesthetic and amenity benefits. Trees and planting can provide a valuable shading effect in summer and insulation effect in winter. POLICY DP21 Greening of development sites

1. Development proposals should set out what measures have been taken to achieve urban greening onsite; and all new major developments should quantify what urban greening factor (UGF) score has been achieved.
2. Development proposals will be required to provide a high standard of landscape design, having regard to the well-being, water, wildlife and character of the surrounding area, ensuring sustainable planting for the long term and be supported by appropriate management and maintenance measures.
3. There will be a presumption in favour of the retention and enhancement of existing trees, woodland and hedgerow cover on site; and planning permission will not normally be permitted where the proposal adversely affects important trees, woodlands, or hedgerows.
4. Development proposals should maximise potential for the planting of new native trees and hedges within the development site and new streets should be tree-lined, unless, in specific cases, there are clear, justifiable and compelling reasons why this would be inappropriate.

Planting and landscaping within developments and ecological buffer zones: a. will be required to contribute to habitats and features of landscape and nature conservation importance; and, b. must not include 'potentially invasive, non-native species' and, where found on a site, appropriate measures to remove these species must be taken as part of the redevelopment. Policy DP21 Greening of development sites Policy implementation 5.140 Applicants are required to incorporate urban greening measures in the layout and design of a scheme with the aim of achieving a UGF score of at least 0.4 for major residential schemes and at least 0.3 for major mixed-use or commercial schemes. These targets are a starting point that will inform the right level of greening for each development. 5.141 Several accreditation schemes have been developed that set standards for the quality of green infrastructure within developments. Proposals which undergo a recognised accreditation process will be considered positively. 5.142 The UGF should be based on the factors set out in Table 8.2 of the London Plan, following Policy G5 Urban Greening. This will help to increase green cover across each development. In areas where there is little opportunity for additional vegetation at ground level, the UGF will promote the incorporation of green walls and green/brown roofs. The Mayor's London Plan guidance on the UGF sets out more information. 5.143 Chapter 9 of the Bexley Green Infrastructure Study sets out evidence on existing urban greening features in Bexley and the Design Guide SPD will provide additional guidance on incorporating greening into developments. 5.144 Planting schemes should be selected according to their suitability for local growing conditions (soil, temperature ranges, rainfall, sunlight and shade), the ability to attract wildlife (e.g. nectar rich planting) and conserve water. The selection of species for planting schemes should also consider the species' long term sustainability in a changing climate. This will need to be evidenced in a Design and Access Statement and soft landscaping plans to ensure the right plants are located in the right place. 5.145 As part of the formal planning process, all trees and hedges present on a proposed development site should be assessed to establish their amenity, nature or landscape conservation value. The Council expects that trees or hedges deemed to have significant value will be retained and protected from harm. Their significance may be as a result of their size, form and maturity, aesthetic value or because they are rare or unusual, form part of Ancient Woodland or hedgerow, have a veteran tree status, are protected under a tree preservation order, or are used by protected or priority species or other species uncommon in Bexley. 5.146 Applicants should check with the planning authority to ascertain whether any trees potentially affected by the proposed development are protected by way of a Tree Preservation Order (TPO) or Conservation Area. When considering felling trees related to development, consents for tree felling may be required under different regimes, even if a planning application is not needed. The Forestry Commission guidance on planning applications affecting trees and woodland provides advice on when to consult the Forestry Commission.

A landscaping scheme should be submitted alongside the planning application that makes provision for the retention of existing trees, hedges and species-rich grassland with significant value. Younger trees or hedges that have the potential to add significant value to the landscape character in the future should also be retained where possible. Their retention should be reflected in the layout of the development proposal, allowing sufficient space for new and young trees to grow to maturity, both above and below ground. 5.148 Due to the environmental importance of trees, implementing at least a '1 for 1' replacement rate is desirable for any tree affected by development. The Council expects developments to incorporate additional trees wherever possible. Where trees are incorporated within development proposals, conditions will be set that will seek to protect the trees to ensure their long-term retention and replacement if needed. 5.149 Not all hedges are beneficial to the environment and, in certain cases, planting the wrong type of hedging plants can lead to difficulties. Hedge heights can sometimes detract from the reasonable enjoyment of a home or garden. Part 8 of the Antisocial Behaviour Act 2003 gives local authorities powers to determine complaints submitted by householders in respect of a neighbour's high hedge. Further information and advice on high hedges can be found on the Council's website. 5.150 Landscaping should aim to complement the biodiversity of the locality and incorporate native plant species. Where appropriate the Council will accept non-native species for trees and other plants, as long as they are deemed to be suitable and non-invasive. Opportunities to increase wildlife aesthetic value and visual connections with important features should be considered. This is particularly important where the application adjoins a Site of Importance for Nature Conservation, Local Nature Reserve or is within or adjacent to a Strategic Green Wildlife Corridor. Where appropriate, the Council will require details to be provided within a Landscape and Ecological Management Plan. 5.151 In selecting appropriate trees and layout for new tree-lined streets, applicants should work with the local planning authority including local highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users. 5.152 Planting new trees and shrubs, especially of native species, can help to soften the harsh lines of new built development and add interest to the design. The benefits of trees include improved mental health and wellbeing, contributing to the beauty and quality of the street scene, providing shade and cooling to offset the 'heat island effect,' providing habitats, mitigating against the risk of surface water flooding, reduction in noise pollution, filtering pollutants from the air, and preventing shrinking and heave during hotter weather. 5.153 Potentially invasive, non-native species are listed in Schedule 9 of the Wildlife and Countryside Act. Invasive non-native species (INNS) are one of the largest threats to global biodiversity after habitat loss and destruction. The London Invasive Species Initiative (LISI) has been created to help address these environmental and economic problems within the Greater London area and has compiled a list of species of concern. 5.154 Development sites where invasive non-native species are present (most commonly Japanese knotweed) require coordinated and considered action to ensure that there is no breach of relevant legislation or no threat of spread. Where they are present on a development site, appropriate methods must be used to ensure they are removed. The following steps should be followed: 1. early detection; 2. create a site plan; 3. control; 4. contain; 5. keep records and monitor. 5.155

The LISI website should be referred to and the guidance provided should be followed. The Great Britain Non-Native Species Secretariat (NNSS) and the Invasive Non-Native Specialists Association (INNSA) provide further guidance.

London Plan (2021). Chapter 8

Policy G1 Green infrastructure:

'a London's network of green and open spaces, and green features in the built environment, should be protected and enhanced. Green infrastructure should be planned, designed and managed in an integrated way to achieve multiple benefits. b Boroughs should prepare green infrastructure strategies that identify opportunities for cross-borough collaboration, ensure green infrastructure is optimised and consider green infrastructure in an integrated way as part of a network consistent with Part A. c Development Plans and area-based strategies should use evidence, including green infrastructure strategies, to: 1) identify key green infrastructure assets, their function and their potential function 2) identify opportunities for addressing environmental and social challenges through strategic green infrastructure interventions. d Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network'.

Policy G5 Urban greening

Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage. B Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses). C Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Table 8.2.

Policy G6 Biodiversity and access to nature: '

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

Policy G7 Trees and woodlands

'a London's urban forest and woodlands should be protected and maintained, and new trees and woodlands should be planted in appropriate locations in order to increase the extent of London's urban forest – the area of London under the canopy of trees. b In their Development Plans, boroughs should: 1) protect 'veteran' trees and ancient woodland where these are not already part of a protected site¹³⁹ 2) identify opportunities for tree planting in strategic locations. c Development proposals should ensure that, wherever possible, existing trees of value are retained.¹⁴⁰ If planning permission is granted that necessitates the removal of trees there should be adequate replacement based on the existing value of the benefits of the trees removed, determined by, for example, i-tree or CAVAT or another appropriate valuation system. The planting of additional trees should generally be included in new developments – particularly large-canopied species which provide a wider range of benefits because of the larger surface area of their canopy.'

Regional and Local BAPs

Many local authorities in the UK have produced a local Biodiversity Action Plan (LBAP) implemented at a County or District level. The London Biodiversity Action Plan has been developed and is based on the UK list of Species and Habitats of Principal Importance and contains 214 species and 11 habitats.

Appendix D

Plant Species List

Plant Species List

Scientific nomenclature follows Stace (2010) for vascular plant species and British Bryological Society (BBS) Special Volume No. 5 *English Names for British Bryophytes* for bryophyte species. Vascular plant common names follow the Botanical Society of the British Isles 2003 list, published on its web site, www.bsbi.org.uk. The plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally

Key to qualifiers: G = garden origin, P = planted, Y = young, S = seedling or sucker, T = tree, H = hedge, W = water, ? = identification uncertain.

Scientific Name	Common Name	Abundance	Qualifier
<i>Acer pseudoplatanus</i>	sycamore	O	T
<i>Achillea millefolium</i>	yarrow	O	
<i>Betula pendula</i>	birch	O	T
<i>Buddleia davidii</i>	Buddleia	O	
<i>Calystegia silvatica</i>	giant bindweed	O	
<i>Cirsium arvense</i>	Creeping thistle	D	
<i>Cirsium vulgare</i>	Spear thistle	F	
<i>Crataegus monogyna</i>	Hawthorn	O	
<i>Dactylis glomerata</i>	cocks foot	O	
<i>Festuca sp.</i>	Fescues	O	
<i>Fraxinus excelsior</i>	Ash	O	T
<i>Geranium robertianum</i>	Herb Robert	O	
<i>Hedra helix</i>	Ivy	A	
<i>Helminthotheca echioides</i>	Bristly oxtongue	A	

<i>Ipsacus fullonum</i>	Teasle	R	
<i>Lathyrus pratensis</i>	Meadow vetchling	O	
<i>Linaria vulgaris</i>	Common toadflax	A	
<i>Lolium perenne</i>	Perennial rye grass	O	
<i>Lotus corniculatus</i>	Birdsfoot trefoil	O	
<i>Phragmites australis</i>	Common reed	O	
<i>Plantago lanceolata</i>	Ribwort plantain	F	
<i>Potentilla reptans</i>	creeping cinquefoil	O	
<i>Pteridium aquilinum</i>	Bracken	O	
<i>Quercus robur</i>	Oak	O	T
<i>Ranunculus repens</i>	Creeping buttercup	O	
<i>Rapistrum sp.</i>	Bastard cabbage	A	
<i>Rubus fruticosus</i>	Bramble	F	
<i>Rumex obtusifolius</i>	Dock	O	
<i>Salix alba</i>	White willow	R	
<i>Sambucus nigra</i>	elder	O	
<i>Silene dioica</i>	red campion	O	
<i>Silene latifolia</i>	White campion	O	
<i>Sisymbrium officinale</i>	Hedge mustard	O	
<i>Taraxacum agg.</i>	Dandelion	O	
<i>Trifolium dubium</i>	Lesser trefoil	O	
<i>Trifolium repens</i>	White clover	O	
<i>Trifolium pratense</i>	Red clover	O	
<i>Tripleurospermum inodorum</i>	Scentless mayweed	A	
<i>Urtica dioica</i>	Nettle	O	



<i>Verbascum</i>	Mullien	O	
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Appendix E

Suggested Compensatory Planting

Suggested Compensatory Planting

This section provides a list of plants which are of proven value to wildlife. The list is not exhaustive and merely provides a guide for suggested planting for wildlife value. Planting should be tailored on a site by site basis. The list includes some native and ornamental species however the emphasis should always be on the use of predominantly native species.

N = Native, NN = Non-native.

This list includes species that may be harmful if handled or ingested. Schedule 9 (Part 2) of the Wildlife and Countryside Act, 1981 (as amended) includes a list of invasive plants, including aquatic species, that should always be avoided in planting schemes.

Large Shrubs

Hedge veronica/Hebe (*Veronica* spp.) NN

Hawthorn (*Crataegus monogyna*) N

Blackthorn (*Prunus spinosa*) N

Rose: dog rose (*Rosa canina*), field rose (*R. arvensis*), burnet rose (*R. pimpinellifolia*) N

California lilac (*Ceanothus* spp.): (*C. arborea*) NN

Wild privet (*Ligustrum vulgare*) N

Common holly (*Ilex aquifolium*) N

Barberry (*Berberis* spp.): (*B. darwinii*), (*B. thunbergii*), (*B. x stenophylla*) NN

Daisy Bush (*Olearia* spp.): (*O. x hastii*), (*O. macrodonta*), (*O. traversii*) NN

Firethorn (*Pyracantha coccinea*) NN

Hazel: (*Corylus avellana*) N, (*C. maxima*) NN

Viburnum (*Viburnum* spp.): wayfaring tree (*V. lantana*) N, guelder rose (*V. opulus*) N, laurustinus (*V. tinus*) NN. Note: *V. lantana* can become invasive in more open habitats.

Dogwood (*Cornus sanguinea*) N

Broom (*Cytisus scoparius*) N

Escallonia (*Escallonia macrantha*) NN

Hardy fuchsia (*Fuchsia magellanica*) NN

Buckthorn (*Rhamnus cathartica*) N

Spindle (*Euonymus europaeus*) N

Tutsan (*Hypericum androsaemum*) N

Yew (*Taxus baccata*) N

Trees

Cherry (*Prunus* spp.): wild cherry (*P. avium*), bird cherry (*P. padus*), domestic plum (*P. domestica*) N, or cherry plum (*P. cerasifera*) NN

Ash (*Fraxinus excelsior*) N

Apple (*Malus* spp.): edible apple (*M. domestica*), crab apple (*M. sylvestris*) N

Pear (*Pyrus* spp.): edible pear (*P. communis*) NN

Small-leaved lime (*Tilia cordata*) N

Silver birch (*Betula pendula*) N

Yew (*Taxus baccata*) N

Black poplar (*Populus nigra*) N

Foxglove tree (*Paulownia tomentosa*) NN

Beech (*Fagus sylvatica*) N

Climbers

Jasmine (*Jasminum* spp.): summer jasmine (*J. officinale*), winter jasmine (*J. nodiflorum*) NN

Ivy (*Hedera helix*) N

Climbing hydrangea (*Hydrangea anomala* ssp. *petiolaris*) NN

Honeysuckle (*Lonicera* spp.): (*L. periclymenum*) N

Clematis (*Clematis* spp.) NN

Hop (*Humulus lupulus*) N

Firethorn (*Pyracantha atalantioides*) NN

Bulbs

English bluebell (*Hyacinthoides non-scripta*) N

Squill species (*Scilla* spp.) N/NN

Snowdrop (*Galanthus nivalis*) N

Winter aconite (*Eranthis hyemalis*) E

Crocus species (*Crocus* spp.) NN

Wild Daffodil (*Narcissus pseudonarcissus*) N

Onion species (*Allium* spp.) N/NN. Note: *Allium triquetrum* (three cornered leek) and *Allium paradoxum* (few-flowered leek) are Schedule 9 invasive plant species.

Wood anemone (*Anemone nemorosa*) N



Lesser celandine (*Ficaria verna*) N


Appendix F

Bird and Bat Box Designs



Bird and Bat Box Designs

Bird Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	Schwegler Nest Box 1B Hole-fronted 26mm entrance hole	16 x 16 x 23	Multi-purpose, including: blue-, marsh-, coal-, and crested tit, and possibly wren. All other species are prevented from using the nest box due to the smaller entrance hole.	Suitable walls or semi-mature/mature trees and shrubs; attached to a tree trunk or hung from branches. Ideal points include discrete areas away from predators, such as against walls, plant, and metal supports.
	Schwegler Bird House 32mm entrance hole	15 x 21 x 33	Multi-purpose, including: great-, blue-, marsh-, and coal tit, redstart, nuthatch, pied flycatcher, and sparrows.	Fixed to a semi-mature/mature tree trunk, wall or fence using the hanging bracket on the back. Between 1.5 m and 3 m high, and should be sited higher if area has a particularly high cat population.

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	Schwegler Sparrow Terrace 1SP	20 x 43 x 24.5	House sparrow. It may also occasionally attract tits, redstarts, and spotted flycatchers.	<p>In an elevated position such as on post/platform within dense shrub/tree planting or on top of lighting columns. Alternatively, they could be attached to the side of a building.</p> <p>The terrace can be fixed on to the surface of a suitable wall or incorporated into the wall. It is suitable for all types of houses in built-up areas, and on industrial and agricultural buildings such as barns, sheds, and factories. Due to its weight (15kg), it is not suitable for fences or garden sheds. Ideally place the terrace two metres or more above the ground. Either install on the surface of the wall using the plugs and screws provided or install directly into the wall. Cleaning is not necessary. The front panel can be removed by turning the screw hook.</p>

Bat Boxes

Example	Type	Dimension D x W x H (cm)	Target Species	Location
	2F Schwegler Bat Box (General Purpose) with or without Double Front Panel	16 x 16 x 33	<p>Without panel: Particularly successful with brown long-eared bat. Also used by noctule.</p> <p>With panel: Ideal for crevice-dwelling species: pipistrelles, Myotis species (particularly Daubenton's), Leisler's, and serotine.</p>	<p>On trees or buildings and at a height of 3 to 6m.</p> <p>In open sunny positions and in groups of 3 to 5 facing different directions.</p> <p>Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.</p>
	Chavenage Bat Box	10 x 18 x 38	<p>Small crevice-dwelling bats: e.g. pipistrelles.</p>	<p>On trees in gardens or woodland and also on house walls. 2.5 - 5m high on a building, mature tree, or vegetation line (trees/tall hedge) or on a feeding/flight route in partial daytime sun.</p> <p>Please note that once bats have inhabited a roost site they may only be disturbed by licensed bat workers.</p>

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