

1 Addington Road, Croydon

UPDATE ECOLOGICAL APPRAISAL AND BAT SURVEY REPORT

784-B028332



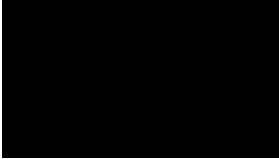
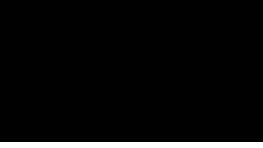
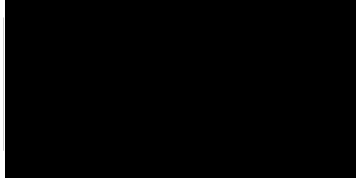
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EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located at 1 Addington Road in Croydon and is centred at Ordnance Survey National Grid Reference TQ 34000 61460 – see Figure 1.
Proposals	The proposal is for the demolition of the existing building and the construction of 30 retirement living apartments (C3) with a communal lounge, guest suite, lower ground floor car parking and refuse store, provision of new access on to Sanderstead Hill (closure of existing vehicle access), pedestrian access, landscaping and associated works. Landscape plan ref 21.054-BOSK-XX-00-DR-L-100-P02.
Existing Site Information	<p>An Ecological Appraisal was also carried out in 2019 by WYG (WYG, 2019a). The site was identified as having moderate suitability for roosting bats in the buildings and high suitability for roosting bats in trees.</p> <p>Dusk emergence and dawn return surveys were undertaken in 2019 (WYG, 2019b) during which a single common pipistrelle was seen re-entering building B1 during the dawn survey. Foraging and commuting activity was recorded for common pipistrelle only.</p>
Scope of this Survey(s)	<p>To undertake an update extended Phase 1 habitat survey of the site to provide an assessment of the likely presence of protected habitats and species. To recommend any further surveys or mitigation that will likely be required.</p> <p>Also, to undertake two dusk emergence and one dawn return survey for building B1 and one dusk emergence and one dawn return survey for building B2 to determine the presence or likely absence of roosting bats in buildings.</p>
Results	<p>There are no SPAs or SACs within 2 km of the site, however there are two SSSIs and one LNR within 2 km of the site. There are also twelve SINCs within 2 km of the site, the closest of which is Sanderstead Pond, 0.04 km south-east of the site.</p> <p>Habitats on site include: a small parcel of broad-leaved semi-natural woodland (which qualifies as HPI), dense scrub, poor semi-improved grassland, tall ruderal, introduced shrub, bare ground, hard standing and buildings. The woodland area has been reduced (via clearance) since 2019 and scrub is replaced by tall ruderal and bare ground.</p> <p>The site has suitability / potential to support the following protected / notable species:</p> <ul style="list-style-type: none"> • Roosting bats; • Foraging and commuting bats; • Reptile; • Hedgehog and • Breeding birds. <p>No bats were recorded roosting within buildings B1 & B2 on the site during the 2021 update surveys.</p> <p>Two species of bats were noted commuting and foraging on or nearby the site – common pipistrelle and <i>Nyctalus</i> sp.</p> <p>The Schedule 9 plant, Wall contoneaster was recorded on site.</p>

Recommendations

An European Protected Species Licence will be required after planning consent has been granted to allow lawful demolition of B1. This can be undertaken via site registration under the Bat Mitigation Class Licence or the standard licence route;

Trees should be protected during construction using root protection fencing around the root zones in accordance with British Standards BS 5837 2012: Trees in Relation to Construction.

Removal of the Schedule 9 invasive species wall cotoneaster.

A sensitive external lighting strategy should be implemented and works should only be undertaken during daylight hours to avoid adverse impacts on foraging and commuting bats.

Clearance of trees / vegetation to 30cm above ground should be undertaken outside of the nesting bird season, i.e. clearance should take place between October to February inclusive. Clearance to ground level (below 30cm) should be undertaken during the reptile and hedgehog active season (March to October).

A number of biodiversity enhancements are proposed including green roofs, invertebrate features and UK native planting.

GLOSSARY

Badger Act	Protection of Badgers Act 1992
BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BSI	British Standard Institute
BTO	British Trust for Ornithology
CEcol	Chartered Ecologist
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
DEFRA	Department for the Environment, Food and Rural Affairs
EclA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EPS	European Protected Species
EPSML	European Protected Species Mitigation Licence
GCN	Great Crested Newt
GiGL	Greenspace Information for Greater London
Habitats Regulations	Conservation of Habitats and Species Regulations 2017 (as amended)
HAP	Habitat Action Plan
Hedgerow Regulations	The Hedgerow Regulations 1997
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
HSI	Habitat Suitability Index
JNCC	Joint Nature Conservation Committee
LBAP	Local Biodiversity Action Plan
LISI	London Invasive Species Initiative
LNR	Local Nature Reserve
LWS	Local Wildlife Site
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
Natura 2000 site	A European site designated for its nature conservation value
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SAP	Species Action Plan
SPA	Special Protection Area
SPI	Species of Principal Importance
SSSI	Site(s) of Special Scientific Interest
W&CA	Wildlife & Countryside Act 1981 (as amended)

1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by Addington Road (1) LLP On 22nd June 2021 to undertake an Ecological Appraisal and Bat surveys of the site known as 1 Addington Road, Croydon.

This report has been prepared by Tetra Tech Assistant Ecologist Laura Grice PGDip and the conditions pertinent to it are provided in Appendix A.

1.2 SITE LOCATION

The site is located at 1 Addington Road in Croydon and is centred at Ordnance Survey National Grid Reference TQ 34000 61460– see Figure 1. The site comprises a two-storey residential property with associated garage and rear garden.

Immediately adjacent and to the north east of the site is ‘Sanderstead Heights’ a four storey development of 27 flats. Further to the east, along Addington Road is the Grade I listed ‘All Saints Church’. The north west boundary of the site faces the rear gardens of large detached properties located in The Woodfields, separated by a significant vegetation and mature tree buffer.

1.3 DEVELOPMENT PROPOSALS

The proposal is for the demolition of the existing building and the construction of 30 retirement living apartments (C3) with a communal lounge, guest suite, lower ground floor car parking and refuse store, provision of new access on to Sanderstead Hill (closure of existing vehicle access), pedestrian access, landscaping and associated works. Landscape plan ref 21.054-BOSK-XX-00-DR-L-100-P02.

1.4 PREVIOUS ECOLOGICAL INFORMATION

Previous surveys have been completed by the Ash Partnership in 2015 and 2017 and WYG in 2019. WYG re-branded to Tetra Tech in January 2021. Table 1 below summarises the results from the previous surveys.

Table 1: Existing Ecological Information

Report Type	Date	Summary
An extended Phase 1 habitat survey	August 2019, WYG	The site was identified as having moderate suitability for roosting bats in the buildings and high suitability for roosting bats in trees.
Bat Report	August 2019b, WYG	A single common pipistrelle was seen re-entering B1 during the dawn survey on 11th September. Foraging and commuting activity was recorded from common pipistrelle only.

1.5 PURPOSE OF THE REPORT

The purpose of this report is to complete:

- A desk study to obtain existing information on statutory and non-statutory sites of nature conservation interest and relevant records of protected/notable species within the site and its zone of influence;

- An extended Phase 1 Habitat Survey, involving a walkover of the site to record habitat types and dominant vegetation, including any invasive species, and a reconnaissance survey for evidence of protected fauna or habitats capable of supporting such species;
- To undertake bat surveys of buildings B1 and B2 to determine the presence or likely absence of roosting bats, their numbers and species, and;
- Provide an assessment of the potential ecological receptors present on site, identify any constraints they pose to future development and (if possible) provide recommendations for any further surveys, avoidance, mitigation or enhancement measures that are needed (as appropriate).

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

A summary of the key legislation is also provided in Appendix B.

2.0 METHODOLOGY

2.1 DESK STUDY

2.1.1 Local Ecological Records Centre

Information was requested from the Greenspace Information for Greater London (GiGL) in September 2019 by WYG on any nature conservation designations and protected or notable species records within 2 km of the site. The records of the above data search have been used to inform this report.

The data search covered:

- Statutory designated sites for nature conservation, namely Special Areas of Conservation (SACs), Special protection Areas (SPAs), Ramsar sites, Sites of Special Scientific Interest (SSSIs), National Nature reserves (NNRs) and Local Nature Reserves (LNRs);
- Non-statutory designated sites for nature conservation, namely Sites of Importance for Nature Conservation (SINCs);
- Legally protected species, such as great crested newts *Triturus cristatus*, badger *Meles meles* and bats;
- Notable habitats and species, such as those listed as Habitats or Species of Principal Importance (HPIs or SPIs); and,
- Priority habitats or species within the Croydon LBAP and London BAP.

The data search did not cover:

- Tree Preservation Orders (TPOs); or
- Conservation Areas designated for their special architectural and historic interest.

2.1.2 Online Resources

A search for relevant information from the area within 2 km of the boundary of the site was also made on MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations (see Figure 2), natural England's Priority Habitats Inventory and information on any European Protected Species Mitigation Licence EPSML applications that have been granted in the local area since 2011.

2.2 FIELD SURVEYS

The following methodologies have been used to identify the ecological receptors present on or near the site, which are relevant to the proposed development.

2.2.1 Habitats

An extended Phase 1 habitat survey was undertaken on the site on 16th July 2021 by Tetra Tech Assistant Ecologist Laura Grice PGDip. The weather conditions were dry, sunny, with temperatures of 25°C, Beaufort scale 0 - calm wind.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified in a Phase 1 Habitat Survey Handbook - *Phase 1 Habitat Survey: A Technique for Environmental Audit* (JNCC, 2010). Dominant plant species were recorded for each habitat present using nomenclature according to *New Flora of the British Isles* (Stace, 2019). The site was also appraised for its suitability to support notable flora, with regard to the *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017).

2.2.2 Protected & Notable Species

The site was inspected for evidence of, and its potential to support, protected or notable species, especially those listed under the Schedule 2 of the Habitat Regulations, Schedule 5 of the W&CA, the CROW Act, those given extra protection under the NERC Act, and species included in the Croydon LBAP and London BAP.

Great Crested Newt

The site was appraised for its suitability to support GCN. The assessment was based on Guidance outlined in the *Herpetofauna Workers' Manual* (Gent & Gibson, 2003) and the *Great Crested Newt Conservation Handbook* (Langton, Becket & Foster, 2001).

One waterbody was identified within 500m of the site using Ordnance Survey maps and aerial images. As recommended by Natural England (NE), the Oldham et al. (2000) Habitat Suitability Index (HSI) was applied to the water body. The water body 0.04 km SE from the site is in Sanderstead Pond SINC shown in Figure 1.

The HSI system provides an index between 0 and 1, with 0 indicating unsuitable habitat and 1 optimal habitat. Ten suitability indices are used to calculate the index score, each representing a factor considered to affect GCN. These factors are listed and briefly explained below:

1. Location: i.e. where the pond is located in the British Isles. Lowlands are generally thought to be most suitable; suitability declines with increases in altitude;
2. Pond area: i.e., the water surface area of a pond. Suitability peaks at approximately 800m²;
3. Pond drying: how often a particular pond dries out. Ponds which dry out more frequently are less suitable;
4. Water quality: an indication of water quality based on the invertebrate diversity present. High invertebrate diversity indicates high water quality and suitability;
5. Shade: an estimate of the total shaded perimeter of a pond. Shoreline shade below 60% is optimal;
6. Fowl: indication of impact by waterfowl. High waterfowl numbers are generally considered detrimental;
7. Fish: indication of fish abundance. High fish numbers are generally considered detrimental;
8. Pond count: based on the density of ponds occurring within 1km of a particular pond. Suitability is positively correlated with pond density;
9. Terrestrial habitat: based on the availability of suitable habitat in the pond vicinity, e.g. rough grassland, scrub and woodland; and
10. Macrophytes: based on an estimate of the percentage cover by emergent and aquatic vegetation. Suitability peaks at between 70% and 80% cover.

Results from individual water bodies are categorised as follows:

- <0.5 = poor
- 0.5 – 0.59 = below average
- 0.6 – 0.69 = average
- 0.7 – 0.79 = good
- >0.8 = excellent

Bats

Roosting Bats – Buildings / Structures / Trees

Any suitable buildings, structures or trees on site were assessed from the ground for their suitability to support breeding, resting and hibernating bats using survey methods based on the BCT *Bat Surveys*

for *Professional Ecologists: Good Practice Guidelines* (Collins, 2016) – hereafter referred to as the ‘BCT Guidelines’. The categories used to classify the bat roost suitability of any features found, are explained in Table 2 below.

Table 2. Categories of Bat Roost Suitability (BCT Guidelines)

Suitability	Typical Roosting Features
Negligible	Negligible habitat feature on site likely to be used by roosting bats.
Low	<p>A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation).</p> <p>A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.</p>
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis & potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.

Foraging/commuting Bats

The BCT Guidelines use the criteria in Table 3 below to categorise the potential value of habitats and features for use by foraging and commuting bats and these have been used to characterise the value of this site.

Table 3 Categories of Habitat Suitability (BCT Guidelines)

Suitability	Typical Foraging & Commuting Features
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	<p>Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat.</p> <p>Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.</p>
Moderate	<p>Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens.</p> <p>Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.</p>
High	<p>Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge.</p> <p>High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broad-leaved woodland, tree-lined watercourses and grazed parkland.</p> <p>Site is close to and connected to known roosts.</p>

Bat Dusk Emergence and Dawn Return Surveys

Bat dusk emergence and dawn return surveys were carried out on buildings B1 & B2 on site. Three surveys were carried out on B1 (which is known to be a confirmed bat roost from surveys in 2019) and two surveys were carried out on B2, assessed as having moderate suitability for roosting bats in accordance with the BCT Guidelines (Collins 2016). The BCT Guidelines recommend that bat surveys should be carried out between May and September, with at least two surveys for confirmed roosts and one survey for moderate suitability buildings undertaken between May and August. All surveys were carried out in July and August, as such, this timing follows the BCT Guidelines.

Surveyors were positioned around the buildings during each survey so that all potential bat access points or roosting features could be observed. Positions of surveyors around the buildings are shown on Figure 5.

Below is a list of the surveyors:

- Associate Ecologist Vivienne Greenough CEcol MCIEEM MSc BSc
- Assistant Ecologist Laura Grice PGDip
- Assistant Ecologist Hannah Goodenough BSc
- Assistant Ecologist Hannah Coutts BSc
- Assistant Ecologist Rob Schwar MSc
- Field Ecologist Marisa Costa
- Field Ecologist Carole Baber
- Field Ecologist Michael Cuff
- Field Ecologist Sarah Alexander

The surveyors used Elekon Batlogger M detectors to record bats (a real time, full spectrum, heterodyne detector with automatic tuning). The Batlogger tunes into the ultrasonic frequencies which the bats are calling at. The Batlogger is able to record directly onto a SD card, this allows recordings to be stored for later analysis, using 'Bat Explorer' version 2.1.7.0 software.

The dusk emergence surveys commenced 30 minutes before sunset and continued for at least 1.5 hours after sunset. The dawn return surveys commenced 1.5 hours before sunrise and continued until 15 minutes after sunrise.

All bat surveys were completed during the period when bats are active, within the optimum survey season and mostly (see limitations) within suitable weather conditions (above 10°C at start, dry and with calm winds).

Table 4 summarises the survey times and weather conditions of the dusk emergence / dawn return surveys.

Table 4: Dates, Timings and Weather Conditions for Dusk Emergence / Dawn Return Surveys

Date of Survey & Building	Start	Sunset/Sunrise	Finish	Temp (°C)		Rainfall	Wind (Beaufort Scale)	Cloud (%)
				Max	Min			
22/07/2021 B1	20:33	21:03	22:33	21	18	None	1	0
06/08/2021 B1&B2	04:01	05:31	05:46	16	16	Misty, damp conditions. Light	3	100

						shower 04:10- 04:32		
23/08/2021	19:37	20:07	21:37	15	14	None	2	20
B1& B2								

Reptiles

The site was appraised for its suitability to support reptiles. The assessment was based on guidance outlined in the Herpetofauna Workers' Manual (Gent & Gibson, 2003).

Badger

The site was surveyed for evidence of badger setts or other badger activity such as paths, latrines or signs of foraging. Methodologies used and any setts recorded were classified according to published criteria (Harris, Cresswell & Jefferies, 1989).

Hazel Dormouse

The site was surveyed for its suitability to support hazel dormice. The assessment was based on guidance outlined in Bright, Morris and Mitchell-Jones (2006).

Other Species

The site was also appraised for its suitability to support other protected or notable fauna including mammals, amphibians, birds and invertebrates with regard to the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017) and *BS42020:2013 Biodiversity – Code of Practice for Planning and Development* (BSI, 2013). Evidence of any current or historical presence of such species was recorded.

Invasive Species

The site was searched for evidence of invasive plant species, such as Japanese *knotweed Reynoutria japonica* (formerly *Fallopia japonica*), Indian (Himalayan) balsam *Impatiens glandulifera*, giant hogweed *Heracleum mantegazzianum*, wall cotoneaster *horizontalis* and rhododendron *ponticum*. A full list of all invasive plant species is provided in Appendix C.

2.3 LIMITATIONS

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in July which is in the optimal survey window.

All bat surveys were completed at appropriate times with reference to current best practice guidance (Collins, 2016).

During the second bat survey on 6th August, conditions were mild and damp with a very light mist in the air, a very light rain shower which from 04:10 to 04:32 occurred. However, it is not considered to be a limitation as bats were still recorded foraging - a common pipistrelle pass was heard during this time.

It was not possible to inspect the full extent of the 50 m buffer for badgers due to access restrictions on private property. This has been taken into consideration within this report.

To determine presence or likely absence of protected species usually requires multiple visits at suitable times of the year. As a result, this survey focuses on assessing the potential of the site to support species of note, which are considered to be of principal importance for the conservation of biodiversity with reference to those given protection under UK or European wildlife legislation. This report cannot therefore be considered a comprehensive assessment of the ecological interest of the

site. However, it does provide an assessment of the ecological interest present on the day the site was visited and highlights areas where further survey work may be recommended.

The Phase 1 Habitat survey will remain valid for a period of **18 months** from the date of the survey (February 2023), after which the validity of this assessment should be reviewed to determine whether further updates are necessary.

The details of the bat survey are considered to remain valid for a period of **one bat survey season** (until May 2022), subject to there being no significant changes to the development proposals.

Note that the recommendations within this report should be reviewed (and reassessed if necessary) should there be any changes to the red line boundary or development proposals which this report was based on.

3.0 BASELINE CONDITIONS

3.1 DESIGNATED SITES

The following designated sites of ecological importance have been identified within 2 km of the site and shown on Figure 2.

Table 5 Designated Sites Within 2 km

Designation	Site Name	Distance & Direction	Summary of features
SINC	Sanderstead Pond	0.04 km SE	<p>The pond is fringed with water-lily <i>Nymphoides peltate</i> and yellow water-lily <i>Nuphar lutea</i> forming extensive strands. Great reedmace <i>Typha latifolia</i> and yellow flag iris <i>pseudacorus</i> form much of the emergent vegetation and greater spearwort <i>Ranunculus lingua</i>, spiked milfoil <i>Myriophyllum spicatum</i> and greater duckweed <i>Spirodela polyrhiza</i> are among the less common London plants present, as is a good population of water-crowfoot <i>Ranunculus aquatilis</i>.</p> <p>This pond has a very good invertebrate fauna which includes several species of water snails, leeches, water boatmen, several species of water beetles as well as dragonflies and damselflies. Sticklebacks and roach occur as do common frogs <i>Rana temporaria</i> and smooth newts <i>Lissotriton vulgaris</i>.</p>
SINC Also classified as a HPI habitat Deciduous Woodland according to NE's Priority Habitats Inventory (Magic, 2021).	Sanderstead Plantation	0.3 km NE	<p>This wood is noted for its display of bluebells <i>Hyacinthoides non-scripta</i> during May, when the flowers form a blue carpet under the trees. The canopy of the wood is predominantly of pedunculate oak <i>Quercus robur</i> and ash <i>Fraxinus excelsior</i>. There is a line of beech <i>Fagus sylvatica</i> trees on the eastern boundary. On the chalk, the more interesting species in the ground flora include early dog-violet <i>Viola reichenbachiana</i> and sanicle</p>

			<i>Sanicula europaea</i> . There is an interesting list of birds, including breeding nuthatch <i>Sitta europaea</i> , spotted flycatcher <i>Muscicapa striata</i> , stock dove <i>Columba oenas</i> and chiffchaff <i>Phylloscopus collybita</i> .
SINC	Southeastern tip of Croham Hurst Golf Course	0.3 km NE	Part of a golf course with flower-rich chalk grassland.
SINC	Purley Downs Golf Course	0.8 km W	The woodland parts of this golf course have a well-developed canopy of oak and beech with occasional ash, yew <i>Taxus baccata</i> and sycamore and Norway maple <i>Acer pseudoplatanus</i> and <i>A. platanoides</i> . There is a good shrub and ground layer with many chalk grassland species. The chalk grassland contains a colony of the nationally scarce round-headed rampion <i>Phyteuma orbiculare</i> and a single recent record of the frog orchid <i>Coeloglossum viride</i> .
SINC	Mitchley Wood	0.8 km SW	Blocks of woodland, with adjacent grassland and scrub. There are records of pyramidal and common spotted orchids and large numbers of bee orchids <i>Ophrys apifera</i> , together with other chalk grassland plants amongst the ash, hawthorn <i>Crataegus monogyna</i> , oak <i>Quercus robur</i> and birch <i>Betula</i> sp. scrub.
SINC	Purley Beeches	0.9 km NW	This woodland comprises native beech <i>Fagus sylvatica</i> with an understorey of yew and whitebeam <i>Sorbus aria</i> . There is an area of coppiced hazel <i>Corylus avellana</i> . The ground flora includes abundant sanicle <i>Sanicula europaea</i> and pignut <i>Conopodium majus</i> . The woodland is a good place for birdwatching, and has good numbers of both redwings <i>Turdus</i>

			<i>iliasus</i> and fieldfares <i>Turdus pilaris</i> in winter.
SINC	Kings Wood	1.0 km SE	An ancient oak woodland on clay overlying chalk. The wood possesses a rich breeding avifauna including all three British woodpeckers, nuthatch <i>Sitta europaea</i> and wood warbler <i>Phylloscopus sibilatrix</i> , a rare bird for London.
SINC	Croham Hurst	1.3 km N	This site combines heathland and ancient woodland on acidic soils with flower-rich grassland on chalk. Much of the site is SSSI.
SSSI	Croham Hurst	1.3km N	Croham Hurst is an area of ancient woodland with a range of stand types that reflect the variations in the underlying geology.
SINC	Riddlesdown and The Rose and Crown Chalk Pit	1.5 km SW	This area of chalk grassland, broken up by areas of woodland, scrub and chalk cliffs, supports many unusual plants and insects, particularly butterflies.
SINC	Kingswood Shaw, Mossy Hill and Beech Way Woodland	1.5 km SE	Woods, with mown grass areas in between, and areas of chalk grassland with a good range of wild flowers.
SSSI	Riddlesdown Common	1.6 km SW	Riddlesdown Common covers an extensive section of a south west facing scarp slope towards the northern end of the North Downs. The site is of particular interest as the largest single expanse of long-established calcareous scrub in Greater London and also for its herb-rich chalk grassland. The variety of shrub and tree species within the scrub is unusually diverse for the county and includes a particularly high abundance of mature yew. Of additional interest is the assemblage of invertebrate species supported by the wide diversity of herbs in the open habitats of the site. These include the nationally scarce Roesel's

			bush cricket <i>Metriopectera roeselii</i> , 8 nationally scarce species of beetle and 19 species of butterfly.
SINC	Littleheath Woods	1.6 km NW	Ancient woodland good for wildlife with areas of grassland and a pond.
LNR	Selsdon Wood Nature Reserve	1.7 km E	Selsdon Wood comprises ancient woodland, secondary woodland and calcareous/neutral grassland. The woodland supports a diverse range of bird species as well as a number of mammal and reptile species.
SINC	Selsdon Wood	1.7 km E	A large ancient wood with a variety of plants and an excellent range of breeding birds. There are further rare plants in the adjacent meadows.

The closest Natura 2000 site is Wimbledon Common SAC located 14.1km north-west of the site. It is not considered further in this report as it is located far away from the site and will not be affected by the development.

3.2 ANCIENT WOODLAND AND HABITATS OF PRINCIPAL IMPORTANCE

Nine parcels of ancient semi-natural woodland are located within 2 km of the site, the closest of which is Mitchley Wood (17ha) located 0.8km south-west of the site. This habitat is also a HPI under the NERC Act, 2006 (Magic, 2021).

16 parcels of deciduous woodland (closest circa 0.3 km east) are located within a 1 km radius of the site according to NE's Priority Habitats Inventory (Magic, 2021).

3.3 HABITATS

The following habitats have been identified through our assessment, with detailed Target Notes included in Appendix C and shown on Figure 3, as appropriate:

3.3.1 Broad-leaved Semi-natural Woodland

A small parcel of broad-leaved semi-natural woodland was present within the north west corner of the site (TN1). It comprised mature sycamore *Acer pseudoplatanus*, beech *Fraxinus excelsior* and yew *Taxus baccata* and contained sparse understorey of bramble *Rubus fruticosus* agg. The woodland ranged in height 10-20 m tall and qualifies as HPI under the NERC Act, 2006.

3.3.2 Scattered Trees

Scattered trees (mostly sycamores) were present alongside the site boundaries, at the north, north-east of the site and next to building B1 (TN2).

3.3.3 Dense Scrub with Scattered Trees

Dense scrub with scattered trees was located along most of the north eastern boundary of the site. Species comprised sycamore *Acer pseudoplatanus*, beech, blackthorn *Crataegus monogyna*, large

leaved lime *Tilia platyphyllos* and hawthorn *Crataegus monogyna*, amongst others, with an understorey of bramble (TN3).

3.3.4 Dense Continuous Scrub

Two parcels of dense continuous scrub were present next to buildings B1 and B2, including species such as bramble, hedge bindweed *Calystegia sepium*, common nettle *Urtica dioica* and hogweed *Heracleum sphondylium* (TN4).

3.3.5 Poor Semi-Improved Grassland

Two parcels of poor semi-improved grassland were located in the south of the site, with a sward height ranging from 10-45 cm (TN5). Grassland covered 90% of the ground cover with 10% bare ground cover and was dominated by Yorkshire fog *Holcus lanatus* and creeping bent *Agrostis stolonifera* (see TN5 in Appendix C for full species list).

3.3.6 Introduced Shrub

A row of planted introduced shrub (TN6) was present at the front of B1 and next to B2. The shrub ranged from 50 cm to 2.2 m tall and included Jasmin sp. *Jasminum sambac*, Japanese spindle tree *Euonymus japonicus* and hardy fuchsia *Fuchsia magellanica* (see TN6 in Appendix C for full species list).

3.3.7 Tall Ruderal

Tall ruderal dominated the northern side of the site (where former broad-leaved semi-natural woodland once existed). Species included common nettle, hedge bindweed, hogweed, creeping thistle *Cirsium arvense*, ragwort *Jacobaea vulgaris*, meadow buttercup *Ranunculus acris* and occasional stands of bramble (see TN7 in Appendix C for full species list).

3.3.8 Bare Ground

Bare ground (TN8) with some wood chippings on the top was present in between patches of tall ruderal and alongside north-western and northern side boundary.

3.3.9 Hardstanding

A tarmac driveway and access road were located in the south of the site (TN9). No vegetation was recorded on the hardstanding.

3.3.10 Buildings

The site contained two buildings. B1 is a two-storey residential brick building with a tiled pitched roof. The 2nd floor of the building consist of hanging clay tiles, with PVC surrounding the windowsills. B2 is a small garage with brick walls and a tiled pitched roof with clay hanging tiles. Further details relating to the bat roost assessment of these structures are provided in Table 6 in Section 3.4.2.

3.4 PROTECTED & NOTABLE SPECIES

3.4.1 Great Crested Newt

The desk study did not return any records for great crested newt; however, it did return 10 records of common toad *Bufo bufo* 0.7 km north-west of the site and 38 records of common frog *Rana temporaria* 0.3 km east of the site. Smooth newts are listed as present within the Sanderstead Pond SINC, as specified on the citation document.

There were no granted EPSML applications for GCN within 2 km of the site boundary. The nearest was 2.5 km north-east of the site granted in 2013, for the destruction of a resting place for GCN.

One pond (WB1) known as Sanderstead Pond SINC is present within 500 m of the site boundary. It is located 0.4 km south-east, beyond the Addington Road A2022 and measures 1.3 ha (see Figure 1 for location). It is separated from the site by a busy road and concrete pavements. WB1 is known to support common frogs and smooth newts. A HSI assessment was carried out for WB1 which determined that this water body was classified as poor (score 0.26) suitability to support GCN due to the major presence of fish (carp), major waterfowl and of no other waterbodies present within 1 km.

The site contained patches of dense scrub, semi-improved grassland and woodland habitat which provide suitable habitat for the terrestrial phase of the GCN life-cycle. However, the only waterbody (WB1, assessed as forming poor quality aquatic habitat for GCN) within 500 m of the site is separated from the site by the busy A2022 Addington Road. This road is considered to form a significant barrier to the movement of GCN onto the site. Therefore, GCN are highly unlikely to be present within the site. It is also noteworthy that no records of GCN are found within the Sanderstead Pond SINC citation. As such, the site is assessed as having **negligible** potential for GCN and this species are not considered further in this assessment.

3.4.2 Bats

The desk study returned records of noctule bat *Nyctalus noctula*, common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*. Some records were only identified to genus including Chiroptera and Vespertilionidae. The most recent record was from 2017 for a common pipistrelle bat 1.8 km north-east of the site, and the nearest record was located 0.8 km south-east of the site for an unidentified bat species.

The search using MAGIC identified one granted EPSML application for bats within 2 km of the site boundary. The nearest was 0.2 km south-east of the site from 2016 (2016-27087-EPS-MIT), for the destruction of a resting place for common pipistrelle).

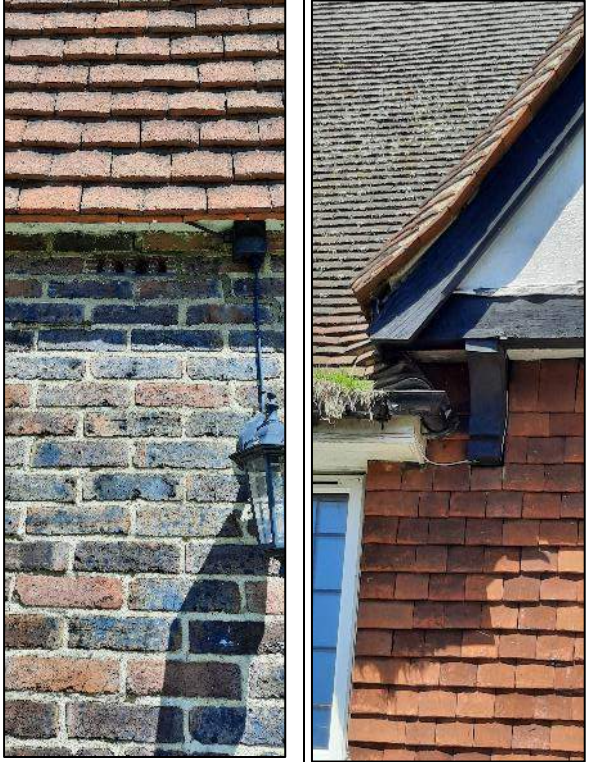

Roosting Bats – Trees



Two mature sycamore trees (T1&T2) with potential bat roosting features were located on the site. These are described along with pictures and an assessment of their bat roosting suitability in Table 6. The trees were assessed as having **moderate** suitability to support roosting bats.

Roosting Bats – Buildings

There are two buildings on the site, B1 is known to be a confirmed bat roost (from surveys carried out in 2019) whereas B2 was assessed as having **moderate** suitability to support roosting bats. These are described along with pictures and an assessment of their bat roosting suitability in Table 6.

Table 6. Building, Tree Description and Bat Roosting Suitability

Building / Tree Number	Description and suitability	Picture
B1	<p>The building contained features such as lifted and loose hanging tiles, gaps at end of ridge tiles, and gaps between the soffit and brickwork on all four aspects, within which bats could roost.</p> <p>B1 is a confirmed bat roost (from surveys carried out in 2019)</p>	
B2	<p>The building contained features such as loose tiles with gaps underneath and missing mortar ridge tiles on all four aspects, within which bats could roost.</p> <p>This building was assessed as having moderate suitability to support roosting bats.</p>	

<p>T1</p>	<p>Mature sycamore with a hole at 1.80 m high from the ground in a broad-leaved woodland parcel in the west of the site.</p> <p>This tree was assessed as having moderate suitability to support roosting bats.</p>		
<p>T2</p>	<p>Mature sycamore with a hole at 2 m high from the ground next to the site boundary in the east of the site.</p> <p>This tree was assessed as having moderate suitability to support roosting bats.</p>		

Commuting and Foraging Bats

The size of broadleaved woodland in the west of the site was significantly reduced since 2019 WYG EA survey (WYG, 2019a). However, the All Saints Church to the east of the site contains a large number of trees, linking the site to Sanderstead Plantation SINC 0.3km north-east of the site which is likely to also provide opportunities for foraging and commuting bats. Overall, bats are likely to be using the site and surrounding habitat, therefore the site itself has **moderate** suitability to support commuting and foraging bats.

3.4.3 Reptiles

The desk study returned seven records of slow-worm *Anguis fragilis* 0.8 km south of the site and one record of common lizard *Zootoca vivipara* 2 km north-west of the site.

The poor semi-improved grassland at the back of B1 had a suitable sward height for reptiles but lacked high diversity of plant species or varied structure, with no tussocks or underlying thatch suitable for reptiles. The dense scrub and three brash/plank piles (TN10) contained some refuge opportunities.

The site is relatively isolated by road infrastructure reducing the likelihood of reptiles being present on site. Overall, the site was considered to have **low** potential to support reptiles.

3.4.4 Badger

The desk study returned 66 records of badger within 2 km of the site, the most recent of which is from 2018. Their exact locations are classified and confidential.

The site is situated within a dense residential area with surrounding land dissected by numerous roads, many of which are subject to heavy traffic. However, the site itself contains a small parcel of woodland, dense scrub, semi-improved grassland and introduced shrub - habitat favoured by badger. All Saints Church cemetery 60 m south-east of the site and Sanderstead Plantation SINC 0.3 km north-east of the site also provide foraging habitat for badger.

3.4.5 Hazel Dormouse

The desk study did not return any records for the hazel dormouse within 2 km of the site. There were no granted EPSL applications identified for dormouse within 2 km of the site boundary.

The woodland parcel has reduced in size (from some clearance activities) since the previous report (WYG, 2019a). The northern side of the site was dominated by tall ruderal and bare ground with sparse ground flora and lacks any understorey. The site itself offers poor quality habitat for dormouse. Furthermore, the urban nature of the site and reduced canopy connectivity limit the sites connectivity to Sanderstead Plantation SINC 0.3km north-east of the. Therefore, the site was assessed as having **negligible** potential to support dormouse and they are not considered further in this report.

3.4.6 Otter & Water Vole

The desk study did not return any records of otters *Lutra lutra* or European water vole *Arvicola amphibius*. Due to a lack of waterbodies on site and within wider environment and the site being relatively isolated by roads and residential housing, the site was assessed as having **negligible** potential to support otter and water vole. Therefore, otters and water voles are not considered further in this assessment.

3.4.7 Birds

Over 1,000 bird records, comprising 65 species, were identified within the 2km desk study. This included one record of house sparrow *Passer domesticus*, a SPI and red listed species under the BoCC. Other bird species relevant to the site include two starling *Sturnus vulgaris* records, six song thrush *Turdus philomelos* records (both red listed under BoCC) and two records of swift *Apus apus* (amber listed under BoCC). One record of the Schedule 1 legally protected black redstart *Phoenicurus ochruros* was also returned.

The habitats on site including the parcel of woodland, scattered trees, dense scrub and introduced shrub are considered to offer **moderate** potential to support common species of birds, some of which may be SPI species or listed species on the red or amber lists of high or medium conservation concern (Eaton, M. et al. 2015).

3.4.8 Notable Mammals

The desk study returned 13 records of West European hedgehog *Erinaceus europaeus*, located 0.7km north-west of the site. The poor semi-improved grassland, dense scrub and woodland on the site provide a diversity of habitats which offer sheltering, hibernating and foraging opportunities for hedgehog. The road infrastructure around the site creates barriers and isolates the site from green corridors, but nonetheless, the site was assessed as having **moderate** potential to support hedgehog.

3.4.9 Invertebrates

The desk study did not return any notable invertebrate species within 2 km of the site. Also, no notable invertebrates were recorded during the site visit. The habitats within the site provide suitable habitats for common invertebrate species but the site offers **negligible** suitability habitat for rarer invertebrate species and are not considered further in this assessment.

3.4.10 Notable plants

A total of 76 records of plants of 36 species within 2 km of the site was identified through the desk study including four occurrences of bluebells, also found in the nearby Sanderstead Plantation SINC. However, notable plants were not recorded during Phase 1 survey and the majority of habitat comprised tall ruderal. Therefore, the site is not considered suitable to support notable species and are not considered further in this assessment.

3.4.11 Invasive Plants

A total of 23 London Invasive Species Initiative (LISI) were returned in the desk study. None of these species were recorded in the Phase 1 Habitat survey.

The Schedule 9 listed species under the W&CA and LISI category 2 invasive species, wall cotoneaster *Cotoneaster horizontalis* was identified on the site within the introduced shrub next to building B1 (TN6) and was also seen around building B2.

4.0 BAT SURVEY RESULTS

4.1 DUSK EMERGENCE / DAWN RETURN SURVEYS

4.1.1 Dusk emergence survey, 22th July 2021 – B1 Only

No bats were seen emerging from B1 during the survey. Incidental activity was recorded including 109 passes of common pipistrelle and four distant passes of Nyctalus sp. The first pass was common pipistrelle heard at 21:34 (29 minutes after sunset) and the last pass was a common pipistrelle at 22:33 (90 minutes after sunset). Some foraging was noted to the west, north, northwest and south of building B1.

4.1.2 Dawn return survey, 6th August 2021 – B1 and B2

No bats were seen re-entering B1 or B2 during the survey. Incidental activity included 28 passes of common pipistrelle. The first pass was a common pipistrelle heard at 4:08 (83 minutes before sunrise), and the last pass was a common pipistrelle at 04:58 (33 minutes before sunrise). Some foraging was noted to the north-east and north-west of buildings B1 & B2.

4.1.3 Dusk emergence survey, 23th August 2021 – B1 and B2

No bats were seen emerging from B1 or B2 during the survey. Incidental activity included 117 passes of common pipistrelle. The first pass was heard at 20:24 (17 minutes after sunset) and the last pass was at 21:37 (90 minutes after sunset). Some foraging was noted to the east, north and northwest of building B1.

No more than two bats were heard at any one time.

4.2 IMPORTANCE OF ECOLOGICAL FEATURES

In line with the CIEEM PEA Guidelines, and based on the above baseline information, the importance of each ecological feature recorded within the study area is given in Table 7 below. The categories used are those which are defined in Section 4 of the CIEEM EclA Guidelines (2018 v1.1):

Table 7 Importance of Ecological Features

Feature	Importance	Rationale
Croham Hurst SSSI and Riddlesdown Common SSSI	National	Croham Hurst is designated for its ancient woodland and Riddlesdown Common is valuable for its calcareous scrub and rich-herb grassland supporting a range of invertebrates.
Twelve SINCs	County	Twelve SINCs are designated as they are known to support a range of habitats and species.
Selsdon Wood LNR	County	This site contains ancient woodland which will support a range of species.
Broad-leaved semi-natural woodland	Local	The woodland comprises tree species that are all common and widespread with sparse ground flora. Classed as HPI.
Dense scrub with scattered trees	Negligible	This habitat contains low diversity of common and widespread plant species.
Poor semi-improved grassland / Introduced shrub / Tall ruderal/ Bare ground	Negligible	These habitats contain a low diversity of common and widespread plant species.
Hardstanding and Buildings	Negligible	These habitat holds no ecological value.
GCN	Negligible	Terrestrial and breeding populations likely to be absent from site.
Roosting bats	Local	B1 is a confirmed bat roost (from surveys in 2019).
Commuting and foraging bats	Unknown – but likely to be Local	The habitats including the woodland, dense scrub and semi-improved grassland are considered suitable for foraging and commuting bats. Small numbers if bats recorded in bat roost survey.
Reptiles	Negligible	Habitats on site have low potential to support reptiles.
Hazel dormouse	Negligible	The site unlikely to support dormouse.
Otter & water vole	Negligible	The site does not provide suitable habitat to support otters or water voles.
Birds	Local	The site is likely to support common birds and also for some SPI and LBAP species (house sparrow).
Notable mammals - Hedgehogs	Local	A small population of hedgehog could be using the site.
Invertebrates	Negligible	The habitats on site are considered suitable to support common invertebrates only.
Notable plants	Negligible	The habitats on site are unlikely to support notable flowering plants.

Feature	Importance	Rationale
Invasive plants	Negligible	Schedule 9 invasive species wall cotoneaster is present on site.
Either: International (incl. European) / National / Regional / County / Local / Negligible Or: Unknown (i.e. further surveys/information needed)		

The potential for the proposals to have adverse or beneficial impacts on these features, along with the need for any mitigation or enhancement measures are discussed in detail below.

5.0 RELEVANT PLANNING POLICY & LEGISLATION

5.1 REVISED NATIONAL PLANNING POLICY FRAMEWORK

A revised NPPF was issued on the 20th July 2021 (Ministry of Housing Communities and Local Government, 2021) and currently supplements government Circular 06/2005, *Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System* (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 174 of the NPPF also states that:

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

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan)*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

The conservation and enhancement of wildlife is also specifically reference re: development within the National Parks or the Broads.

Paragraph 180 then goes on to confirm that:

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

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*

- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.*

Regarding EclA's and HRA's – any sites identified, or required, as compensatory measures for adverse effects on any Natura 2000/habitats site should also be given the same level as protection as the pSPA's and cSAC's themselves. In addition, when an application is being determined, Paragraph 182 clarifies that:

“The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”

Paragraph 185 is also relevant as;

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:...

- c) *limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

5.2 BIODIVERSITY 2020: A STRATEGY FOR ENGLAND'S WILDLIFE & ECOSYSTEM SERVICES

Biodiversity 2020 (DEFRA, 2011) replaces the previous UK Biodiversity Action Plan and sets national targets to be achieved. The intent of Biodiversity 2020, however, is much broader than the protection and enhancement of less common species, and is meant to embrace the wider countryside as a whole.

The priority species and habitats considered under Biodiversity 2020 are the SPI & HPI detailed under NERC Act (see Appendix B for further details).

5.3 LOCAL BIODIVERSITY ACTION PLAN

Local Biodiversity Action Plans (LBAPs) identify habitat and species conservation priorities at a local level (typically County by County) and are usually drawn up by a consortium of local Government organisations and conservation charities. Although they are no-longer managed at a national level many are still reviewed and updated at a local level.

The Croydon LBAP is the relevant document for this site and it contains the following relevant Habitat & Species Action Plans:

Table 8 Croydon LBAP HAPs

Species Action Plans	
Cemeteries and churchyards	Woodlands

Table 9 Croydon LBAP SAPs

Habitats Action Plans	
House sparrow	Bats
Black redstart	Bumblebees - <i>Bombus</i> spp.
Reptiles	Stag beetle

It should be noted that the existence of a SAP or HAP does not always infer an elevated level importance for those features. These plans may be designed to encourage an increase in these habitats/species, rather than to protect a county-scarce feature (for example).

5.4 LOCAL PLAN

5.4.1 The London Plan 2021

The London Plan 2021: The Spatial Strategy for Greater London (GLA, 2021) contains the regional policies for the site.

Policy D8 Public realm

“I. incorporate green infrastructure such as street trees and other vegetation into the public realm to support rainwater management through sustainable drainage, reduce exposure to air pollution, moderate surface and air temperature and increase biodiversity”.

Policy G5 Urban greening

“A 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.”

“ 8.5.1 The inclusion of urban greening measures in new development will result in an increase in green cover, and should be integral to planning the layout and design of new buildings and developments. This should be considered from the beginning of the design process.

8.5.2 Urban greening covers a wide range of options including, but not limited to, street trees, green roofs, green walls, and rain gardens. It can help to meet other policy requirements and provide a range of benefits including amenity space, enhanced biodiversity, addressing the urban heat island effect, sustainable drainage and amenity – the latter being especially important in the most densely developed parts of the city where traditional green space is limited. The management and ongoing maintenance of green infrastructure should be considered and secured through the planning system where appropriate.”

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.”

5.4.2 Croydon Local Plan

The relevant policy from the Croydon Local Plan 2018 for biodiversity and protected species is set within Policy DM27 which states the following:

To enhance biodiversity across the borough and improve access to nature, development proposals should:

- a. Incorporate biodiversity on development sites to enhance local flora and fauna and aid pollination locally;*
- b. Incorporate biodiversity within and on buildings in the form of green roofs, green walls or equivalent measures;*
- c. Incorporate productive landscapes in the design and layout of buildings and landscaping of all major developments;*
- d. Have no adverse impact on land with biodiversity or geo-diversity value as designated on the Policies Map; and*
- e. Have no adverse impact on species of animal or plant or their habitat protected under British or European law, highlighted within a local/regional Biodiversity Action Plan, or when the Council is presented with evidence that a protected species would be affected.*

The Croydon Local Plan 2018, also includes the following relevant policies:

Policy SP7: Green Grid

SP7.1 In order to deliver new and enhanced green infrastructure commensurate with growth the Council will apply a presumption in favour of development provided applications assist in the delivery of a Green Grid and meet the requirements of Policy SP7 and other applicable policies of the development plan.

Green spaces

SP7.2 The Council will protect and safeguard the extent of the borough’s Metropolitan Green Belt, Metropolitan Open Land and local green spaces.

SP7.3 The Council will establish a network of multi-functional open spaces, a ‘Green Grid’, comprising those parts of the All London Green Grid together with other green spaces within the borough as shown in Figure 9.1. The Council and its partners will:

- a. Seek the provision and creation of new green spaces. With particular focus for areas deficient in access to nature, play areas, and publicly accessible recreational open space;*
- b. Improve access and links to and through green spaces to encourage walking, cycling and horse-riding;*
- c. Assist in the delivery of the Mayor’s All London Green Grid through the implementation of the London Downlands and Wandle Valley Area Frameworks;*
- d. Maintain and improve the quality, function and offer of open spaces across the borough for all users; and*
- e. Maximise opportunities for street tree planting, green roofs, green walls and green landscaping to assist urban cooling in a changing climate.*

Biodiversity

SP7.4 The Council and its partners will enhance biodiversity across the borough, assist ecological restoration and address spatial deficiencies in access to nature by:

- a. Protecting and enhancing sites of importance for biological and geological diversity;*
- b. Improving the quality of current sites through habitat management;*
- c. Exploring options to increase the size of wildlife areas of existing sites and creating new areas for wildlife;*
- d. Enhancing connections between, or joining up sites, either through direct physical corridors, or through a series of linked sites;*
- e. Reducing the pressures on wildlife and sensitive sites by improving the wider environment around wildlife sites by establishing buffer areas; and*
- f. Promoting the naturalisation of landscapes and the enhancement of Croydon's natural landscape signatures.*

Productive landscapes

SP7.5 The Council and its partners will support the role of productive landscapes by:

- a. Protecting and enhancing allotments, community gardens and woodland;*
- b. Supporting food growing, tree planting and forestry, including the temporary utilisation of cleared sites; and encouraging major residential developments to incorporate edible planting and growing spaces at multiple floor levels; and*
- c. Ensuring landscaping is flexible so that spaces may be adapted for growing opportunities.*

5.5 LEGISLATION

Full details of the UK legislation and offences which are relevant to the ecological receptors identified are included in Appendix B. However, based on the findings of our assessment, it is considered that the proposals will need to consider the following legal provisions:

- Disturbance or killing of an EPS - bats;
- Disturbance of nesting wild birds; and
- Cause of permitting the spread of an invasive species into the wild.

6.0 DISCUSSION

6.1 DESIGNATED SITES

6.1.1 Sites of Special Scientific Interest

Croham Hurst SSSI is located 1.3 km north of the site and Riddlesdown SSSI is located 1.6 km south-west of the site. The proposals are unlikely to have direct or indirect effects on the SSSIs due to the localised nature of the development and significant road barriers between the site and the SSSIs. In addition, due to the nature of the proposals (retirement living apartments) it is unlikely that there will be any adverse impacts from increases in recreational pressure on the SSSIs.

6.1.2 Sites of Importance for Nature Conservation

Twelve SINCs are located within 2 km of the site, the closest of which is Sanderstead Pond located 0.04 km south-east of the site, beyond Addington Road. The proposals are unlikely to cause a direct or indirect effect on the SINC due to the localised nature of the development and road barriers separating the site and the SINCs. The site is already located in a busy urban environment so increases in pollution from vehicles / traffic is likely negligible. Due to the nature of the proposals (a proposed care home) it is unlikely that there will be an increase in recreational pressure on the SINCs. However, as a matter of best practice the pollution prevention measures listed below should be adopted:

- Measures to minimise dust arising, when necessary, including the use of dust control machinery and wet machinery;
- Measures to prevent pollution / contamination events through surface run-off; and
- Measures to minimise other pollution events such as noise, vibration and wind-blown litter.

6.2 HABITATS

6.2.1 Broad-leaved Semi-natural Woodland

The most ecological valuable habitat recorded on the site is broad-leaved semi-natural woodland which is classified as a HPI under the NERC Act 2006. The proposals retain the majority of this habitat, with a few trees requiring removal for the new access road and car parking. It is recommended that trees are protected during construction using root protection fencing around the root zones in accordance with *British Standards BS 5837 2012: Trees in Relation to Design, demolition and Construction*. For trees which are being removed, they should be replaced on at least a like for like basis and, if possible, more trees planted than lost to account for the lag time for the trees to establish and mature.

All other habitats on site have negligible importance for ecology and their removal is not ecological significant.

6.2.1 Invasive Plant Species

Wall cotoneaster listed under Schedule 9 of the W&CA is present on site. Cotoneaster provide berries and seeds which could spread into the wild when eaten by birds.

It is recommended that the cotoneaster is incinerated or buried at the site under a Method Statement (to prevent spread into the wild).

6.3 PROTECTED & NOTABLE SPECIES

Only those species that could be adversely impacted by the proposals are discussed in this section.

6.3.1 Bats

Roosting Bats

No roosting bats were recorded in buildings B1 and B2 during the update bat surveys in 2021. However, B1 was confirmed as providing a day roost for common pipistrelle bats during surveys in 2019. As such, B1 is likely used occasionally by roosting bats. It is not possible to retain this roost under the development proposals, as B1 will be demolished. To allow the development to proceed lawfully, a licence from Natural England (an EPSL) will be required once planning permission has been granted. The site qualifies for registration under the BMCL (formerly known as the low impact) or a standard EPS mitigation licence. The BMCL is appropriate to use as the roost is considered to be 'of low conservation importance' and is used by common species of bat. Whichever licensing route is chosen, works affecting bats are subject to very close scrutiny and must satisfy regulations set out in the Habitat Regulations, which state:

- The actions are essential for 'imperative reasons of overriding public interest' or 'preserving public health and safety';
- 'There is no satisfactory alternative'; and
- The action authorised will not be detrimental to the maintenance of the population of the species conserved at a favourable conservation status in their natural range'.

The BMCL site registration must demonstrate compliance with these regulations. The aim of the mitigation strategy is to avoid the proposed development having a detrimental impact on the favourable conservation status of bats in their natural range. This will cover all activities with the potential to affect the bat roosts and bat activity on site.

The main mitigation included within the licence for the site is likely to include:

- Demolition of all features suitable to support roosting bats to be taken apart by hand and under supervision by a licenced bat worker; and
- The provision of temporary roost locations (bat boxes) during demolition and construction phases and potentially permanent replacement of roosting opportunities within the site.

As no roosting bats were recorded in B2, no mitigation of licence will be required prior to the demolition of B2.

The two sycamores T1 & T2 (which have moderate suitability for roosting bats) are being retained within the scheme layout as such, no further survey or mitigation is required for these trees.

Foraging and Commuting Bats

Commuting and foraging common pipistrelle bats were recorded during the surveys and these bats were observed to be mainly active along the north-eastern and north-western boundary of the site. The site comprises broad-leaved semi-natural woodland, dense scrub and introduced shrub linking it to the wider environment. The site is also adjacent to a cemetery and close to a nearby golf course, containing grassland and trees. These habitats are likely to provide opportunities for foraging and commuting bats. The woodland and boundary habitats are being retained within the scheme. Therefore, the integrity of foraging and commuting bats will not be significantly affected, as such, no

further surveys are recommended. However artificial lighting should be considered with the aim of minimising light spill onto the woodland and boundary habitats.

Artificial Lighting

Artificial lighting has been proven to disturb bats and to have a negative impact on their ability to forage and commute to and from their roosts (Emery, 2008; BCT, 2009; ILP, 2018). To minimise the risk of disturbance to bats, the following mitigation is recommended:

During Construction

- It is advised that **no** night time working is undertaken between the months of March to October, inclusive (during the bat active season); and
- If security lighting is necessary, lights triggered by motion sensors should be used and their coverage should be kept to a minimum.

Operational Phase

For new lighting the external lighting should be carefully designed to minimise disturbance to foraging and commuting bats in the nearby areas. A sensitive lighting strategy is recommended including steps such as:

- There should be no direct lighting onto any new bat roosting features created.
- Consideration of the available lighting technology to minimise impacts on bats, i.e. use of LED lighting (as opposed to high pressure sodium, mercury, and white SON). These have been shown to have the least impact on bats (as well as invertebrates) as they emit little UV light (which attracts invertebrates). These lamps can be programmed to switch off, or dim at certain times;
- Directional lighting where light spillage is avoided. Hoods / cowls can be used to direct light below the horizontal plane (ideally at an angle less than 70 degrees);
- Lights should be designed to be as low to the ground as possible (specifically not above 8 m), this should be taken into account when designing the ménage floodlighting; and
- Lights switched off at night (particularly during the months of March to October, inclusive when bats are active), or at least motion sensed (Emery, 2008; BCT, 2009; ILP, 2018).

6.3.2 Reptiles

The site is considered to have low suitability to support reptiles. Therefore, a precautionary approach to habitat clearance is recommended.

Where clearance of tall ruderal, grassland and scrub vegetation is required, a precautionary, phased cutting approach should be adopted under supervision of an ECoW. This can be achieved by cutting the vegetation in stages down to ground level and working towards an adjoining area of suitable reptile habitat. Firstly, above ground vegetation should be cleared between the months of October through to February (avoiding the nesting bird season). Secondly, the clearance of vegetation from 30cm to ground level should be undertaken between March to October during the reptile active season. Or, both of these stages can be done in October). The arisings should be raked up, and where possible removed from the site. As a precaution, it is recommended that any brash piles and similar are removed during the spring/summer months after a period of mild weather to avoid interfering with the hibernation season (October to February). The clearance of the brash piles will need to be completed under supervision by ECoW to avoid committing an offence by disturbing nesting birds.

Provided that vegetation is kept short, any reptiles which were present, should not return.

6.3.3 Birds

The buildings, introduced shrub, dense & scattered scrub, scattered trees and broad-leaved semi-natural woodland provide nesting opportunities for common nesting bird species. To avoid committing an offence by disturbing / destroying a nesting bird, habitat clearance (to 30cm) should be undertaken outside of the nesting bird season, i.e. clearance should take place between October to February inclusive.

If clearance during this timing is not possible, it is recommended that a check for nesting birds is undertaken within 48 hours prior to clearance of vegetation / buildings by an ecologist.

If an active bird nest is found, a buffer (typically around 10 m, but more for some sensitive species) should be set up within which no work takes place until the young have fledged and the nest is no longer in use. Work which creates more disturbances (e.g. piling) will require a larger buffer. It is important to recognise that, if nesting birds are found, this may result in a substantial adjustment to the construction timetable.

6.3.4 Notable Mammals

Hedgehogs could be utilising the site during the night for foraging, the ECOW works would prevent any harm to hedgehogs during clearance activities. As a precaution, it is recommended that any brash piles are removed during the spring and summer months from March to October, by hand, when hibernating hedgehogs are least likely to be using them.

It is recommended that any holes or trenches dug as part of the proposed development are either covered at night or else a plank of wood or similar is placed in them in such a manner as to afford a ready escape route should a hedgehog or any other animal fall in.

6.4 ENHANCEMENTS

In line with the NPPF (2021), London Local Plan (2021) and Croydon Local Plan (2018), the site should be enhanced for biodiversity. The following enhancements are included in the scheme layout:

- Biodiverse green roofs – wildflower meadow mats on three parts of the roof of the new building;
- Log piles, insect piles and bee towers to be included on the green roof;
- UK native hedgerow planting;
- Tree planting (mix of UK and ornamental); and
- Species rich wildflower meadow.

In addition, the following is recommended for ecological enhancement of the site:

- Installation of bird nest boxes on retained trees and new building – hole nesting boxes for species such as great tit and house sparrow and open fronted boxed for species such as robin.
- Erection of three 1FF Schwegler or 1WQ Schwegler bat boxes (or similar) in trees to be retained within the survey area and/or in the newly to enhance the site for roosting bats; and
- Provision of log piles for invertebrates and hedgehogs.

7.0 SUMMARY

7.1 DESIGNATED SITES

The development is unlikely to have any significant effects on designated sites.

As a matter of best practice the pollution prevention measures listed below should be adopted:

- Measures to minimise dust arising, when necessary, including the use of dust control machinery and wet machinery;
- Measures to prevent pollution / contamination events through surface run-off and
- Measures to minimise other pollution events such as noise, vibration and wind-blown litter.

7.2 HABITATS

The most ecologically valuable habitat on site is the woodland, which is mostly being retained, any loss of trees should be compensated on at least a like for like basis.

Trees should be protected during demolition and construction using root protection fencing around the root zones in accordance with *British Standards BS 5837 2012: Trees in Relation to Construction*.

Removal of the Schedule 9 invasive non-native plant species wall cotoneaster is recommended.

7.3 PROTECTED & NOTABLE SPECIES

An ESPL or site registration under the BMCL will be required after planning approval has been granted and before demolition of B1 can begin. Mitigation will involve ecologist supervision during removal of bat roost features on B1 and replacement roost provision on site.

A sensitive lighting strategy is recommended, in particular the boundary habitats should not be lit with any new artificial lighting.

Specific methods of habitat clearance and timings are required for reptiles, breeding birds and hedgehogs.

7.4 ENHANCEMENTS

Ecological enhancements are already proposed for the scheme such as green roofs, UK native planting and invertebrate features. The addition of bird and bat boxes would also provide biodiversity benefit.

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Please note that the legislation which is relevant to this report is not included in the list above, but details are included in Appendix B below.

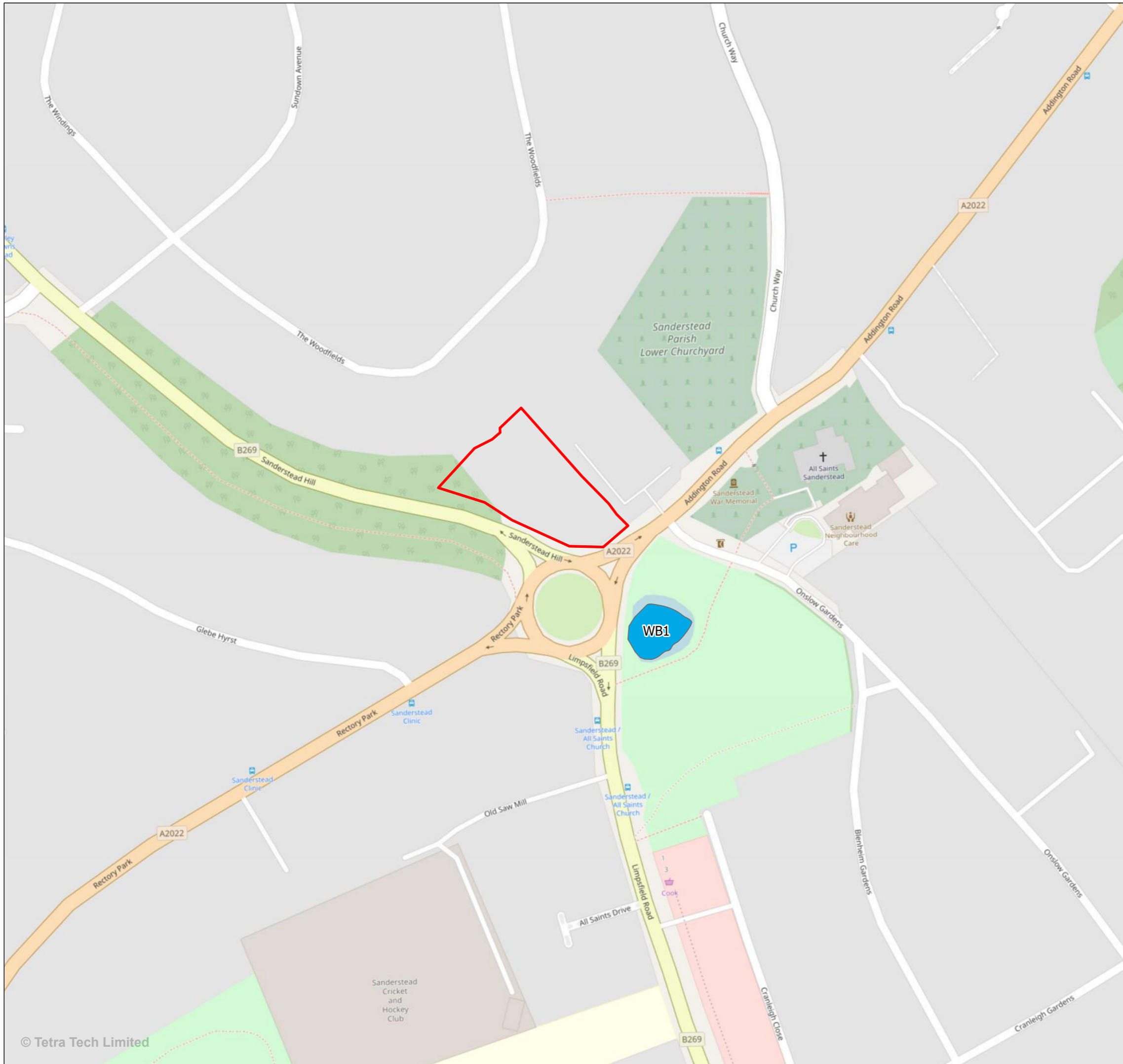
FIGURES

Figure 1 – Site Location Plan

Figure 2 – Designated Sites Plan

Figure 3 – Phase 1 Habitat Plan

Figure 5 – Surveyors Location Plan



Site Location Plan

1 Addington Road, Croydon



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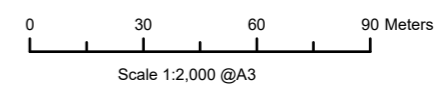
Legend

- Site boundary
- Pond location

Notes:

Drawn by: SB
 Checked by: LG
 Office: Southampton

Figure No. 1
 Revision No. A

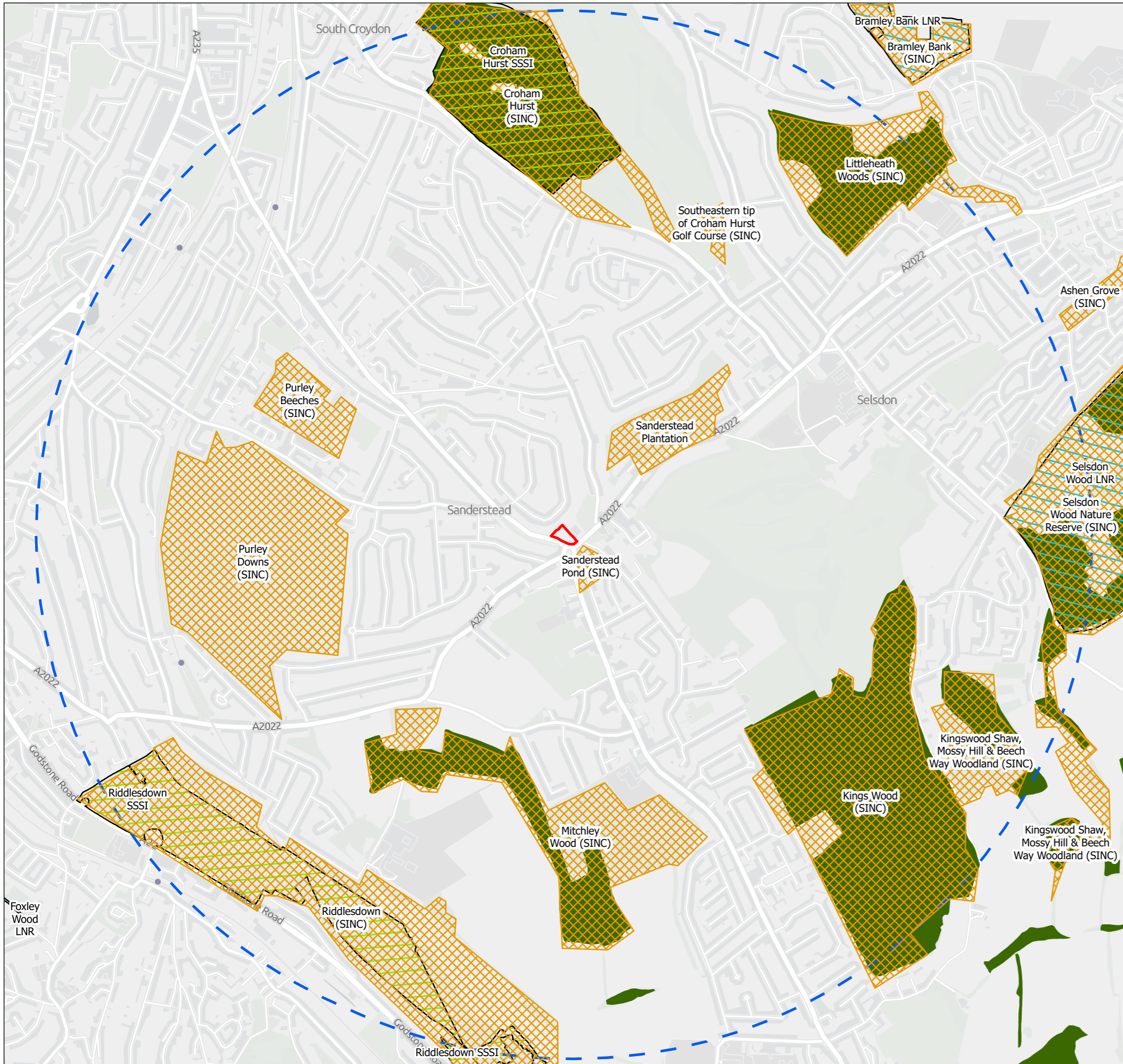


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Designated Sites Plan

1 Addington Road, Croydon

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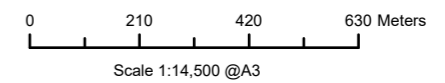
Legend

- Site boundary
- Site boundary 2 km buffer
- Sites of Special Scientific Interest (SSSI)
- Local Nature Reserves (LNR)
- Ancient & Semi-Natural Woodland
- SINCs

Notes:

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Figure No. 2
 Revision No. A



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Phase 1 Habitat Plan
1 Addington Road, Croydon



Addington Road (1) LLP

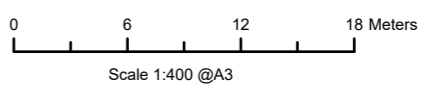
Legend

- Site boundary
- Broadleaved woodland - semi-natural
- Scrub - dense/continuous
- SI Poor semi-improved grassland
- Tall ruderal
- Introduced shrub
- Buildings
- Hardstanding
- Bare ground
- Dense scrub with scattered trees
- Fence
- Scattered tree
- Target note

Notes:

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Figure No. 3
Revision No. A



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Surveyor Location Plan

1 Addington Road, Croydon

Addington Road (1) LLP



Legend

- Site boundary
- Buildings
- ★ 2019 confirmed bat roost
- ★ Surveyor location

Notes:

Drawn by: SB
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 Office: Southampton

Figure No. 5
 Revision No. A

0 6 12 18 Meters
 Scale 1:400 @A3

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APPENDIX A – REPORT CONDITIONS

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The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B – KEY LEGISLATION

Bern Convention

The *Convention on the Conservation of European Wildlife and Natural Habitats* (the *Bern Convention*) was adopted in Bern, Switzerland in 1979, and was ratified in 1982. Its aims are to protect wild plants and animals and their habitats listed in Appendices 1 and 2 of the Convention, and regulate the exploitation of species listed in Appendix 3. The regulation imposes legal obligations on participating countries to protect over 500 plant species and more than 1000 animals. To meet its obligations imposed by the Convention, the European Community adopted the *EC Birds Directive* (1979) and the *EC Habitats Directive* (1992 – see below). Since the Lisbon Treaty, in force since 1st December 2009, European legislation has been adopted by the European Union.

Bonn Convention

The Convention on the Conservation of Migratory Species of Wild Animals or ‘Bonn Convention’ was adopted in Bonn, Germany in 1979 and came into force in 1985. Participating states agree to work together to preserve migratory species and their habitats by providing strict protection to species listed in Appendix I of the Convention. It also establishes agreements for the conservation and management of migratory species listed in Appendix II.

In the UK, the requirements of the convention are implemented via the Wildlife & Countryside Act 1981 (as amended), Wildlife (Northern Ireland) Order 1985 (as amended), Nature Conservation and Amenity Lands (Northern Ireland) Order 1985 and the Countryside and Rights of Way Act 2000 (CRoW).

Habitats Directive

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, or the ‘Habitats Directive’, is a European Union directive adopted in 1992 in response to the Bern Convention. Its aims are to protect approximately 220 habitats and 1,000 species listed in its several Annexes.

In the UK, the Habitats Directive is transposed into national law via the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales, and via the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland.

Birds Directive

The EC Directive on the Conservation of Wild Birds (79/409/EEC) or ‘Birds Directive’ was introduced to achieve favourable conservation status of all wild bird species across their distribution range. In this context, the most important provision is the identification and classification of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex 1 of the Directive, as well as for all regularly occurring migratory species, paying particular attention to the protection of wetlands of international importance.

Conservation of Habitats and Species Regulations 2017 (as amended)

Regulations place a duty on the Secretary of State to propose a list of sites which are important for either habitats or species (listed in Annexes I or II of the Habitats Directive respectively) to the European Commission. These sites, if ratified by Ministers, are then designated as Special Protection Areas (SPAs) within six years. Public bodies must also help preserve, maintain and re-establish habitats for wild birds.

The 2018 amendments mainly related to the impact of the *People Over Wind* decision and some implications arising for neighbourhood plan development and a range of other planning tools including Local Development Orders and Permission in Principle – see here for full details:

<https://www.legislation.gov.uk/uksi/2018/1307/note/made>

The Regulations make it an offence to deliberately capture, kill, disturb or trade in the animals listed in Schedule 2, or pick, uproot, destroy, or trade in the plants listed in Schedule 5 - see below:

Schedule 2 – European Protected Species of Animals	Schedule 5 – European Protected Species of Plants
Horseshoe bats <i>Rhinolophidae</i> - all species	Shore dock <i>Rumex rupestris</i>
Common bats <i>Vespertilionidae</i> - all species	Killarney fern <i>Trichomanes speciosum</i>
Large Blue Butterfly <i>Maculinea arion</i>	Early gentian <i>Gentianella anglica</i>
Wild cat <i>Felis sylvestris</i>	Lady's-slipper <i>Cypripedium calceolus</i>
Dolphins, porpoises and whales <i>Cetacea</i> – all sp.	Creeping marsh-wort <i>Apium repens</i>
Dormouse <i>Muscardinus avellanarius</i>	Slender naiad <i>Najas flexilis</i>
Pool frog <i>Rana lessonae</i>	Fen orchid <i>Liparis loeselii</i>
Sand lizard <i>Lacerta agilis</i>	Floating-leaved water plantain <i>Luronium natans</i>
Fisher's estuarine moth <i>Gortyna borelii lunata</i>	Yellow marsh saxifrage <i>Saxifraga hirculus</i>
Great crested newt <i>Triturus cristatus</i>	
Otter <i>Lutra lutra</i>	
Lesser whirlpool ram's-horn snail <i>Anisus vorticulus</i>	
Smooth snake <i>Coronella austriaca</i>	
Sturgeon <i>Acipenser sturio</i>	
Natterjack toad <i>Epidalea calamita</i>	
Marine turtles <i>Caretta caretta</i> , <i>Chelonia mydas</i> , <i>Lepidochelys kempji</i> , <i>Eretmochelys imbricata</i> , <i>Dermochelys coriacea</i>	

Wildlife & Countryside Act 1981 (as amended)

This is the principal mechanism for the legislative protection of wildlife in the UK. This legislation is the chief means by which the 'Bern Convention' and the Birds Directive are implemented in the UK. Since it was first introduced, the Act has been amended several times.

The Act makes it an offence to (with exception to species listed in Schedule 2) intentionally:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any wild bird while that nest is in use; or
- take or destroy an egg of any wild bird.

Or to intentionally do the following to a wild bird listed in Schedule 1:

- disturbs any wild bird while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird.

In addition, the Act makes it an offence (subject to exceptions) to:

- intentionally or recklessly kill, injure or take any wild animal listed on Schedule 5;
- interfere with places used for shelter or protection, or intentionally disturbing animals occupying such places; and
- The Act also prohibits certain methods of killing, injuring, or taking wild animals.

Finally, the Act also makes it an offence (subject to exceptions) to: intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant; unless an authorised person, intentionally uproot any wild plant not included in Schedule 8; or sell, offer or expose for sale, or possess (for the purposes of trade), any live or dead wild plant included in Schedule 8, or any part of, or anything derived from, such a plant.

Following all amendments to the Act, Schedule 5 'Animals which are Protected' contains a total of 154 species of animal, including several mammals, reptiles, amphibians, fish and invertebrates. Schedule 8 'Plants which are Protected' of the Act, contains 185 species, including higher plants, bryophytes and fungi and lichens. A comprehensive and up-to-date list of these species can be obtained from the JNCC website.

Part 14 of the Act makes unlawful to plant or otherwise cause to grow in the wild any plant which is listed in Part II of Schedule 9.

It is recommended that plant material of these species is disposed of as bio-hazardous waste, and these plants should not be used in planting schemes.

Schedule 1 - Birds which are protected by special penalties			
Avocet	<i>Recurvirostra avosetta</i>	Osprey	<i>Pandion haliaetus</i>
Bee-eater	<i>Merops apiaster</i>	Owl, Barn	<i>Tyto alba</i>
Bittern	<i>Botaurus stellaris</i>	Owl, Snowy	<i>Nyctea scandiaca</i>
Bittern, Little	<i>Ixobrychus minutus</i>	Peregrine	<i>Falco peregrinus</i>
Bluethroat	<i>Luscinia svecica</i>	Petrel, Leach's	<i>Oceanodroma leucorhoa</i>
Brambling	<i>Fringilla montifringilla</i>	Phalarope, Red-necked	<i>Phalaropus lobatus</i>
Bunting, Cirl	<i>Emberiza cirlus</i>	Plover, Kentish	<i>Charadrius alexandrinus</i>
Bunting, Lapland	<i>Calcarius lapponicus</i>	Plover, Little Ringed	<i>Charadrius dubius</i>
Bunting, Snow	<i>Plectrophenax nivalis</i>	Quail, Common	<i>Coturnix coturnix</i>
Buzzard, Honey	<i>Pernis apivorus</i>	Redstart, Black	<i>Phoenicurus ochruros</i>
<u>Capercaille</u>	<i>Tetrao urogallus</i>	Redwing	<i>Turdus iliacus</i>
Chough	<i>Pyrrhocorax pyrrhocorax</i>	Rosefinch, Scarlet	<i>Carpodacus erythrinus</i>
Corncrake	<i>Crex crex</i>	Ruff	<i>Philomachus pugnax</i>
Crake, Spotted	<i>Porzana porzana</i>	Sandpiper, Green	<i>Tringa ochropus</i>
Crossbills (all species)	<i>Loxia</i>	Sandpiper, Purple	<i>Calidris maritima</i>
Curlew, Stone	<i>Burhinus oedichnemus</i>	Sandpiper, Wood	<i>Tringa glareola</i>
Divers (all species)	<i>Gavia</i>	Scaup	<i>Aythya marila</i>
Dotterel	<i>Charadrius morinellus</i>	Scoter, Common	<i>Melanitta nigra</i>
Duck, Long-tailed	<i>Clangula hyemalis</i>	Scoter, Velvet	<i>Melanitta fusca</i>
Eagle, Golden	<i>Aquila chrysaetos</i>	Serin	<i>Serinus serinus</i>
Eagle, White-tailed	<i>Haliaeetus albicilla</i>	Shorelark	<i>Eremophila alpestris</i>
Falcon, Gyr	<i>Falco rusticolus</i>	Shrike, Red-backed	<i>Lanius collurio</i>
Fieldfare	<i>Turdus pilaris</i>	Spoonbill	<i>Platalea leucorodia</i>
Firecrest	<i>Regulus ignicapillus</i>	Stilt, Black-winged	<i>Himantopus himantopus</i>
Garganey	<i>Anas querquedula</i>	Stint, Temminck's	<i>Calidris temminckii</i>
Godwit, Black-tailed	<i>Limosa limosa</i>	Swan, Bewick's	<i>Cygnus bewickii</i>
Goshawk	<i>Accipiter gentilis</i>	Swan, Whooper	<i>Cygnus cygnus</i>
Grebe, Black-necked	<i>Podiceps nigricollis</i>	Tern, Black	<i>Chlidonias niger</i>
Grebe, Slavonian	<i>Podiceps auritus</i>	Tern, Little	<i>Sterna albifrons</i>
Greenshank	<i>Tringa nebularia</i>	Tern, Roseate	<i>Sterna dougallii</i>
Gull, Little	<i>Larus minutus</i>	Tit, Bearded	<i>Panurus biarmicus</i>
Gull, Mediterranean	<i>Larus melanocephalus</i>	Tit, Crested	<i>Parus cristatus</i>
Harriers (all species)	<i>Circus</i>	Tree-creeper, Short-toed	<i>Certhia brachydactyla</i>
Heron, Purple	<i>Ardea purpurea</i>	Warbler, Cetti's	<i>Cettia cetti</i>
Hobby	<i>Falco subbuteo</i>	Warbler, Dartford	<i>Sylvia undata</i>
Hoopoe	<i>Upupa epops</i>	Warbler, Marsh	<i>Acrocephalus palustris</i>
Kingfisher	<i>Alcedo atthis</i>	Warbler, Savi's	<i>Locustella luscinioides</i>
Kite, Red	<i>Milvus milvus</i>	Whimbrel	<i>Numenius phaeopus</i>
Merlin	<i>Falco columbarius</i>	Woodlark	<i>Lullula arborea</i>
Oriole, Golden	<i>Oriolus oriolus</i>	Wryneck	<i>Jynx torquilla</i>
Animal (Vertebrate) Species Listed in Schedule 5 (full legal protection at all times)			
Horseshoe Bats (all species)	<i>Rhinolophidae</i>	Newt – Great Crested	<i>Triturus cristatus</i>
Typical Bats (all species)	<i>Vespertilionidae</i>	Snake – Smooth	<i>Coronella austriaca</i>
Dolphin – Bottle-nosed	<i>Tursiops truncatus (tursio)</i>	Toad, Natterjack	<i>Epidalea calamita</i>
Dolphin – Common	<i>Delphinus delphis</i>	Turtles – All Species	<i>Cheloniidae & Dermochelyidae</i>
Dormouse – Hazel	<i>Muscardinus avellanarius</i>	Basking Shark	<i>Cetorhinus maximus</i>
Pine Marten	<i>Martes martes</i>	Burbot	<i>Lota lota</i>
Porpoise – Harbour	<i>Phocaena phocaena</i>	Goby – Giant	<i>Gobius cobitis</i>
Otter – Eurasian	<i>Lutra lutra</i>	Goby – Couch's	<i>Gobius couchii</i>
Squirrel – Red	<i>Sciurus vulgaris</i>	Seahorse – Short-snouted ¹	<i>Hippocampus hippocampus</i>
Walrus	<i>Odobenus rosmarus</i>	Seahorse – Spiny	<i>Hippocampus guttulatus</i>
Water Vole	<i>Arvicola amphibius</i>	Sturgeon	<i>Acipenser sturio</i>
Whales – All Species	<i>Cetacea</i>	Vendace	<i>Coregonus albula</i>

¹ Both sea horse species are protected in England only.

Wildcat	<i>Felis sylvestris</i>	Whitefish	<i>Coregonus lavaretus</i>
Lizard – Sand	<i>Lacerta agilis</i>		
Animal (Vertebrate) Species Protected under Section 9 (1) part: Killing and Injuring & Section 9 (5) Sale			
Adder	<i>Vipera berus</i>	Slow-worm	<i>Anguis fragilis</i>
Lizard – Viviparous	<i>Zootoca vivipara</i>	Snake – Grass	<i>Natrix helvetica (natrix)</i>
Animals (Vertebrate) Species Protected under Section 9 (5) Sale only			
Frog – common	<i>Rana temporaria</i>	Newt – Smooth	<i>Lissotriton vulgaris</i>
Newt – Palmate	<i>Lissotriton helvetica</i>	Toad – Common	<i>Bufo bufo</i>
Animals (Vertebrate) Species Protected under Section 9 (1) (4)(a): Killing, Injuring & Taking and Damage / Destruction of place of shelter / protection only			
Allis Shad	<i>Alosa alosa</i>	Shark – Angel	<i>Squatina squatina</i>
Twaite Shad	<i>Alosa fallax</i>		
Butterflies & Moths – Full Protection under Schedule 5² at all times			
High brown fritillary	<i>Argynnis adippe</i>	Fisher's Estuarine Moth	<i>Gortyna borellii</i>
Large Blue	<i>Maculinea arion</i>	Barberry Carpet	<i>Pareulype berberata</i>
Heath Fritillary	<i>Mellicta athalea</i>	Black-veined Moth	<i>Siona lineata</i>
Marsh Fritillary	<i>Eurodryas aurinia</i>	Sussex Emerald	<i>Thalera fimbrialis</i>
Swallowtail	<i>Papilio machaon britannicus</i>	Essex Emerald	<i>Thetidia smaragdaria</i>
Large Copper	<i>Lycaena dispar</i>	Fiery Clearwing	<i>Bembecia chrysidiformis</i>
Reddish-buff Moth	<i>Acosmetia caliginosa</i>	New-Forest Burnet	<i>Zygaena viciae</i>
Butterflies – Protected under Section 9 (5) Sale Only			
Purple Emperor	<i>Apatura iris</i>	Adonis Blue	<i>Lysandra bellargus</i>
Northern Brown Argus	<i>Aricia artaxerxes</i>	Chalkhill Blue	<i>Lysandra coridon</i>
Pearl-bordered Fritillary	<i>Boloria euphrosyne</i>	Glanville Fritillary	<i>Melitaea cinxia</i>
Chequered Skipper	<i>Carterocephalus palaemon</i>	Large Tortoiseshell	<i>Nymphalis polychloros</i>
Large Heath	<i>Coenonympha tullia</i>	Silver-studded Blue	<i>Plebejus argus</i>
Small Blue	<i>Cupido minimus</i>	Black Hairstreak	<i>Strymonidia pruni</i>
Mountain Ringlet	<i>Erebia epiphron</i>	White-letter Hairstreak	<i>Strymonidia w-album</i>
Duke of Burgundy	<i>Hamearis lucina</i>	Brown Hairstreak	<i>Thecla betulae</i>
Silver-spotted Skipper	<i>Hesperia comma</i>	Lulworth Skipper	<i>Thymelicus acteon</i>
Wood White	<i>Leptidea sinapis</i>		
Other Invertebrates – Full Protection under Schedule 5 at all times			
Rainbow Leaf-beetle	<i>Chrysolina cerealis</i>	Tadpole Shrimp	<i>Triops cancriformis</i>
Spangled Diving-beetle	<i>Graphopterus zonatus</i>	Trembling Sea-mat	<i>Victorella pavida</i>
Lesser Silver Water-beetle	<i>Hydrochara caraboides</i>	De Folin's Lagoon Snail	<i>Caecum armoricum</i>
Moccas Beetle	<i>Hypebaeus flavipes</i>	Sandbowl Snail	<i>Catinella arenaria</i>
Violet Click-beetle	<i>Limoniscus violaceus</i>	Freshwater Pearl Mussel	<i>Margaritifera margaritifera</i>
Bembridge Beetle	<i>Parcymus aeneus</i>	Glutinous Snail	<i>Myxas glutinosa</i>
New Forest Cicada	<i>Cicadetta montana</i>	Lagoon Snail	<i>Paludinella littorina</i>
Wart-Biter	<i>Decticus verrucivorus</i>	Lagoon Sea Slug	<i>Tenellia adspersa</i>
Mole-Cricket	<i>Gryllotalpa gryllotalpa</i>	Northern Hatchet-shell	<i>Thyasira gouldi</i>
Field-Cricket	<i>Gryllus campestris</i>	Tentacled Lagoon-worm	<i>Alkmaria romijni</i>
Norfolk Hawker Dragonfly	<i>Aeshna isosceles</i>	Lagoon Sand-worm	<i>Armandia cirrhosa</i>
Southern Damselfly	<i>Coenagrion mercuriale</i>	Medicinal Leech	<i>Hirudo medicinalis</i>
Fen Raft Spider	<i>Dolomedes fimbriatus</i>	Marine Hydroid	<i>Clavopsella navis</i>
Ladybird Spider	<i>Eresus niger (cinaberinus)</i>	Ivell's Sea Anemone	<i>Edwardsia ivelli</i>
Fairy Shrimp	<i>Chirocephalus diaphanus</i>	Starlet Sea Anemone	<i>Nematosella vectensis</i>
Lagoon Sand Shrimp	<i>Gammarus insensibilis</i>	Atlantic Stream (White-clawed) Crayfish	<i>Austropotamobius pallipes</i>
Other Invertebrates Protected under Section 9 (1) Possession & 9 (2) (5) Sale only			
Stag Beetle	<i>Lucanus cervus</i>	Roman Snail ³	<i>Helix pomatia</i>

² Viper's Bugloss Moth *Hadena irregularis* was removed from Schedule 5 in 1996 as it is believed to be extinct.

³ England only

Fan Mussel	<i>Atrina fragilis</i>	Pink Sea-fan	<i>Eunicella verrucosa</i>
Other Invertebrates Protected under Section 9 (4) (a) Damage / Destruction of Place of Shelter / Protection only			
Mire Pill Beetle	<i>Curimopsis nigrita</i>		
Vascular Plant Species - Full Protection under Schedule 8 at all times (previous Scientific name in brackets)			
Adder's-tongue Least	<i>Ophioglossum lusitanicum</i>	Lily – Snowdon	<i>Gagea serotina</i> (<i>Lloydia serotina</i>)
Alison- Small	<i>Alyssum alyssoides</i>	Marsh-mallow – Rough	<i>Malva setigera</i> (<i>Althaea hirsuta</i>)
Broomrape – Bedstraw	<i>Orobanche caryophyllacea</i>	Milk-parsley – Cambridge	<i>Selinum carvifolia</i>
Broomrape – Oxtongue	<i>Orobanche picridis</i>	Mudwort – Welsh	<i>Limosella aquatica</i>
Broomrape – Thistle	<i>Orobanche reticulata</i> ⁴	Naiad – Holly-leaved	<i>Najas marina</i>
Cabbage – Lundy	<i>Coincya wrightii</i> (<i>Rhynchosinapis wrightii</i>)	Orache – Stalked	<i>Atriplex pedunculata</i> (<i>Halimione pedunculata</i>)
Calamint – Wood	<i>Clinopodium menthifolium</i> (<i>Calamintha sylvatica</i>)	Orchid – Early Spider	<i>Ophrys sphegodes</i>
Catchfly – Alpine	<i>Silene suecica</i> (<i>Lychnis alpina</i>)	Orchid – Ghost	<i>Epipogium aphyllum</i>
Centaury – Slender	<i>Centaureum tenuiflorum</i>	Orchid – Lapland Marsh	<i>Dactylorhiza lapponica</i>
Cinquefoil – Rock	<i>Potentilla rupestris</i>	Orchid – Late Spider	<i>Ophrys fuciflora</i>
Clary – Meadow	<i>Salvia pratensis</i>	Orchid – Lizard	<i>Himantoglossum hircinum</i>
Club-rush – Triangular	<i>Schoenoplectus triquetter</i> (<i>Scirpus triquetter</i>)	Orchid – Military	<i>Orchis militaris</i>
Colt's-foot – Purple	<i>Homogyne alpina</i>	Orchid – Monkey	<i>Orchis simia</i>
Cotoneaster – Wild	<i>Cotoneaster cambricus</i> (<i>C. integerrimus</i>)	Pear – Plymouth	<i>Pyrus cordata</i>
Cotton-grass – Slender	<i>Eriophorum gracile</i>	Pennycress – Perfoliate	<i>Microthlaspi perfoliatum</i> (<i>Thlaspi perfoliatum</i>)
Cow-wheat – Field	<i>Melampyrum arvense</i>	Pennyroyal	<i>Mentha pulegium</i>
Crocus – Sand	<i>Romulus columnae</i>	Pigmyweed	<i>Crassula aquatica</i>
Cudweed – Broad-leaved	<i>Filago pyramidata</i>	Pine - Ground	<i>Ajuga chamaepitys</i>
Cudweed – Jersey	<i>Gnaphalium luteoalbum</i>	Pink – Cheddar	<i>Dianthus gratianopolitanus</i>
Cudweed – Red-tipped	<i>Filago lutescens</i>	Pink – Childing	<i>Petrorhagia nanteuillii</i>
Cut-grass	<i>Leersia oryzoides</i>	Ragwort – Fen	<i>Jacobaea paludosa</i> (<i>Senecio paludosa</i>)
Deptford Pink	<i>Dianthus armeria</i>	Ramping-fumitory – Martin's	<i>Fumaria reuteri</i> (<i>F. martinii</i>)
Diapensia	<i>Diapensia lapponica</i>	Rampion – Spiked	<i>Phyteuma spicata</i>
Eryngo – Field	<i>Eryngium campestre</i>	Restharrow – Small	<i>Ononis reclinata</i>
Fern – Dickie's-bladder	<i>Cystopteris dickieana</i>	Rock-cress – Alpine	<i>Arabis alpina</i>
Fleabane – Alpine	<i>Erigeron borealis</i>	Rock-cress – Bristol	<i>Arabis scabra</i>
Fleabane – Small	<i>Pulicaria vulgaris</i>	Sandwort – Norwegian	<i>Arenaria norvegica</i> ⁵
Galingale – Brown	<i>Cyperus fuscus</i>	Sandwort – Teesdale	<i>Minuartia stricta</i>
Gentian – Alpine	<i>Gentiana nivalis</i>	Saxifrage – Drooping	<i>Saxifraga cernua</i>
Gentian - Dune	<i>Gentianella amarella</i> subsp. <i>occidentalis</i> (<i>Gentianella uliginosa</i>)	Saxifrage – Tufted	<i>Saxifraga cespitosa</i>
Gentian – Fringed	<i>Gentianopsis ciliata</i> (<i>Gentianella ciliata</i>)	Solomon's-seal – Whorled	<i>Polygonatum verticillatum</i>
Gentian - Spring	<i>Gentiana verna</i>	Sow-thistle – Alpine	<i>Cicerbita alpina</i>
Germander – Cut-leaved	<i>Teucrium botrys</i>	Spearwort – Adder's-tongue	<i>Ranunculus ophioglossifolius</i>
Germander – Water	<i>Teucrium scordium</i>	Speedwell – Fingered	<i>Veronica triphyllos</i>

⁴ The Weeds Act 1959 does not apply to thistles *Cirsium* & *Carduus* species supporting this broomrape.

⁵ All subspecies occurring in the UK

Gladiolus – Wild	<i>Gladiolus illyricus</i>	Speedwell – Spiked	<i>Veronica spicata</i> ⁶
Goosefoot – Stinking	<i>Chenopodium vulvaria</i>	Spike-rush – Dwarf	<i>Eleocharis parvula</i>
Grass-poly	<i>Lythrum hyssopifolia</i>	South-stack Fleawort	<i>Tephrosia integrifolia</i> <i>ssp. maritima</i>
Hare's-ear – Sickle-leaved	<i>Bupleurum falcatum</i>	Star-of-Bethlehem – Early	<i>Gagea bohemica</i>
Hare's-ear – Small	<i>Bupleurum baldense</i>	Starfruit	<i>Damasonium alisma</i>
Hawk's-beard – Stinking	<i>Crepis foetida</i>	Strapwort	<i>Corrigiola littoralis</i>
Hawkweed – Northroe	<i>Hieracium northroense</i>	Violet – Fen	<i>Viola persicifolia</i>
Hawkweed – Shetland	<i>Hieracium zetlandicum</i>	Viper's-grass	<i>Scorzonera humilis</i>
Hawkweed – Weak-leaved	<i>Hieracium attenuatifolium</i>	Water-plantain – Ribbon-leaved	<i>Alisma gramineum</i>
Heath – Blue	<i>Phyllodoce caerulea</i>	Wood-sedge – Starved	<i>Carex depauperata</i>
Helleborine – Red	<i>Cephalanthera rubra</i>	Woodsia – Alpine	<i>Woodsia alpina</i>
Horsetail – Branched	<i>Equisetum ramosissimum</i>	Woodsia – Oblong	<i>Woodsia ilvensis</i>
Hound's-tongue – Green	<i>Cynoglossum germanicum</i>	Wormwood – Field	<i>Artemisia campestris</i>
Knawel – Perennial	<i>Scleranthus perennis</i> ⁷	Woundwort - Downy	<i>Stachys germanica</i>
Knot-grass – Sea	<i>Polygonum maritimum</i>	Woundwort – Limestone	<i>Stachys alpina</i>
Leek – Round-headed	<i>Allium sphaerocephalon</i>	Yellow-rattle – Greater	<i>Rhinanthus angustifolius</i>
Lettuce – Least	<i>Lactuca saligna</i>		
Vascular Plant Species – Partial Protection under Section 13 (2) Protection from commercial exploitation and sale			
Bluebell	<i>Hyacinthoides non-scripta</i>		
Bryophytes – Full Protection under Schedule 8 at all times			
Anamodon – Long-leaved	<i>Anomodon langifolius</i>	Flamingo Moss	<i>Desmatodon cernuus</i>
Blackwort	<i>Southbya nigrella</i>	Frostwort	<i>Gymnomitrium apiculatum</i>
Crystalwort – Lizard	<i>Riccia bifurca</i>	Glaucous Beard Moss	<i>Barbula glauca</i>
Earwort – Marsh	<i>Jamesoniella undulifolia</i>	Green Shield Moss	<i>Buxbaumia viridis</i>
Feathermoss – Polar	<i>Hygrohypnum polare</i>	Hair Silk Moss	<i>Plagiothecium piliferum</i>
Flapwort – Norfolk	<i>Leiocolea rutheana</i>	Knothole Moss	<i>Zygodon forsteri</i>
Grimmia – Blunt-leaved	<i>Grimmia unicolor</i>	Large Yellow Feather Moss	<i>Scorpidium turgescens</i>
Petalwort	<i>Petalophyllum ralfsii</i>	Millimetre Moss	<i>Micromitrium tenerum</i>
Lindenberg's Leafy-Liverwort	<i>Adelanthus lindenbergianus</i>	Multi-fruited River Moss	<i>Cryphaea lamyana</i>
Feather-moss Slender Green	<i>Drepanocladus vernicosus</i>	Nowell's Limestone Moss	<i>Zygodon gracilis</i>
Alpine Copper-Moss	<i>Mielichoferia mellichoferia</i>	Rigid Apple Moss	<i>Bartramia stricta</i>
Baltic Bog-Moss	<i>Sphagnum balticum</i>	Round-leaved feather Moss	<i>Rhynchostegium rotundifolium</i>
Blue Dew-Moss	<i>Saellania glaucescens</i>	Schleicher's Thread Moss	<i>Bryum schleicheri</i>
Blunt-leaved bristle-Moss	<i>Orthotrichum obtusifolium</i>	Triangular Pygmy Moss	<i>Acaulon triquetrum</i>
Bright-Green Cave-Moss	<i>Cyclodictyon laetevirens</i>	Turpswort	<i>Geocalyx graveolens</i>
Cordate Beard Moss	<i>Barbula cordata</i>	Vaucher's Feather Moss	<i>Hypnum vaucheri</i>
Cornish Path Moss	<i>Ditrichum comubicum</i>	Western Rustwort	<i>Marsupella profunda</i>
Derbyshire Feather Moss	<i>Thamnobryum angustifolium</i>		
Stoneworts – Full Protection under Schedule 8 at all times			
Bearded Stonewort	<i>Chara canescens</i>	Foxtail Stonewort	<i>Lamprothamnium papulosum</i>

⁶ Both subspecies: *spicata* & *hybrida*

⁷ Includes both subspecies: *perennis* & *prostratus*

Lichens – Full Protection under Schedule 8 at all times			
New Forest Beech Lichen	<i>Enterographa elaborata</i>	Forked Hair Lichen	<i>Bryoria furcellata</i>
Snow Caloplaca	<i>Caloplaca nivalis</i>	Golden Hair Lichen	<i>Teloschistes flavicans</i>
Tree Catapyrenium	<i>Catapyrenium psoromoides</i>	Orange-fruited Elm Lichen	<i>Caloplaca luteoalba</i>
Laurer's Catillaria	<i>Catillaria laurai</i>	River Jelly Lichen	<i>Collema dichotomum</i>
Convolut Cladonia	<i>Cladonia convoluta</i>	Starry Breck Lichen	<i>Buellia asterella</i>
Upright Mountain Cladonia	<i>Cladonia stricta</i>	Caledonia Pannaria	<i>Pannaria ignobilis</i>
Goblin Lights	<i>Catolechia wahlenbergii</i>	New Forest Parmelia	<i>Parmelia minarum</i>
Elm Gyalecta	<i>Gyalecta ulmi</i>	Oil Stain Parmentaria	<i>Parmentaria chilensis</i>
Tarn Lecanora	<i>Lecanora archariana</i>	Southern Grey Physcia	<i>Physcia tribacioides</i>
Copper Lecidea	<i>Lecidea inops</i>	Ragged Pseudo-cyphellaria	<i>Pseudocyphellaria lacerata</i>
Arctic Kidney Lichen	<i>Nephroma arcticum</i>	Rusty Alpine Psora	<i>Psora rubiformis</i>
Ciliate Strap Lichen	<i>Heterodermia leucomelos</i>	Rock Nail	<i>Calicium corynellum</i>
Coralloid Rosette Lichen	<i>Heterodermia propagulifera</i>	Serpentine Selanopsora	<i>Selanopsora liparina</i>
Ear-lobed Dog Lichen	<i>Peltigera lepidophora</i>	Sulphur Tresses	<i>Alectoria ochroleuca</i>
Lichens – Partial Protection under Section 13 (2) Commercial Exploitation and Sale Only			
Tree Lungwort	<i>Lobaria pulmonaria</i>		
Fungi – Full Protection under Schedule 8 at all times			
Royal Bolete	<i>Boletus regius</i>	Oak Polypore	<i>Buglossosporus pulvinus</i>
Hedgehog Fungus	<i>Hericium erinaceum</i>	Sandy Stilt Ball	<i>Battaria phalloides</i>
Invasive plant species listed in Schedule 9			
Alexanders, Perfoliate	<i>Smyrniium perfoliatum</i>	Kelp, Japanese	<i>Laminaria japonica</i>
Algae, Red	<i>Grateloupia luxurians</i>	Knotweed, Giant	<i>Reynoutria (Fallopia) sachalinensis</i>
Archangel, Variegated Yellow	<i>Lamiastrum galeobdolon subsp. argentatum</i>	Knotweed, Hybrid	<i>Reynoutria (Fallopia) japonica x sachalinensis</i>
Azalea, Yellow	<i>Rhododendron luteum</i>	Knotweed, Japanese	<i>Reynoutria (Fallopia) japonica</i>
Balsam, Himalayan	<i>Impatiens glandulifera</i>	Leek, Few-flowered	<i>Allium paradoxum</i>
Cotoneaster, Wall	<i>Cotoneaster horizontalis</i>	Lettuce, water	<i>Pistia stratiotes</i>
Cotoneaster, Entire-leaved	<i>Cotoneaster integrifolius</i>	Montbretia	<i>Crocsmia x crocosmiiflora</i>
Cotoneaster, Himalayan	<i>Cotoneaster simonsii</i>	Parrot's Feather	<i>Myriophyllum aquaticum</i>
Cotoneaster, Hollyberry	<i>Cotoneaster bullatus</i>	Pennywort, Floating	<i>Hydrocotyle ranunculoides</i>
Cotoneaster, Small-leaved	<i>Cotoneaster microphyllus</i>	Potato, Duck	<i>Sagittaria latifolia</i>
Creeper, False Virginia	<i>Parthenocissus inserta</i>	Primrose, Floating Water	<i>Ludwigia peploides</i>
Creeper, Virginia	<i>Parthenocissus quinquefolia</i>	Primrose, Water	<i>Ludwigia grandiflora</i>
Dewplant, Purple	<i>Disphyma crassifolium</i>	Primrose, Water	<i>Ludwigia uruguayensis</i>
False-acacia	<i>Robinia pseudoacacia</i>	Rhododendron	<i>Rhododendron ponticum</i> and hybrid <i>R. ponticum x R. maximum</i>
Fanwort/Carolina Water-Shield	<i>Cabomba caroliniana</i>	Rhubarb, Giant	<i>Gunnera tinctoria</i>
Fern, Water	<i>Azolla filiculoides</i>	Rose, Japanese	<i>Rosa rugosa</i>
Fig, Hottentot	<i>Carpobrotus edulis</i>	Salvinia, Giant	<i>Salvinia molesta</i>
Garlic, Three-cornered	<i>Allium triquetrum</i>	Seafingers, Green	<i>Codium fragile</i>
Hogweed, Giant	<i>Heracleum mantegazzianum</i>	Seaweed, Californian Red	<i>Pikea californica</i>

Hyacinth, Water	<i>Eichhornia crassipes</i>	Seaweed, Hooked Asparagus	<i>Asparagopsis armata</i>
Kelp, Giant species	<i>Macrocystis angustifolia</i> , <i>M. integrifolia</i> , <i>M. laevis</i> , <i>M. pyrifera</i>	Seaweed, Japanese	<i>Sargassum muticum</i>
Seaweeds, Laver	<i>Porphyra</i> spp except native species, <i>P. amethystea</i> , <i>P. leucosticta</i> , <i>P. linearis</i> , <i>P. miniate</i> , <i>P. purpurea</i> , <i>P. umbilicalis</i>	Wakame	<i>Undaria pinnatifida</i>
Shallon	<i>Gaultheria shallon</i>	Waterweed, Curly	<i>Lagarosiphon major</i>
Stonecrop, Australian Swamp/New Zealand Pygmyweed	<i>Crassula helmsii</i>	Waterweeds	All species of the genus <i>Elodea</i>

Protection of Badgers Act 1992

The main legislation protecting badgers in England and Wales is the Protection of Badgers Act 1992 (the 1992 Act). Under the 1992 Act it is an offence to: wilfully kill, injure, take or attempt to kill, injure or take a badger; dig for a badger; interfere with a badger sett by, damaging a sett or any part thereof, destroying a sett, obstructing access to a sett, causing a dog to enter a sett or disturbing a badger while occupying a sett.

The 1992 Act defines a badger sett as: “any structure or place which displays signs indicating current use by a badger”

Natural Environment and Rural Communities Act 2006

Section 41 (S41) of this Act requires the Secretary of State to publish a list (in consultation with Natural England) of Habitats and Species which are of Principal Importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies including local and regional authorities, in implementing their duty under Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal (e.g. planning) functions. The S41 list includes 65 Habitats of Principal Importance and 1,150 Species of Principal Importance.

Hedgerow Regulations 1997

The Hedgerow Regulations were made under Section 97 of the Environment Act 1995 and came into force in 1997. They introduced new arrangements for local planning authorities in England and Wales to protect important hedgerows in the countryside, by controlling their removal through a system of notification. Important hedgerows are defined by complex assessment criteria, which draw on biodiversity features, historical context and the landscape value of the hedgerow.

Birds of Conservation Concern

This is a review of the status of all birds occurring regularly in the United Kingdom. It is regularly updated and is prepared by leading bird conservation organisations, including the British Trust for Ornithology (BTO), Joint Nature Conservation Committee (JNCC) and The Royal Society for the Protection of Birds (RSPB).

The latest report was produced in 2015 (Eaton *et al*, 2015) and identified 67 red list species, 96 amber species, and 81 green species. The criteria are complex, but generally:

- **Red list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of more than 50% in the last 25 years.
- **Amber list** species are those that have shown a decline of the breeding population, non-breeding population or breeding range of between 25% and 50% in the last 25 years. Species that have a UK breeding population of less than 300 or a non-breeding population of less than 900 individuals are also included, together with those whose 50% of the population is localised in 10 sites or fewer and those whose 20% of the European population is found in the UK.

- **Green list** species are all regularly occurring species that do not qualify under any of the red or amber criteria are green listed

Global IUCN Red List

The International Union for Conservation of Nature (IUCN) Threatened Species was devised to provide a list of those species that are most at risk of becoming extinct globally. It provides taxonomic, conservation status and distribution information about threatened taxa around the globe. The system catalogues threatened species into groups of varying levels of threat, which are: Extinct (EX), Extinct in the Wild (EW), Critically Endangered (CE), Endangered (EN), Vulnerable (VU), Near Threatened (NT), Least Concern (LC), Data Deficient (DD), Not Evaluated (NE). Criteria for designation into each of the categories is complex, and consider several principles.

Local Biodiversity Action Plan (LBAP)

Local Biodiversity Action Plans (LBAP) identify habitat and species conservation priorities at a local level (typically at the County level), and are usually drawn up by a consortium of local Government organisations and conservation charities.

Some LBAP's may also include Habitat Action Plans (HAP) and/or Species Action Plans (SAP), which are used to guide and inform the local decision making process.

Wild Mammals (Protection) Act 1996

This Act offers protects a form of protection to all wild species of mammals, irrespective of other legislation, and focussed on animal welfare, rather than conservation.



Unless covered by one of the exceptions, a person is guilty of an offence if he mutilates, kicks, beats, nails or otherwise impales, stabs, burns, stones, crushes, drowns, drags or asphyxiates any wild mammal with intent to inflict unnecessary suffering.

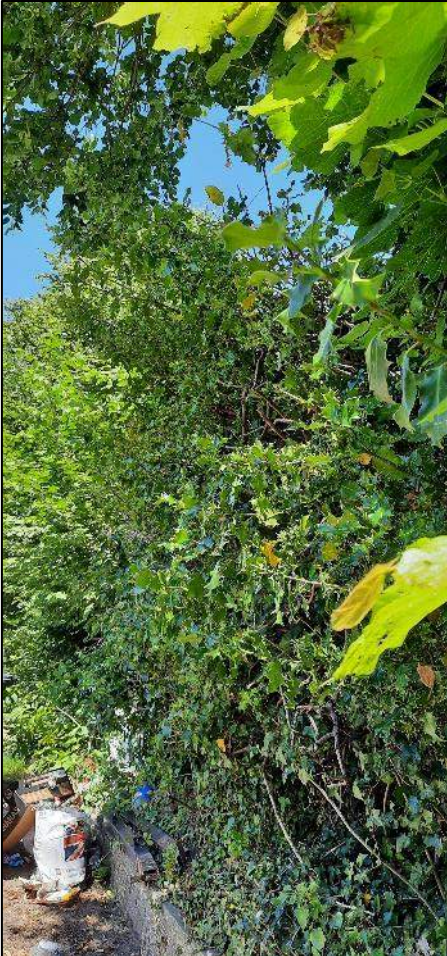

It's application is typically restricted to preventing deliberate harm to wildlife (in general) during construction works etc.


APPENDIX C – TARGET NOTES



*The DAFOR scale has been used and is based on:


- **D** – Dominant 50-100%
- **A** – Abundant 30-50%
- **F** – Frequent 15-30%
- **O** – Occasional 5-15%
- **R** – Rare < 5%

Target Note	Description	Photograph
TN1	<p>Broad-leaved semi-natural woodland</p> <p>Species include:</p> <ul style="list-style-type: none"> • Sycamore <i>Acer pseudoplatanus</i> (D) • Beech <i>Fraxinus excelsior</i> (R) • Yew <i>Taxus baccata</i> (R) • Holly <i>Ilex aquifolium</i> (F) • Elder <i>Sambucus nigra</i> (R) • Ivy <i>Hedera helix</i> (F) • Bamble <i>Rubus fruticosus</i> agg. (R) 	
TN2	<p>Scattered trees</p> <p>Species include:</p> <ul style="list-style-type: none"> • Sycamore <i>Acer pseudoplatanus</i> (D) • Holly <i>Ilex aquifolium</i> (R) • Hazel <i>Corylus avellana</i> (R) • Sweet chestnut <i>Castanea sativa</i> (R) 	


<p>TN3</p>	<p>Dense scrub with scattered trees</p> <p>Species include:</p> <ul style="list-style-type: none"> • Sycamore <i>Acer pseudoplatanus</i> (D) • Holly <i>Ilex aquifolium</i> (O) • Beech <i>Fraxinus excelsior</i> (R) • Ivy <i>Hedera helix</i> (F) • Broad-leaved lime <i>Tilia platyphyllos</i> (R) • Hawthorn <i>Crataegus monogyna</i> (O) • Hazel <i>Corylus avellana</i> (O) • Blackthorn <i>Crataegus monogyna</i> (R) • Bamble <i>Rubus fruticosus</i> agg. (O) • Liliac <i>Syringa vulgaris</i> (R) 	
<p>TN4</p>	<p>Dense continuous scrub</p> <p>Species include:</p> <ul style="list-style-type: none"> • Ivy <i>Hedera helix</i> (F) • Elm sp. <i>Ulmus</i> sp. (R) • Sycamore <i>Acer pseudoplatanus</i> (O) • Elder <i>Sambucus nigra</i> (R) • Bamble <i>Rubus fruticosus</i> agg. (D) <p>With ground flora of:</p> <ul style="list-style-type: none"> • Hedge bindweed <i>Calystegia sepium</i> (D) • Common nettle <i>Urtica dioica</i> (O) • Hogweed <i>Heracleum sphondylium</i> (O) 	

<p>TN5</p>	<p>Poor semi-improved grassland</p> <p>Species include:</p> <ul style="list-style-type: none"> • Yorkshire fog <i>Holcus lanatus</i> (D) • Creeping bent <i>Agrostis stolonifera</i> (F) • Creeping thistle <i>Cirsium arvense</i> (O) • Ragwort <i>Jacobaea vulgaris</i> (O) • Common nettle <i>Urtica dioica</i> (O) • Hedge bindweed <i>Calystegia sepium</i> (O) • Dove's foot cranesbill <i>Geranium molle</i> (F) • Meadow buttercup <i>Ranunculus acris</i> (O) • Bramble r <i>Rubus fruticosus</i> agg. (R) • Lavender sp. <i>Lavandula</i> sp. (R) • Nipplewort <i>Lapsana communis</i> (R) • Ground ivy <i>Glechoma hederacea</i> (O) • Hogweed <i>Heracleum sphondylium</i> (R) • Pendulous sedge <i>Carex pendula</i> (R) • Lilly sp. <i>Lilium</i> sp. (R) • Ox-eye daisy <i>Leucanthemum vulgare</i> (R) • Sycamore saplings <i>Acer pseudoplatanus</i> (R) • False oat grass <i>Arrhenatherum elatius</i> (R) 	
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<p>TN6</p>	<p>Introduced shrub</p> <p>Species include:</p> <ul style="list-style-type: none"> • Jasmin sp. <i>Jasminum sambac</i> (R) • Japanese spindle tree <i>Euonymus japonicus</i> (O) • Hardy fuchsia <i>Fuchsia magellanica</i> (O) • Wall cotoneaster <i>Cotoneaster horizontalis</i> (F) <p>With ground flora:</p> <ul style="list-style-type: none"> • Ivy <i>Hedera helix</i> (F) • Bramble <i>Rubus fruticosus</i> agg. (R) • Hogweed <i>Heracleum sphondylium</i> (O) • Nipplewort <i>Lapsana communis</i> (O) • Wood avens <i>Geum urbanum</i> (R) • Meadow buttercup <i>Ranunculus acris</i> (R) • Rough meadow grass <i>Poa trivialis</i> (O) • False oat grass <i>Arrhenatherum elatius</i> (O) • Sycamore <i>Acer pseudoplatanus</i> saplings (R) • Hedge bindweed <i>Calystegia sepium</i> (O) 	
<p>TN7</p>	<p>Tall ruderal</p> <p>Species include:</p> <ul style="list-style-type: none"> • Bramble <i>Rubus fruticosus</i> agg. (F) • Hedge bindweed <i>Calystegia sepium</i> (F) • Creeping thistle <i>Cirsium arvense</i> (F) • Ragwort <i>Jacobaea vulgaris</i> (O) • Spear thistle <i>Cirsium vulgare</i> (O) • Dove's foot cranesbill <i>Geranium molle</i> (R) • Narrow-leaved dock <i>Rumex acetosa</i> (O) • Common nettle <i>Urtica dioica</i> (D) • Hogweed <i>Heracleum sphondylium</i> (F) 	

	<ul style="list-style-type: none"> • Meadow buttercup <i>Ranunculus acris</i> (R) • Smooth sow thistle <i>Sonchus oleraceus</i> (O) • Sycamore <i>Acer pseudoplatanus</i> saplings (O) • Elm sp. <i>Ulmus sp.</i> saplings (R) 	
TN8	<p>Bare ground covered with wood chippings</p>	 <p>The photograph shows a field of wood chippings with patches of green vegetation. A blue measuring tape is stretched across the ground in the middle ground. The background consists of a dense line of trees.</p>

TN9	Hardstanding intact	
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<p>TN10</p>	<p>Brash/plank pile x3</p>	
<p>B1& B2</p>	<p>Detailed B1 & B2 descriptions are in Table 5.</p>	