

Moorhill Road, West End

ECOLOGICAL APPRAISAL

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Highwood Homes Ltd

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EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located at Moorhill Road, West End and is centred at OS National Grid Reference SU 47110 13549.
Proposals	The development proposals are for the construction of a 70-bed care home (use class C2) with access to Moorhill Road, parking, landscaping and other associated works.
Existing Site Information	An Ecological Appraisal was completed by Daniel Ahern Ecology in June 2020.
Scope of this Survey(s)	The scope of the survey is to conduct an Ecological Appraisal including a desk-based study and an extended Phase 1 habitat survey of the Site. The desk-based study used online resources and information sourced from the Local Environmental Records Centre (LERC).
Results	Designated Sites - The nearest Natura 2000 site is the River Itchen SAC located approximately 2.6 km west of the site. - Moorgreen Meadows SSSI is located approximately 1.3 km north-east of the site. - There are two LNRs and 17 SINC's within 2 km of the site, with West End Covered Reservoir and Telegraph Woods are the closest which are less than 0.1 km north and east of the site. Habitats The habitats found on site consist of dense / scattered scrub, mixed scattered trees, poor semi-improved grassland, tall ruderal, artificial exposures, and waste tips – spoil, amenity grassland, introduced shrub, buildings and hardstanding. Protected / Notable Species There is suitable habitat on site for GCN (terrestrial), reptiles, bats (roosting, commuting and foraging), badger, hazel dormouse, common nesting birds, invertebrates, West European hedgehog.
Recommendations	Designated Sites The development is considered to have potential indirect effects on the Solent and Southampton Water SPA via the discharge of wastewater. Therefore, a nutrient balancing assessment is recommended. There is also the potential for an increase in recreational pressure at the Solent and Southampton SPA. All planning applications for new homes that fall within 5.6 km of the Solent SPAs are required to make a financial contribution to the Solent Recreation Mitigation Strategy. The development is considered to have a potential indirect effects on the West End Covered Reservoir and Telegraph Wood SINC's. It is recommended that a CEMP is produced for the site. Habitats Where the retention of scrub and trees is not possible, removal of vegetation is recommended to be undertaken outside of the breeding season for birds (March-September inclusive).

	Protected species It was considered that to understand the potential impacts on protected species, that the following surveys would be required: • Reptile presence / likely absence surveys; and • Climbed Bat Roost Assessment (BRA) of trees Impacts on other species should be avoided with the inclusion of measures secured within an EMMP (or similar) including: • Retention of deadwood features; • Supervision of vegetation clearance works by under ECoW for GCN and hazel dormouse through non-licenced method statements; • Inclusion of two bird boxes on newly constructed building / retained trees; • Inclusion of two bat boxes on newly constructed building / retained trees; • Design of a lighting strategy sensitive to impacts on bats; and • Inclusion of native planting within landscape design to provide a gain for biodiversity within for the site.
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GLOSSARY

BCT	Bat Conservation Trust
BoCC	Bird(s) of Conservation Concern
BSI	British Standard Institute
BTO	British Trust for Ornithology
CEnv	Chartered Environmentalist
CIEEM	Chartered Institute of Ecology & Environmental Management
CRoW Act	Countryside and Rights of Way Act 2000
cSPA	Candidate Special Protected Area
DEFRA	Department for the Environment, Food and Rural Affairs
EcIA	Ecological Impact Assessment
ECow	Ecological Clerk of Works
EMMP	Environmental Mitigation and Management Plan
EPS	European Protected Species
EPSL	European Protected Species Licence
GCN	Great Crested Newt
Habitats Regulations	Conservation of Habitats and Species Regulations 2017 (as amended)
HAP	Habitat Action Plan
HBIC	Hampshire Biodiversity Information Centre
Hedgerow Regulations	The Hedgerow Regulations 1997
HPI	Habitat(s) of Principal Importance
HRA	Habitats Regulations Assessment
LERC	Local Ecological Record Centre
LBAP	Local Biodiversity Action Plan
LNR	Local Nature Reserve
LPA	Local Planning Authority
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
NLMS	Non-licenced Method Statement
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
PEA	Preliminary Ecological Appraisal
pSAC	Potential Special Area of Conservation
SAC	Special Area of Conservation
SAP	Species Action Plan
SINC	Site of Interest for Nature Conservation
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 Highwood Homes Ltd in April 2021 to undertake an Ecological Appraisal of the site known as Moorhill Road, West End.

This report has been prepared by Project Ecologist Ben Cooke and the conditions pertinent to it are provided in Appendix A.

1.2 SITE LOCATION

The site is located at Moorhill Road, West End in Hampshire and is centred at Ordnance Survey National Grid Reference SU 47110 13549. The site is shown on Figure 1 and comprises the grounds of a former residential property with areas of scrub and scattered trees.

1.3 DEVELOPMENT PROPOSALS

The development proposals are for the construction of a 70-bed care home (use class C2) with access to Moorhill Road, parking, landscaping and other associated works.

1.4 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;
- An assessment of the potential ecological receptors present on site, identify any constraints they pose to future development and (if possible) any 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 Previous Reports

An Ecological Appraisal of the site was completed in June 2020 by Daniel Ahern Ecology (Daniel Ahern Ecology, 2020). The assessment recorded the presence of habitats on site which were common and widespread within the surrounding area (e.g., scrub, tall ruderal vegetation, poor semi-improved grassland and mixed scattered trees). The assessment also considered the site had suitability for the following protected and notable species; badger, bats (roosting, foraging and commuting), nesting birds, hazel dormouse and reptiles.

2.1.2 Local Ecological Records Centre

Information was requested from the Hampshire Information Biodiversity Centre (HBIC) for information on any nature conservation designations and protected or notable species records within 2 km of the site.

The data search covered:

- Statutory designated sites for nature conservation, namely Special Areas of Conservation (SACs), Special Protected Areas (SPAs), Ramsar sites, Site of Special Scientific Interest (SSSIs), National Nature Reserve (NNRs) and Local Nature Reserve (LNRs);
- Non-statutory designated sites for nature conservation, namely Local Wildlife Sites (LWS);
- 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 Hampshire (Local Biodiversity Action Plan) LBAP.

The data search did not cover:

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

2.1.3 Online Resources

A search for relevant information was also made on the following websites:

- MAGIC www.magic.gov.uk - DEFRA's interactive, web-based database for statutory designations and information on any EPSL applications that have been granted in the local area.

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 5th May 2021 by Tetra Tech Project Ecologist Ben Cooke. The weather conditions were sunny with scattered cloud and a light breeze. The temperature was approximately 12°C.

The vegetation and broad habitat types within the site were noted during the survey in accordance with the categories specified for a Phase 1 Habitat Survey (JNCC, 2010). Dominant plant species

were recorded for each habitat present using nomenclature according to 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 Hampshire LBAP.

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).

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 1 below.

Table 1: 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	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). 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.
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 2 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 2: 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	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. 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.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

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 *Cotoneaster horizontalis* and rhododendron *Rhododendron ponticum*. A full list of all invasive plant species is provided in Appendix B.

2.3 LIMITATIONS

The optimal period to undertake an extended Phase 1 habitat survey is April-September. The survey was completed in May which is in the optimal survey window. As such this is not considered to be a

limitation to the accurate assessment of the habitats and the dominant species of the respective vegetation types were visible and identifiable.

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.

A Habitat Suitability Index (HSI) assessment could not be completed on the two waterbodies. The two ponds were located within private land (The Ageas Bowl County Golf Course) which had no public right of way within proximity of the waterbodies and therefore these could not be accessed during the survey. This is not considered a significant limitation as the site is considered to be of negligible potential for the species for both terrestrial and aquatic habitat and therefore are unlikely to be found within the site.

The details of this report will remain valid for a period of two years from the date of the survey (May 2023), after which the validity of this assessment should be reviewed to determine whether further updates are necessary (CIEEM, 2019). 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, the details of which are summarised within Table 3. The locations of these sites are also shown within Figure 2.

Table 3: Designated Sites Within 2 km

Designation	Site Name	Distance (km) & Direction	Summary of features (Hampshire SINC Criteria)
SSSI	Moorgreen Meadows	1.33, NE	Neutral meadows and alder <i>Alnus</i> wood flanking a small tributary of the River Hamble on the Bracklesham Beds of the Hampshire Basin. The meadows lie on alluvium and clay with thin deposits of peat. The sward comprises at least 17 co-dominant herbs and grasses and is of exceptional scientific importance for its populations of marsh orchids <i>Dactylorhiza</i> spp., including a geographically isolated population of northern marsh orchid <i>Dactylorhiza purpurella</i> .
LNR	Wildern	1.10, E	The site is formed from three SINC's (Bridget Mary Gardens, Hogsty Copse and Wildern Nature Park). The site comprises of wetlands including ponds, flooded meadows and valley mire.
LNR	Netley Common	1.63, E	The site comprises open lowland heathland surrounded by a woodland fringe.
SINC	West End Covered Reservoir	Adjacent to the North of the site	2D: Grasslands which have become impoverished through inappropriate management, but which retain sufficient elements of relic unimproved grassland to enable recovery. 6A: Sites which support one or more notable species: Green-Winged Orchid <i>Orchis morio</i> [NI]
SINC	Telegraph Woods	0.01, E	1D: Pasture woodland and wooded commons, not included in any of the above, which are of considerable biological and historical interest. 3B(i): Areas of heathland which are afforested or have succeeded to woodland, if they retain significant remnants of heathland vegetation which would enable their recovery.
SINC	Harefield Copse	0.13, SE	1B: Other woodland where there is a significant element of ancient semi-natural woodland surviving.

Designation	Site Name	Distance (km) & Direction	Summary of features (Hampshire SINC Criteria)
SINC	Thornhill Park Plantation	0.65, SE	2B: Semi-improved grasslands which retain a significant element of unimproved grassland. 7A: Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities e.g., community wildlife sites.
SINC	Hogsty Corner	1.10, ESE	1A: Ancient semi-natural woodlands. 1C(ii): Other semi-natural woodland if; they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods. 3B(i): Areas of heathland which are afforested or have succeeded to woodland if they retain significant remnants of heathland vegetation which would enable their recovery, 5B: Fens, flushes, seepages, springs, inundation grasslands etc. that support a flora and fauna characteristic of unimproved and waterlogged (seasonal or permanent) conditions.
SINC	Dumbleton's Copse	1.24, SSE	3B(ii): Areas of heathland which are afforested or have succeeded to woodland if; they are contiguous with or form an integral part of an open area of heathland.
SINC	Hatch Grange Meadows	1.25, NNW	1C(ii): Other semi-natural woodland if they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods. 2B: Semi-improved grasslands which retain a significant element of unimproved grassland.
SINC	West End Copse	1.30, NW	1A: Ancient semi-natural woodlands. 1B: Other woodland where there is a significant element of ancient semi-natural woodland surviving.
SINC	Sholing Common	1.32, SW	2B: Semi-improved grasslands which retain a significant element of unimproved grassland. 7A: Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local

Designation	Site Name	Distance (km) & Direction	Summary of features (Hampshire SINC Criteria)
			communities e.g., community wildlife sites.
SINC	Bridget Mary Garden	1.42, ESE	1C(ii): Other semi-natural woodland if; they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods. 2B: Semi-improved grasslands which retain a significant element of unimproved grassland.
SINC	Wildern Nature Park	1.52, ESE	1B: Other woodland where there is a significant element of ancient semi-natural woodland surviving. 1C(ii): Other semi-natural woodland if; they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods. 2A: Agriculturally unimproved grasslands 5B: Fens, flushes, seepages, springs, inundation grasslands etc. that support a flora and fauna characteristic of unimproved and waterlogged (seasonal or permanent) conditions.
SINC	Shoreburs Greenway	1.56, SW	1B: Other woodland where there is a significant element of ancient semi-natural woodland surviving. 1C(ii): Other semi-natural woodland if; they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods. 2B: Semi-improved grasslands which retain a significant element of unimproved grassland. 7A: Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities e.g., community wildlife sites.
SINC	Netley Common, Southampton	1.61, SSE	2B: Semi-improved grasslands which retain a significant element of unimproved grassland. 3A: Areas of heathland vegetation; including matrices of dwarf shrub, acid grassland, valley mires and scrub. 3B(i): Areas of heathland which are afforested or have succeeded to woodland, if they retain

Designation	Site Name	Distance (km) & Direction	Summary of features (Hampshire SINC Criteria)
			significant remnants of heathland vegetation which would enable their recovery, 5B: Fens, flushes, seepages, springs, inundation grasslands etc. that support a flora and fauna characteristic of unimproved and waterlogged (seasonal or permanent) conditions.
SINC	Southwest of Exeter Close	1.82, E	7A: Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities e.g., community wildlife sites.
SINC	Dummers Copse South	1.84, NW	1A: Ancient semi-natural woodlands.
SINC	Montgomery Way	1.87, E	7A: Sites of nature conservation interest which occur in areas otherwise deficient in such interest, and/or are known to be of particularly high value to local communities e.g., community wildlife sites.
SINC	Dummers Copse North	1.90, NW	1A: Ancient semi-natural woodlands.

The nearest Natura 2000 site is River Itchen SAC / SSSI located approximately 2.6 km, NNW of the site.

The River Itchen SAC is a classic example of an Annex 1 habitat chalk river that is dominated throughout by aquatic *Ranunculus* species. It also supports nationally important Annex 2 species: southern damselfly *Coenagrion mercuriale* and bullhead *Cottus gobio*. The habitat type and species listed above are the primary reasons for designation however the following Annex 2 species; white clawed crayfish *Austropotamobius pallipes*, brook lamprey *Lampetra planeri*, Atlantic salmon *Salmo salar* and otter *Lutra lutra* are also present.

In addition to the qualifying features listed above, the River Itchen SSSI is also designated for the following; water vole *Arvicola amphibius* and an assemblage of breeding birds. These include tufted duck *Aythya fuligula*, pochard *A. farina* and shoveler *Anas clypeata*, the waders lapwing *Vanellus vanellus*, redshank *Tringa totanus* and snipe *Gallinago gallinago*, and wetland passerines including sedge warbler *Acrocephalus schoenobaenus*, reed warbler *A. Scirpaceus* and the Schedule 1 listed Cetti's warbler *Cettia cetti*.

3.2 HABITATS

The following habitats have been identified through our assessment. The composition of these habitats within the site are shown in Figure 3. Detailed Target Notes are included in Appendix C, as appropriate.

3.2.1 Dense/Scattered Scrub

Scrub composed of bramble *Rubus fruticosus* and hawthorn *Crataegus monogyna* was present across much of the site although concentrated within the eastern and southern extents (TN16 and TN20). The

areas of dense scrub were considered to be where the habitat has been long established within the site. The areas of scattered scrub represented areas where the habitat had begun to extend into adjacent areas and encompassed the existing habitat, particularly former areas of grassland and existing areas of hardstanding.

3.2.2 Mixed Scattered Trees

Individual and groups of trees (including lines of trees) were present within the site however the majority were located within the western half of the site. These are described within Table 4 and further details of the potential of these trees to support roosting bats are provided within Section 3.3.3.

Table 4: Tree Descriptions

Target Note	Description
TN3	Western red cedar <i>Thuja plicata</i> containing a small, dilapidated treehouse.
TN6	A cluster of trees within the north-western corner of the site. Species included sweet chestnut <i>Castanea sativa</i> , common holly <i>Ilex aquifolium</i> and Lawson cypress <i>Chamaecyparis lawsoniana</i> .
TN7	A mature sycamore <i>Acer pseudoplatanus</i> .
TN10	A mature sweet chestnut.
TN11	A dead sweet chestnut.
TN12	A sweet chestnut.
TN18	A line of trees to the north of a tarmac track. Species included sweet chestnut, common beech <i>Fagus sylvatica</i> , pedunculate oak <i>Quercus robur</i> and sycamore.
TN22	A mature field maple <i>Acer campestre</i> .
TN23	A mature narrowleaf ash <i>Fraxinus angustifolia</i> .
TN24	A mature Turkey oak <i>Quercus cerris</i> .
TN25	A mature pedunculate oak.
TN26	A mature pedunculate oak.
TN28	A mature sweet chestnut.
TN29	A mature common lime.
TN30	A mature sycamore.
TN31	A mature sycamore.
TN34	A mature sycamore.
TN35	A cluster of trees adjacent to the north of the southern site entrance. Species included Western red cedar, common beech, holly and Monterey pine <i>Pinus radiata</i> .
TN36	A mature sweet chestnut.
TN37	Western red cedar within the roadside verge along Moorhill Road (A27).
TN38	Mature pedunculate oak within the roadside verge along Moorhill Road (A27).
TN39	Mature Monterey pine within the roadside verge along Moorhill Road (A27).

3.2.3 Poor Semi-Improved Grassland

Areas of poor semi-improved grassland were located with the centre and western extent of the site (TN5, TN8 and TN19). The majority of the grassland comprised the remnants of the garden of the

former residential property on site which has since been demolished. The grassland was dominated by false oat grass *Arrthenatherum elatius*, perennial rye grass *Lolium perenne* and annual meadow grass *Poa annua*.

3.2.4 Tall Ruderal

Tall ruderal vegetation had established within the centre of the site (TN9). The vegetation was dominated by common nettle *Urtica dioica*, butterfly bush *Buddleia davidii* with rosebay willowherb *Epilobium angustifolium*.

3.2.5 Artificial Exposures and Waste Tips – Spoil

The remains of the property previously located on site (brick and building waste) had been piled into a large heap within the western extent of the site (TN1).

3.2.6 Amenity Grassland

Amenity grassland is situated along the roadside verge of Moorhill Road (A27) at the western extent of the site adjacent to the existing site entrances (TN40). Species included perennial rye-grass, white clover *Trifolium repens* and daisy *Bellis perennis*. The grassland was well maintained and appeared regularly mown.

3.2.7 Introduced Shrub

Strips of laurel *Prunus laurocerasus* hedge were located along the northern and western boundaries of the former property (TN4 and TN13).

3.2.8 Buildings

The remnants of two outbuildings were recorded within the site (TN13 and TN17). All had been partially or completely demolished.

3.2.9 Bare Ground

Areas of tarmac and concrete (which comprised foundations and driveway of the former residential property) (TN2) and patches of bare earth were identified within the site. These areas were concentrated primarily within the western extent of the site.

3.3 PROTECTED & NOTABLE SPECIES

3.3.1 Great Crested Newt

No records of GCN were returned by HBIC within 2 km of the site.

In addition, a search of MAGIC identified no granted ESPLs for GCN within a 2 km radius of the site.

Two waterbodies were identified using aerial photography and available mapping within a 500 m radius of the site and are shown in Figure 4. A description of each of these waterbodies are given in Table 5.

Table 5: Waterbody Locations

Waterbody Reference	OS Grid Reference	Distance (km) and Direction
P1	SU 47590 13644	0.4 km, E
P2	SU 47590 13644	0.46 km, E

Much of the site contained suitable habitat for commuting, foraging and shelter such as scrub and tall ruderal vegetation were located within the site. In addition, there were six potential hibernacula noted

on site; the demolished remains of the former residential property (TN1), a fallen tree trunk (TN15), a wood pile (TN21), a pile of rubble (TN33) and a log pile (TN34). All were considered potentially suitable for GCN to hibernate.

It is considered given the above that GCN are likely absent from the site due to the absence of local records, and the distance from potential breeding waterbodies. The two identified are located at the edge of the maximum considered 500m dispersal range for GCN and have poor connectivity to the site as they are interspersed with well-maintained fairways.

3.3.2 Reptiles

HBIC returned six records of all four species of common reptiles, adder *Vipera berus*, common lizard *Zootica vivipara*, grass snake *Natrix helvetica* and slow worm *Anguis fragilis*. These are summarised in Table 6. None of the records were within the boundary of the site.

Table 6: Reptile records returned within 2 km of the site

Common Name	No. of Records	Nearest Record to the Site (km)
Adder	1	1.7 km, E
Common lizard	2	1.8 km, NNE
Grass snake	1	0.5 km, NE
Slow worm	49	1.8 km, S

The combination of scrub and tall ruderal vegetation within the site is considered to provide suitable habitat for reptile species. As mentioned in Section 3.3.1, five potential hibernacula were present on site were also considered to provide suitable habitat for reptiles to forage and hibernate.

3.3.3 Bats

HBIC returned 94 records of up to six species including within a 2 km radius of the site, these are summarised within Table 7. None of the records returned were located within the site.

Table 7: Bat records returned within 2 km of the site

Common / Scientific Name	No. of Records	Nearest Record to the Site (km)
Common pipistrelle <i>Pipistrellus pipistrellus</i>	43	1.3 km, NW
Nathusius' pipistrelle <i>Pipistrellus nathusii</i>	1	1.51 km N
Natterer's bat <i>Myotis nattereri</i>	1	1.37 km, NE
Noctule <i>Nyctalus noctula</i>	16	1.77 km, WSW
Serotine <i>Eptesicus serotinus</i>	8	1.51 km N
Soprano pipistrelle <i>Pipistrellus pygmaeus</i>	22	1.9 km, E
Western Barbastelle <i>Barbastella barbastellus</i>	3	0.34 km, SE

A search of data of MAGIC identified two ESPLs granted for bats within a 2 km radius of the site (Table 8).

Table 8: ESPL for bats granted within 2 km of the site

Species affected	Distance from site	Licence allowed	Licence validity	Granted application reference
Brown long-eared, common pipistrelle	1 km, NNE	Damage and destruction of a resting place	17.05.2016 – 17.05.2026	2016-22944-EPS-MIT
Common pipistrelle	1.3 km, ESE	Destruction of a resting place	25.04.2013 – 01.04.2015	EPSM2013-5805

3.3.3.1 Roosting Bats – Trees

A ground-level assessment of trees within the site identified a number of trees with the potential to house roosting bats. Table 9 describes the bat roost potential for the trees present within the site.

Table 9: Potential Roosting Features on Trees within the Site

Target Note	Species	Description of Potential Roosting Features (PRFs)	Bat Roosting Potential
TN3	Western red cedar	A split was observed within the trunk of the tree on the southern aspect.	Low
TN6	Sweet chestnut, common holly and Lawson cypress	No PRFs were observed within the cluster of trees. Although dense vegetation obscured the base of some of the trees.	Negligible
TN7	Sycamore	A broken limb (approx. 4m above ground level) on the southern aspect of the tree had a knot hole. Assessment from ground level was unable to determine whether this formed a substantial cavity.	Moderate
TN10	Sweet chestnut	A dead tree with a single woodpecker hole (approx. 4 m above ground level) on the eastern aspect of the trunk.	Moderate
TN11	Sweet chestnut	A single woodpecker hole (approx. 2 m above ground level) on the southern aspect of the trunk	Moderate
TN12	Sweet chestnut	No PRFs were observed on the tree.	Negligible
TN19	Sweet chestnut, common beech, pedunculate oak and sycamore	Where PRFs were observed on individual within this row these have been described within TN25, TN26 and TN28. No PRFs were observed within the remaining trees.	Negligible
TN23	Field maple	No PRFs were observed on the tree.	Negligible
TN24	Narrowleaf ash	Two knotholes (approx. 1 m above ground level) were observed on the southern aspect.	Moderate
TN25	Turkey oak	No PRFs were observed on the tree.	Negligible
TN26	Pedunculate oak	A sparse covering of ivy was recorded along the trunk between 0.5 m to 4 m above ground level. No PRFs were observed on the tree.	Negligible
TN27	Pedunculate oak	A split was observed within a limb on the southern aspect (approx. 4 m above ground level).	Low

Target Note	Species	Description of Potential Roosting Features (PRFs)	Bat Roosting Potential
TN29	Sweet chestnut	Two woodpecker holes (approx. 2 and 3 m above ground level) on the eastern aspect of the trunk.	Moderate
TN30	Common lime	A single woodpecker hole (approx. 1.5 m above ground level) on the southern aspect of the trunk.	Moderate
TN31	Sycamore	Large cavity at the base of the tree.	Moderate
TN32	Sweet chestnut	Two woodpecker holes within the southern aspect of the tree (approx. 2m and 4m above ground level)	Moderate
TN35	Sycamore	No PRFs were observed on the tree.	Negligible
TN36	Western cedar, common beech, holly and Monterey pine	No PRFs were observed within the cluster of trees.	Negligible
TN37	Sweet chestnut.	A single woodpecker hole (approx. 3.5 m above ground level) on the northern aspect of the trunk. A blue tit was observed nesting within the cavity.	Low
TN38	Western red cedar	No PRFs were observed on the tree.	Negligible
TN39	Pedunculate oak	No PRFs were observed on the tree.	Negligible
TN40	Monterey pine	No PRFs were observed on the tree.	Negligible

3.3.3.2 Roosting Bats – Buildings

As the two buildings (TN13 and TN17) within the site had been demolished and or damaged to such an extent that they were both considered to be of negligible potential to house roosting bats.

3.3.3.3 Foraging and Commuting

The scrub, tall ruderal vegetation, introduced shrub and lines of trees are considered to provide suitable foraging and commuting habitat. These habitats comprised a majority of the site although the site comprised a sizeable minority of unsuitable habitat in the form of hardstanding and poor semi-improved grassland. The site is also considered relatively small in size which is considered to reduce its suitability. Overall, the site is considered to provide low suitability for foraging and commuting bats.

3.3.4 Badger

HBIC returned 25 records of badger within 2 km of the site. The exact location of these records are confidential.

The scrub, tall ruderal vegetation and lines of trees within the site are considered to provide suitable habitat for foraging and commuting. During the survey no signs of foraging or commuting badger were recorded. A mammal hole was recorded within the site (TN27). The majority of the entrances contained leaf litter and other debris however it appeared that the feature was now being used as a warren for rabbits *Oryctolagus cuniculus*.

It is considered, given the above that the site has low potential to be used by foraging and commuting badger.

3.3.5 Hazel Dormouse

HBIC returned seven records of hazel dormouse *Muscardinus avellanarius* within 2 km of the site. These are summarised in Table 10. None of the records were within the boundary of the site.

Table 10: Hazel dormouse records returned within 2 km of the site

OS Grid Reference	No. of Records	Proximity and direction from Site (km)
SU474133	4	0.38 km, SSE

A search of data of MAGIC identified a single ESPL granted for hazel dormouse within a 2 km radius of the site (Table 11).

Table 11: ESPL for hazel dormouse granted within 2 km of the site

Distance from site	Licence allowed	Licence validity	Granted application reference
0.7 km, E	Damage / destruction to a resting and breeding site	15.05.2014 – 31.10.2017	2014-636-EPS-MIT

The stands of dense scrub located within the eastern extent of the site are considered to offer a feeding resource and shelter, although these are considered sub-optimal. The scrub within the site is not contiguous with surrounding suitable habitat (woodland), and therefore it is considered unlikely to be used by hazel dormice if present in the wider area. The site is not considered to be connected to the woodland to the southeast where the ESPL was granted. The site therefore has been assessed as having negligible potential for the species.

3.3.6 Otter & Water Vole

No records of otter *Lutra lutra* or water vole *Arvicola amphibius* were returned by HBIC within 2 km of the site.

It is considered that given the lack of records, suitable habitat on site and direct hydrological connection to suitable habitats within the wider area that these two species are likely absent from the site. The site has therefore been assessed as having negligible potential for both species and they will not be considered further.

3.3.7 Birds

HBIC identified 1153 records for a total of 60 bird species within 2 km of the site. Of these a total of 18 were identified as legally protected bird species, listed on Schedule 1 of the W&CA (as amended). The data search also returned 25 records of bird species of high importance (Birds of Conservation Concern, (BoCC) Red List) within 2 km radius.

The habitats present on site are considered to have the potential to support nesting and foraging common and / or garden birds. There was no evidence of any nests belonging to species of bird listed on Schedule 1 of the W&CA.

3.3.8 Invertebrates

HBIC returned 1062 records of 71 invertebrate species within 2 km of the site. Of these two species were considered nationally scarce (stag beetle and the woodland grasshopper *Omocestus rufipes*). None of the records were located within the site.

The habitats on site have low potential to support notable invertebrates, primarily due to the relatively low species diversity and lack of suitable habitat present (e.g., woodland) which is abundant within the wider landscape. The presence of deadwood does however increase the suitability of the site for stag beetle in comparison to other invertebrate species. Overall, the site is considered to have low potential to support notable species of invertebrate.

3.3.9 Invasive Species

HBIC returned 142 records of 10 invasive species were listed under Schedule 9, Part 1 of the W&CA within a 2 km radius. None of these species were recorded within the site. Therefore, these are not considered further within the report.

3.3.10 Other Species

3.3.10.1 West European Hedgehog

HBIC returned no records of West European hedgehog *Erinaceus europaeus* within a 2 km radius of the site.

The scrub and tall ruderal vegetation on site are considered to provide shelter in addition to suitable habitat for foraging and commuting. The site is therefore considered to provide moderate potential for the species.

3.3.10.2 European rabbit

HBIC returned no records of European rabbit *Oryctolagus cuniculus* within a 2 km radius of the site.

The scrub and tall ruderal vegetation on site are considered to provide suitable habitat for foraging and commuting. The mammal hole was being partially used by rabbits identified by fresh earth digging at some entrance holes and the abundance of surrounding rabbit droppings.

3.4 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 12. The categories used are those which are defined in Section 4 of the CIEEM EcIA Guidelines (2018 v1.1):

Table 12: Importance of Ecological Features

Feature	Importance	Rationale
Solent and Southampton Water SPA	International	Internationally designated site for nature conservation.
River Itchen SAC	International	Internationally designated site for nature conservation.
River Itchen SSSI	National	Nationally designated site for nature conservation.
Moorgreen Meadows SSSI	National	Nationally designated site for nature conservation.
LNR	County	LNR are designated sites important at a county scale.
SINCs	County	SINCs are designated sites important at a county scale.
Mixed scattered trees	Local	Potential for nesting birds and roosting bats.

Feature	Importance	Rationale
Bats (Foraging and commuting)	Local	The site has suitable habitat but is relatively small and unlikely to support an assemblage of bats important beyond a local scale.
Birds	Local	The site is likely to support common and garden birds only.
West European Hedgehog	Local	The species is a SPI. Implementation of construction phase management practices to prevent killing or injury.
GCN	Negligible	Low potential for these species, suitable habitat on site is limited to margins. Precautionary approach recommended through non licenced method statement.
Hazel dormouse	Negligible	Low potential for the species, suitable habitat on site is limited. Precautionary approach with ECoW supervised displacement recommended, through a non-licenced method statement.
Invertebrate	Negligible	Notable invertebrates considered likely to be absent from site due to the habitats present.
Invasive species	Negligible	No invasive species were noted on site or within adjacent habitat.
Rabbits	Negligible	Species common and widespread within surrounding area. Implementation of construction phase management practices to prevent killing or injury.
Dense / Scattered scrub	Negligible	An area of commonly found habitat lacking any significant botanical interest, albeit it had the potential to support protected and notable species.
Poor semi-improved grassland	Negligible	Formerly intensively managed habitat, lacking any significant ecological interest, albeit it had the potential to support protected and notable species.
Bracken	Negligible	Low value habitat which is common and widespread within the surrounding area.
Tall ruderal	Negligible	A small area of commonly found habitat lacking any significant botanical interest.
Artificial Exposures and Waste Tips - Spoil	Negligible	This habitat is considered to have no significant ecological value.
Amenity grassland	Negligible	Low value habitat which is common and widespread and easy to recreate.
Introduced shrub	Negligible	Low value habitat which is common and widespread and easy to recreate.
Bare ground	Negligible	This habitat is considered to have no significant ecological value.
Buildings	Negligible	This habitat is considered to have no significant ecological value.
Badger	Unknown	Low potential for badgers, pre-commencement survey recommended. If present the site would be considered at best to be of local importance.

Feature	Importance	Rationale
Reptiles	Unknown	Suitable habitat is present within the site in areas of scrub and neutral semi-improved grassland and hence further surveys are required to determine presence/likely absence.
Bats (Roosting)	Unknown	Eleven trees considered to have potential for roosting bats, further surveys required.
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.

4.0 RELEVANT PLANNING POLICY & LEGISLATION

4.1 REVISED NATIONAL PLANNING POLICY FRAMEWORK

A revised National Planning Policy Framework (NPPF) was issued on 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 Habitat Regulation Assessments (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.*

4.2 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).

4.3 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 Hampshire LBAP is the relevant document for this site, and it contains the following relevant Habitat & Species Action Plans:

Table 13: LBAP SAPs

Species Action Plans	
Barbastelle bat <i>Barbastella barbastellus</i>	Butterflies and moths*
Serotine bat <i>Eptesicus serotinus</i>	Bumblebees*
Bechstein's bat <i>Myotis bechsteinii</i>	Stag beetle <i>Lucanus cervus</i>
Pipistrelle bat*	Seed-eating farmland birds*

Table 14: LBAP HAPs

Habitats Action Plans	
Urban	-

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).

4.4 LOCAL PLAN

The Eastleigh Borough Local Plan 2016 -2036 (EBC, 2018) under Policy DM11, Nature Conservation states;

The Borough Council will work with statutory and voluntary agencies and developers to:

- i. Protect, conserve and enhance areas subject to international, national and local nature conservation designations;*
- ii. Assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);*
- iii. Protect, conserve and enhance networks of natural habitats and Eastleigh Borough Local Plan 2016-2036 91 Eastleigh Borough Local Plan 2016-2036 features, including the Priority Biodiversity Areas and Priority Biodiversity Links identified in the Eastleigh Borough Biodiversity Action Plan 2012-2022, and watercourses and wetland complexes, woodland trees and hedgerows important to biodiversity and local character; and*
- iv. On new development sites seek enhancement of biodiversity through the protection and connection of existing and provision of new habitats and features compatible with the native biodiversity characteristics of the Borough.*

The Council will work with PUSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement a strategic approach to the protection of European sites from the direct and indirect effects of development including recreational disturbance. Within Eastleigh Borough this will include:

- a. implementing the Solent Recreation Mitigation Strategy and contributions to recreation mitigation for the New Forest or alternative agreed approaches if required;*
- b. preserving the water quality and flows within the Itchen and Hamble;*
- c. protection of the River Itchen SAC including water quality and the southern damselfly from the impacts of nitrogen deposition; and*
- d. contributing to major elements of the PUSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes, ecological networks and biodiversity enhancements(see policy S10). Development*

which is likely to adversely affect the integrity of an international or European nature conservation site will not be permitted.

Development which is likely to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI) will not be permitted, unless the Borough Council is satisfied that there are no alternative solutions and the reasons for the development clearly outweigh the harm to the nature conservation value of the site.

Development will not be permitted if it is likely to have a direct or indirect adverse effect on a Site of Importance for Nature Conservation (SINC) or Local Nature Reserve as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre), unless it can be demonstrated to the satisfaction of the Borough Council that:

- i. the benefits of the development clearly outweigh the adverse effects on the nature conservation value of the site;*
- ii. the adverse impacts are unavoidable;*
- iii. measures are taken to mitigate or, if this is not possible, compensate for the adverse effects, such that 92 Eastleigh Borough Local Plan 2016-2036 June 2018 the development will result in at least no net loss of biodiversity; and*
- iv. buffers free from development are provided to Locally designated sites within or adjacent to developments to alleviate recreational impact and impacts on edge habitats and to maintain dark skies.*

Impacts on priority habitats and protected and priority species will not be permitted unless the applicant can evidence that;

- there has been thorough habitat and species surveys;*
- there is an overall biodiversity gain; and*
- protected species impacts have been avoided or mitigated and their needs taken into consideration within the development design;*
- the great crested newt strategic survey and strategy have been considered in all developments within 500 m of a great crested newt pond;*
- the strategic bat trapping survey has been considered in all developments within the locality of a woodland surveyed or connected habitat networks.*

In determining planning applications, the Borough Council will:

- a. seek opportunities to create or enhance habitats and features of nature conservation interest, having regard to local geodiversity and soils; 45 Eastleigh Borough Council Biodiversity Action Plan 2012-2022 or updated versions*
- b. have regard to the need to protect, and opportunities to enhance the Priority Biodiversity Areas and the Priority Biodiversity Links set out in the Council's Biodiversity Action Plan⁴⁵; and*
- c. for residential developments within 5.6 km of the Solent Special Protection Areas (SPAs), require contributions to the Solent Recreation Mitigation Strategy or site-specific measures to address recreational disturbance as agreed by the Council and Natural England.*

4.5 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:

- Habitats Regulations – Disturbance, killing or habitat loss affecting a European Protected Species (EPS), i.e., GCN, bats and hazel dormouse.
- The W&CA - Disturbance or killing of reptiles
- The W&CA - Disturbance of nesting wild birds; and
- The NERC Act 2006 - Requirement for the Local Planning Authority (LPA), Eastleigh Borough Council to assess impacts on species listed in accordance with Schedule 41 as a material consideration in the planning process

5.0 DISCUSSION

5.1 DESIGNATED SITES

5.1.1 Natura 2000 Sites

The closest Natura 2000 site is the River Itchen SAC located 2.6 km NNW of the site. Given the distance to the site and the lack of both habitat and hydrological connections direct and indirect effects are considered unlikely.

The site is however considered to have a potential indirect effect from a net increase in the discharge of wastewater on the Solent Southampton Water SPA (approximately 3 km, SW of the site) via the Portswood Wastewater Treatment Works to which the proposed development would be contacted.

It is recommended that a nutrient balancing assessment is undertaken to determine whether the proposed development will create a net increase in the discharge of nutrients into the river catchment. This assessment will inform any mitigation that may be required to avoid an adverse effect resulting from the proposed development.

There is also the potential for effects arising from the operational phase of the development proposals at the site to cause an increase in recreational pressure at Solent and Southampton Water SPA. This is based on the zone of influence for this pathway being 5.6 km in accordance with the Solent Recreation Mitigation Strategy (Bird Aware Solent, 2017).

In order to mitigate this effect, all planning applications for new homes that fall within this 5.6 km zone are required to make a financial contribution to the Solent Recreation Mitigation Strategy (Bird Aware Solent, 2017).

5.1.2 Sites of Special Scientific Interest

Moorgreen Meadows is the closest SSSI to the site approximately 1.3 km to the north-west. Although the site is situated within the impact risk zone of the SSSI, there are no direct habitat and hydrological connections between the site and the SSSI. The site is not considered to fall into any of the described categories to which likely impacts would result. Therefore, construction phase impacts are not considered likely.

Given the proposals for the site are for the construction of a residential care home (and by extension the subsequent relatively small number of occupants) within the local area, the potential for direct impacts via increased recreational pressure are not considered large enough to be measurable and therefore significant.

5.1.3 Local Wildlife Sites

There are two LNRs and 17 SINC within a 2 km radius of the site. It is considered unlikely that any development on site would result in any direct effects to the majority of these designated sites as there is no direct access or connecting habitat. There is potential, however, for indirect effects on West End Covered Reservoir and Telegraph Woods SINC as these are situated less than 0.1 km north and east of the site. Potential adverse effects include air quality considerations, such as generation of dust and nitrogen deposition during construction.

As stated in Section 5.1.2, the relatively small number of occupants within the local area due to the development are not considered to create indirect impacts via increased recreational pressure large enough to be measurable and therefore significant.

It is recommended that a Construction Environmental Mitigation Plan (CEMP) is produced detailing mitigation to be implemented to counter the indirect effects to the West End Covered Reservoir and Telegraph Woods SINC considered to result from the proposed development.

5.2 HABITATS

The habitats present on site are common in the wider landscape and are generally of low quality. However, these habitats do have the potential to support protected and notable species and impacts from the perspective of these ecological features must be assessed.

Whilst not currently mandatory, the requirement to deliver biodiversity net gain as calculated by a metric is becoming increasingly common and is proposed in the Governments white paper “The Environment Bill 2019-2021”. The Eastleigh Local Plan 2016 -2036 requires at least no net loss of biodiversity with net gain where possible (EBC, 2018).

It is therefore recommended that an assessment of the potential for the site to deliver biodiversity net gain is made to quantitatively capture the impact that the development proposals will have.

Whilst enhancement is not a legal requirement, it is encouraged within the site as it helps to meet the government objectives for planning to protect and enhance biodiversity, minimise impacts and provide net gains for biodiversity in accordance with the NPPF (see Section 4.1).

It is recommended that high-quality habitats for invertebrates are created within any new planting scheme for the site. This could include pollen rich species of grassland mix being used and planting of native pollen-rich trees and shrubs. The planting could be secured within landscape design plans or an Ecological Mitigation and Management Plan (EMMP) for the project.

5.3 PROTECTED & NOTABLE SPECIES

5.3.1 GCN

The site comprises habitats with limited potential to support GCN (scrub and tall ruderal vegetation) and only in their terrestrial phase. The site is also located approximately 0.4 km from the closest known waterbody and surrounded by areas of more suitable terrestrial habitat (i.e., woodland). It is therefore considered that there is negligible potential for GCN to be present on site.

It is recommended that appropriate precautionary working methods are used during site clearance, and these should include actions to be undertaken in the unlikely event that GCN are encountered during works. These methods are considered to include a toolbox talk, a trimmed clearance of suitable habitat with subsequent hand search and the dismantling by hand of hibernacula which require removal. To avoid the risk of killing or injury, the removal of hibernacula is recommended to be completed during the GCN active season (March to October, inclusive). These methods are to be supervised and / or completed by GCN licenced ecologist. The methodology of the above works is recommended to be detailed in a Non-licence Method Statement (NLMS).

5.3.2 Reptiles

The site was considered to have suitability to support reptiles and further surveys are required to understand the size of the population present. Surveys would comprise seven visits to check artificial refuges that reptiles preferentially use for shelter and or basking. These checks must be done in suitable weather conditions i.e., warm and dry and in the active season between March and October.

The outcome of the surveys will establish whether a reptile population(s) are present and if it will be possible to retain any reptile population present on site in enhanced habitats or whether an off-site mitigation solution will be necessary.

5.3.3 Bats

5.3.3.1 Foraging and Commuting

It is considered that the value of the site for commuting and foraging bats can largely be retained as the majority of the linear habitats are being retained. The current proposals indicate that none of the existing linear habitat is to be removed to facilitate the development.

It is recommended that impacts are avoided by having a lighting strategy developed for the site that is sensitive to impacts on bats. Also, that the landscape planting includes species that are attractive to invertebrates that serve as prey for bats. No further surveys are considered necessary for bats as potential significant effects can be avoided.

5.3.3.2 Roosting Bats – Trees

Eleven of the trees within the site were considered to have the potential for roosting bats. At the time of writing none of the trees are proposed to be removed to facilitate the construction of the development. However, proximity of these trees to construction it is considered likely that works could result in potential disturbance effects to bats should they be roosting within these associated trees.

In addition, following an arboricultural survey eight of the trees considered to have potential for roosting bats trees have been recommended for removal on the grounds of safety. These trees have been recorded as showing signs of structural weakness and are expected to collapse within ten years (James Fuller Arboriculture, 2021).

A Climbed Bat Roost Assessment (BRA) of trees is therefore recommended to assess their potential more accurately to be used by bats.

5.3.4 Badgers

A precautionary methodology is recommended to avoid impacts to badgers during construction. Therefore, it is recommended that a pre-commencement badger survey is completed prior to the commencement of works. This will determine whether the level of badger or activity, lack thereof within the site has been maintained.

It is also recommended that precautions are taken to prevent injury or killing of badger during construction such as the capping of pipes and the inclusion ramps in earthworks left open overnight. These working methods could be secured and detailed within a Construction Environmental Management Plan (CEMP) for the project.

5.3.5 Hazel Dormouse

The stands of dense scrub are considered to offer suboptimal habitat for the species and combined are less than 50 m wide a while in close proximity to adjacent woodland off-site, is disconnected from habitats in the wider area.

Although hazel dormice are considered unlikely to be present on site, a precautionary approach to clearance is recommended to avoid effects in the unlikely event they are encountered. The measures include a two-stage clearance of vegetation which will also avoid potential effects on other fauna such as reptiles (if they are found to be present). This will be undertaken between March and November (inclusive). An Ecological Clerks of Works (ECoW) (with appropriate Natural England Licence) will supervise the strimming of areas of suitable vegetation to 300 mm, following which a fingertip search will be undertaken to check for fauna including hazel dormice. This would be followed by a further cut to ground-level. The methodology is recommended to be detailed in a NLMS.

5.3.6 Nesting Birds

The terrestrial habitats within and adjacent to the site are considered to be suitable for nesting birds (particularly songbirds).

To mitigate the risk of breaches in wildlife protection legislation afforded to nesting birds, it is recommended that works are programmed to occur outside the breeding bird season (March to August inclusive) if possible. If this is not possible (in line with the timing restrictions proposed above) works should proceed under the supervision of an Ecological Clerk of Works (ECoW). The role of the ECoW would be:

- To inform the principal contractor and site staff of the potential nesting birds to occupy the site present via a toolbox talk prior to works commencing on site each day.
- To undertake nesting bird searches prior to vegetation clearance or to carry out observational surveys of the building prior to demolition. Any vegetation would then be cleared on confirmation no nests are present.
- If any active bird nests are found, then works in that area would need to cease until the nest had become inactive e.g., chicks have fledged, or the nest failed. The size of the works exclusion buffer zone around the nest would depend on the species recorded and would be determined by the ECoW. Typically, buffers are 5-10 m for most common species.
- To act as a point of contact for site contractors in the event that a birds nest is identified when the ECoW is absent from site.

5.3.7 Invertebrates

It is recommended that trees are retained as far as practicable and that where clearance does take place, deadwood habitats are translocated into areas that will not be affected by works. Ideally this should include larger stumps with the potential to support stag beetle larvae as they are known to be in the area. These are best placed by being partially buried to encourage decomposition thereby forming so called stumperies. It is also recommended that landscape planting uses pollen rich species of local provenance to compensate for losses where they have occurred.

5.3.8 West European Hedgehog

The site provides suitable habitat for hedgehog, an SPI. To avoid harm to hedgehogs during the construction phase of the development, it is recommended that a search by hand for hedgehogs is carried out immediately prior to removing any dense vegetation.

During construction, the precautions mentioned within Section 5.3.4 (Badgers) are considered applicable to hedgehog as well, in addition to checking the site/stored materials at the beginning of each day.

5.4 ENHANCEMENTS

5.4.1 GCN

The creation of hibernation sites (hibernacula) within the site is recommended to provide GCN with a frost-free shelter and safe from predation. Where possible existing log piles should be retained within the site. Additional piles within the site can be created using materials within the site such as the fallen tree trunk (TN16). These piles would provide extra shelter and help to attract an array of invertebrate species.

5.4.2 Reptiles

The creation of further hibernacula within the site as described within Section 5.4.1 for GCN is considered applicable as an enhancement for reptiles.

5.4.3 Bats

Further roosting opportunities could be provided through the installation of two bat boxes on trees and buildings (such as the Schwegler 2FN or suitable alternative).

As good practice, measures to minimise impacts on bats potentially foraging / commuting on site should be implemented through consultation with the lighting designers as part of any future proposals to reduce impacts in line with the Institution Lighting Professional (ILP) 'Bats and artificial lighting in the UK' guidance note 8 (ILP, 2018). Any external lighting should be designed to meet a number of criteria to ensure that the environmental effects of artificial lighting are managed to a high standard with limited impacts to the existing tree-lined corridors and woodland areas, where practicable, to provide dark commuting and foraging areas for bats. A sensitive lighting strategy could potentially include the below where feasible:

- Consideration of the available lighting technology to minimise impacts on bats, i.e., use of Light Emitting Diode (LED) lighting also emits little UV light, and these lamps can be programmed to switch off, or dim at certain times;
- The lights being directional with light spillage avoided. Hoods / cowls can be used to direct light below the horizontal plane (ideally at an angle less than 70 degrees);
- Lights designed to be as low to the ground as possible (specifically not above 8 m); and
- Lights to switched off at an hour before sunset (particularly during the months of April to October, inclusive when bats are active), or at least, motion activated.

5.4.4 Badgers

The creation of suitable habitat for foraging should be considered within the site. As detailed above, new planting should comprise native species.

5.4.5 Nesting Birds

Additional nesting opportunities could be provided through the installation of two bird boxes (such as the Schwegler 1B or suitable alternative) within areas of suitable habitat (e.g., individual trees and buildings).

5.4.6 Invertebrates

The use of a range of native flowering species within the landscaping proposal is likely to enhance the site's potential to provide foraging resources for a range of invertebrate species.

5.4.7 West European Hedgehog

The installation hedgehog access holes in plot boundary fencing would maintain commuting routes for hedgehogs into the surrounding area.

6.0 SUMMARY

6.1 DESIGNATED SITES

It is considered that the current proposals may cause and indirect impact to the Solent and Southampton Water SPA via the discharge of wastewater. A nutrient balancing assessment is recommended to assess the effect of the development and propose mitigation should a net increase in nutrient be calculated as result of the proposals.

There is also the potential for effects arising from the operational phase of the development proposals at the site to cause an increase in recreational pressure at Solent SPAs. All planning applications for new homes that fall within 5.6 km of the Solent SPAs are required to make a financial contribution to the Solent Recreation Mitigation Strategy.

The proposals are considered to have indirect effects on West End Covered Reservoir and Telegraph Wood SINC. It is recommended that a CEMP is produced detailing mitigation to be implemented to counter these proposed effects.

6.2 HABITATS

Where the retention of these habitats is not possible, removal of vegetation is recommended to be undertaken outside of the breeding season for birds (March-September inclusive).

6.3 PROTECTED & NOTABLE SPECIES

It was considered that to understand the potential impacts on protected species, that the following surveys would be required:

- Reptile presence / likely absence surveys; and
- Climbed Bat Roost Assessment (BRA) of trees (following the assessment if any further impacts are highlighted, suitable mitigation will be provided)

Impacts on other species could be avoided with the inclusion of measures secured within an EMMP (or similar) including:

- Retention of deadwood features
- Supervision of vegetation clearance works by under ECoW for GCN and hazel dormouse through non-licensed method statements
- Inclusion of two bird boxes on newly constructed building / retained trees
- Inclusion of two bat boxes on newly constructed building / retained trees
- Design of a lighting strategy sensitive to impacts on bats; and
- Inclusion of native planting within landscape design to provide a gain for biodiversity within for the site.

6.4 ENHANCEMENTS

The following enhancements have been proposed for the site:

- Construction of hibernacula / log piles for GCN, Reptiles and Stag beetles
- Installation of bat boxes on suitable trees and buildings within the site
- Installation of bird boxes on suitable trees and buildings within the site
- Inclusion of native species within the landscape proposals; and

- Installation of fencing with access holes to maintain commuting routes

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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.

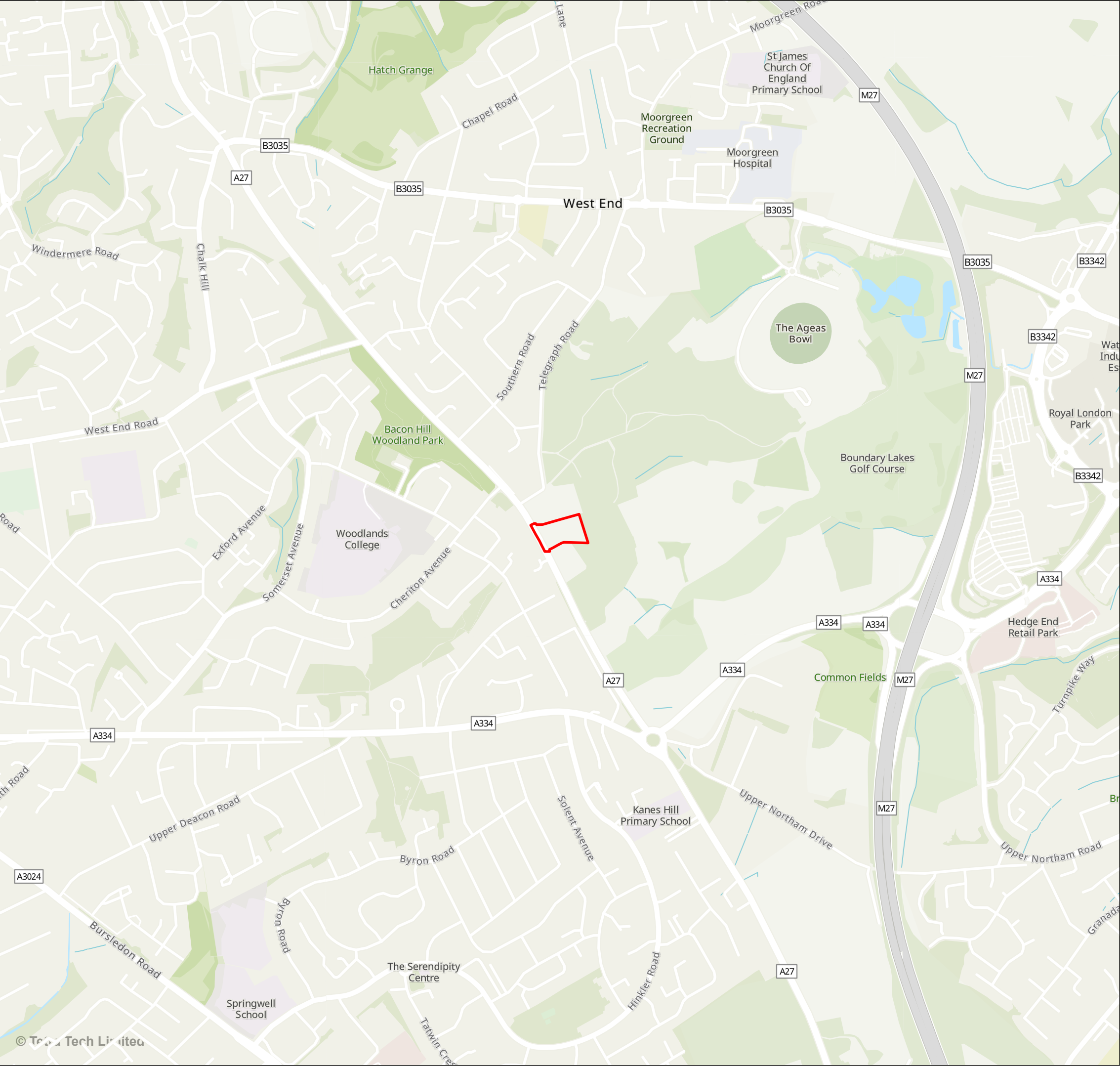
FIGURES

Figure 1 – Site Location Plan

Figure 2 – Designated Sites Map

Figure 3 – Phase 1 Habitat Plan

Figure 4 – Waterbody Location Plan



Site Location Plan

Moorhill, Moorhill Road, West End

Highwood Homes Ltd

Legend

Site boundary



Notes:

Drawn by: CL
Checked by: BC
Office: Southampton

Figure No. 1
Revision No. A

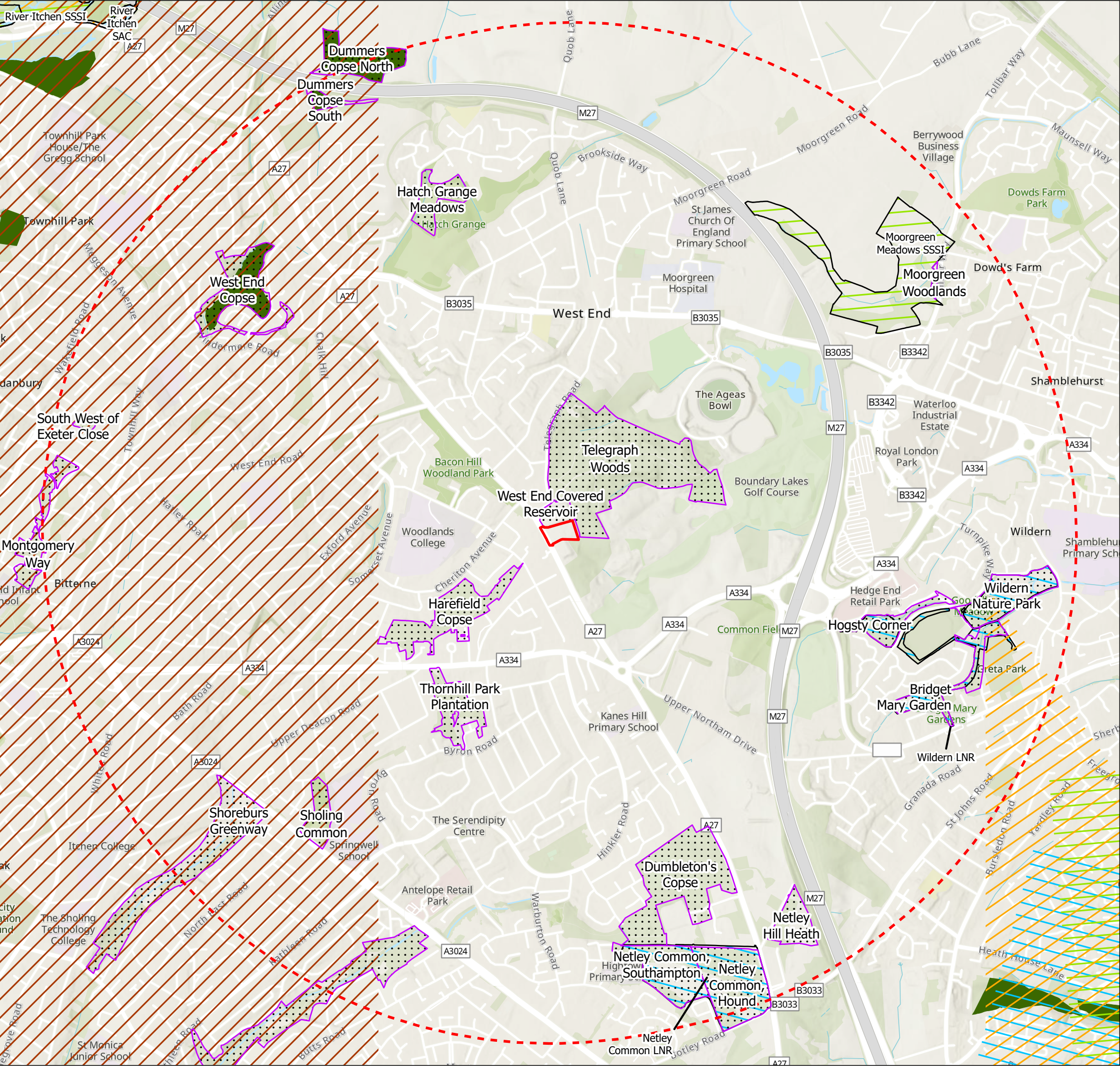
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29 October 2021
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Nature Conservation Designated Sites

Moorhill, Moorhill Road, West End

Highwood Homes Ltd

Legend

- SiteBoundary_2kmBuffer
- Site boundary
- Special Areas of Conservation (SAC)
- Sites of Special Scientific Interest (SSSI)
- Local Nature Reserves (LNR)
- Ancient & Semi-Natural Woodland
- SINC

Notes:

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Figure No. 2
Revision No. A

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Waterbody Location Plan

Moorhill, Moorhill Road, West End

Highwood Homes Ltd



Legend

- Site boundary
- Site boundary 500 m buffer
- Waterbodies

Notes:

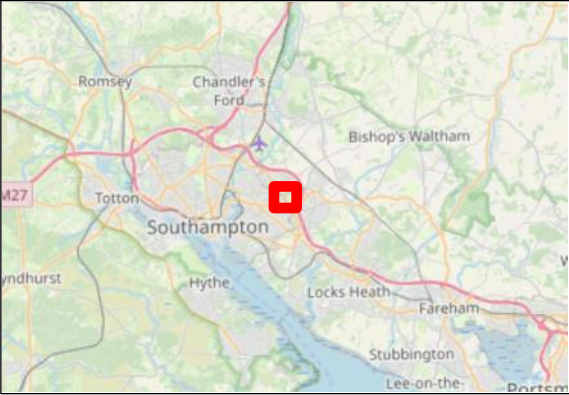
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Figure No. 4
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Phase 1 Habitat Plan

Moorhill, Moorhill Road, West End

Highwood Homes Ltd



Legend

- Site boundary
- Bare ground
- Scrub - dense/continuous
- Scrub - scattered
- Tall ruderal
- Target Notes
- Scattered tree - broad-leaved
- Fence

Notes:

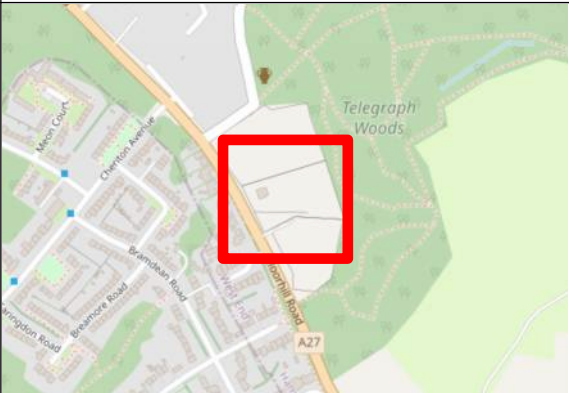
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Office: Southampton

Figure No. 3
Revision No. A

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APPENDIX A – REPORT CONDITIONS

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections’. Environmental conditions can vary, and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

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 cirius</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>
Capercaillie	<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 temminckii</i>
Curlew, Stone	<i>Burhinus oedicnemus</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>Haliaetus 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</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>Melicta 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 smaragdalis</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 cerealidis</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>Centaurium 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 triqueter</i> (<i>Scirpus triqueter</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 nanteuilii</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 – Sick- 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</i> <i>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>Mielichhoferia melicoferia</i>	Rigid Apple Moss	<i>Bartramia stricta</i>
Baltic Bog-Moss	<i>Sphagnum balticum</i>	Round-leaved feather Moss	<i>Rhynchostegium</i> <i>rotundifolium</i>
Blue Dew-Moss	<i>Saelania 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 cornubicum</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</i> <i>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 laurei</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 Boletus	<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>Smyrniolum 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>Crocasmia 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>Pilea 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. miniata</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 D – TARGET NOTES

Target Note	Description	Photograph
TN1	A potential hibernaculum – A pile of rubble comprised of the remains of the residential property which was previously located on site.	
TN2	Hardstanding - Areas of tarmac and concrete which comprised foundations and driveway of the former residential property.	
TN3	Tree – A mature Western red cedar with a split was observed within the trunk of the tree on the southern aspect.	

TN4	Introduced shrub – Laurel hedge along the western boundary of the site	
TN5	Poor semi-improved grassland – Part of the former residential garden on site. Species included – • false oat grass • perennial rye grass; and • annual meadow grass.	
TN6	Group of trees – A cluster of trees within the north-western corner of the site. Species included – • sweet chestnut • common holly; and • Lawson cypress	

TN7	Tree – A mature sycamore with a broken limb (approx. 4m above ground level) on the southern aspect of the tree had a knot hole.	
TN8	Poor semi-improved grassland – Part of the former residential garden on site. Species included – • false oat grass • perennial rye grass; and • annual meadow grass.	
TN9	Tall ruderal - Stand of tall ruderal vegetation within the centre of the site. Species included – • common nettle • butterfly bush; and • rosebay willowherb	

TN10	Tree – A dead sweet chestnut with a single woodpecker hole (approx. 4 m above ground level) on the eastern aspect of the trunk.	
TN11	Tree – A sweet chestnut with a single woodpecker hole (approx. 2 m above ground level) on the southern aspect of the trunk.	

TN12	Tree – Sweet chestnut	
TN13	Introduced shrub - Laurel hedge along the northern boundary of the site.	
TN14	Building – A collapse outbuilding. Also appeared to have sustained fire damage.	

TN15	A potential hibernaculum - Felled rotting tree trunk.	
TN16	Dense scrub – A stand of dense scrub within the western extent of the site. Species included – • bramble; and • hawthorn	
TN17	Building – Partially demolished former outbuilding. This structure also appears to have sustained fire damage.	

TN18	Line of trees – A line of mature trees adjacent to the north of the southern access track. Species included – • Sweet chestnut • Common beech • Pedunculate oak; and • Sycamore	
TN19	Poor semi-improved grassland – Part of the former residential garden on site. Species included – • false oat grass • perennial rye grass; and • annual meadow grass.	
TN20	Scattered scrub – Stand of sparse bramble encompassing the area of grassland.	

TN21	A potential hibernaculum – Pile of wood cutting of various other materials.	
TN22	Tree – Mature field maple	

TN23	Tree- Mature narrowleaf ash with two knotholes (approx. 1 m above ground level) were observed on the southern aspect.	
TN24	Tree – Mature Turkey oak	

TN25	Tree – Mature pedunculate oak with sparse covering of ivy recorded along the trunk between 0.5 m to 4 m above ground level.	
TN26	Tree – A mature pedunculate oak. A split was observed within a limb on the southern aspect (approx. 4 m above ground level).	

TN27	Mammal hole – The feature was being used by rabbits at the time of survey.	
TN28	Tree – Mature sweet chestnut with two woodpecker holes (approx. 2 and 3 m above ground level) on the eastern aspect of the trunk.	

TN29	Tree – Mature common lime. A single woodpecker hole (approx. 1.5 m above ground level) on the southern aspect of the trunk.	
TN30	Tree – A mature sycamore with a large cavity at the base of the tree.	

TN31	Tree – A mature sycamore with two woodpecker holes within the southern aspect of the tree (approx. 2m and 4m above ground level).	
TN32	A potential hibernaculum - Pile of rubble	
TN33	A potential hibernaculum - Log pile	

TN34	Tree – A mature sycamore.	
TN35	Group of Trees – A cluster of trees adjacent to the north of the southern site entrance. Species included – • Western red cedar • common beech • holly; and • Monterey pine	

TN36	Tree - Mature sweet chestnut with a single woodpecker hole. A blue tit was noted nesting within the feature during the survey.	
TN37	Tree - Western red cedar	

TN38	Tree - Mature pedunculate oak	
TN39	Tree - A mature Monterey pine	

TN40	Amenity grassland - The roadside verge of Moorhill Road (A27). The grassland was well maintained and appeared regularly mown. Species included – • Perennial rye-grass • White clover; and • Daisy	
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