Greengage

Dunsbury Park 500-502, Portsmouth City Council
Preliminary Ecological Appraisal, September 2021

QA

Dunsbury Park Plots 500 – 502 - Preliminary Ecological Appraisal

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1.0 EXECUTIVE SUMMARY

1.1 Greengage Environmental Ltd was commissioned to undertake a Preliminary Ecological Appraisal (PEA) by Portsmouth City Council of Plots 500-502 of Dunsbury Park within the administrative boundary of Havant Borough Council.

1.2 This document is a report of this survey and has been produced to support a Reserved Matters Application (RMA) for the site which seeks the construction of three industrial units with associated landscaping and parking.

1.3 This survey aimed to establish the ecological value of this site and the potential for notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

1.4 The survey area extends to approximately 3.58 hectares (ha) and comprises a large previously cleared building plot with emerging ruderal vegetation, young plantation woodland and a hedgerow.

1.5 The nearest statutory designated sites are considered outside the zone of impact. However, a non-statutory designated site (Beechwood East Site of Nature Conservation Importance) is located immediately adjacent the site. Measures relating to the protection of this designated site are described, including provision of a buffer zone and pollution control measures.

1.6 The site survey, alongside the desk study received from Hampshire Biodiversity Information Centre (HBIC) and a review of existing survey records for the site confirmed the site as having:

- Low potential to support badgers;
- High potential to support foraging and commuting bats;
- High potential to support dormouse;
- Moderate potential to support reptiles;
- Low potential to support invertebrates and
- Low potential to support hedgehog.

1.7 Further survey is required to establish the value of the site for commuting and foraging bats, and reptiles. Detail is provided within this report on the appropriate assessment methodology which falls in line with Bat Conservation Trust (BCT) Good Practice Guidelines[1].

1.8 Additional reptile surveys are recommended to confirm the presence/likely absence of reptiles from the site and identify an approach to mitigation.

1.9 Further surveys are not required for badgers or dormouse owing to the lack of foreseeable detrimental impacts upon these species.

1.10 Further mitigation recommendations are made. In conjunction with the further protected species survey results, mitigation measures should be detailed within a Construction Environment Management Plan (CEMP) which could be secured by condition.

1.11 Recommended ecological enhancements are specified within section 5 of this report. These enhancements target UK and Hampshire Biodiversity Action Plan (BAP) species/habitats, to help enhance the biodiversity value of the site.

1.12 It is recommended that the ecological enhancement measures are detailed within an Ecological Management Plan (EMP), which could be secured through condition.

2.0 INTRODUCTION

2.1 Greengage was commissioned to undertake a Preliminary Ecological Appraisal (PEA) by Portsmouth City Council of a site known as Dunsbury Park, Plots 500 – 502, which forms a sub-section of the wider Dunsbury Park Masterplan area, within the borough of Havant.

2.2 This document is a report of this survey and has been produced to support a Reserved Matters Application (RMA) for the site which seeks the construction of three industrial units with associated landscaping and parking.

2.3 This survey aimed to establish the ecological value of this site and the presence/likely absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

SITE DESCRIPTION

2.4 The survey area extends to approximately 3.58 hectares (ha) and is centred on National Grid Reference SU 69860 09290.

2.5 The site is located approximately 2.5km north-west of the centre of Havant, and approximately 150m east of the main carriageway A3(M). The immediate site surroundings comprise young, recently planted woodland to the west, bare ground and commercial / industrial units associated with the wider Dunsbury Park area to the east and south, and open green space to the north. The wider surroundings comprise pockets of woodland and areas of grassland, and the urban environments of Havant and Waterlooville. A small, flowing watercourse is present approximately 125m south.

2.6 The site largely comprises bare ground and young plantation woodland, with small areas of hardstanding and introduced shrub, and hedgerow forming the eastern boundary.

3.0 METHODOLOGY

3.1 The PEA (which included an Extended Ecological Phase 1 Survey) was undertaken in accordance with guidance in the Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 Habitat Survey[2] and the Chartered Institute of Ecological and Environmental Management (CIEEM) (2017) Guidelines for Preliminary Ecological Appraisal[3], in accordance with BS42020:2013: Biodiversity[4]. The overall assessment consisted of:

Biological information gained from a desktop review of available biological records within 2km of the site; and

A site walkover, protected species scoping assessment and phase 1 habitat survey.

3.2 The site walkover was conducted on 11th June 2021.

3.3 The survey boundary and existing site is shown at Figure 1.

3.4 Greengage undertook the site walkover during clear weather conditions. Features within the site boundary and accessible features immediately bordering it were evaluated and the extent and distribution of habitats and plant communities were recorded and supplemented with target notes on areas or species requiring further commentary. Fauna using the area were recorded and areas of habitat suitable for statutorily protected species were identified where present, with an active search carried out for evidence of such use.

DESK TOP REVIEW

3.5 A review of readily available ecological information and other relevant environmental databases (included Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) website[5]) was undertaken for the site and its vicinity. In addition, a biological records search from Hampshire Biodiversity Information Centre (HBIC) was reviewed to identify the location and citations of local non-statutory designated sites and presence of records for notable and protected species. Previous surveys of a wider area that included the Plots 500-502 application boundary, were conducted by Atkins in 2010 and 2011, and relevant results from these surveys have also been used to inform the desk study. This provided the overall ecological context for the site, to better inform the PEA.

ON SITE SURVEYS

Flora

3.6 The extent and distribution of different habitats on site were identified and mapped according to the standard Phase 1 Survey methodologies, supplemented with target notes describing the dominant botanical species and any features of interest. Any

protected plant species and invasive/non-natives present were also noted. A habitat map has been produced to illustrate the results, as shown at Figure 1.

Fauna

3.7 The Phase 1 Survey specifically included assessments to identify the potential value for notable, rare and protected species at site. This involved identifying potential habitats in terms of refugia, breeding sites and foraging areas in the context of species known to be present locally and regionally.

3.8 The likelihood of occurrence is ranked as follows:

Negligible - While presence cannot be absolutely discounted, the site includes very limited or poor-quality habitat for a particular species. The site may also be outside the known national range for a species;

Low - On-site habitat is poor to moderate quality for a given species, with few or no information about their presence from desk top study. However, presence cannot be discounted due to the national distribution of the species or the nature of on-site and surrounding habitats;

Moderate - The on-site habitats are of moderate quality, providing most or all of the key requirements for a species. Several factors may limit the likelihood of occurrence, habitat severance, habitat disturbance and small habitat area;

High - On-site habitat of high quality for given species. Site is within a regional or national stronghold for that particular species with good quality surroundings and good connectivity; and

Present - Presence confirmed for the survey itself or recent, confirmed records from information gathered through desk top study.

3.9 The species of relevance surveyed for included:

Badger (Meles meles)

3.10 The potential for badger to inhabit or forage within the study area was assessed. Evidence of badger activity includes the identification of setts (a system of underground tunnels and nesting chambers), grubbed up grassland (caused by the animals digging for earthworms, slugs, beetles etc.), badger hairs, paths, latrines and paw prints.

Bat Species (Chiroptera)

3.11 The site visit was undertaken in daylight and the evaluation of bat potential comprised an assessment of natural features on site that aimed to identify characteristics suitable for bat roosts, foraging and commuting. In accordance with Bat Conservation Trust's Good Practice Guidelines and methods given in English Nature's (now Natural England) Bat Mitigation Guidelines consideration was given to:

The availability of access to roosts for bats;

The presence and suitability of crevices and other places as roosts; and

Signs of bat activity or presence.

3.12 Definite signs of bat activity were taken to be:

The bats themselves;

Droppings;

Grease marks;

Scratch marks; and

Urine spatter.

3.13 Signs of possible bat presence were taken to be:

Stains; and

Moth and butterfly wings.

3.14 Features with potential as roost sites include mature trees with holes, crevices or splits (the most utilised trees being oak, ash, beech, willow and Scots pine), caves, bridges, tunnels and buildings with cracks or gaps serving as possible access points to voids or crevices.

3.15 Additionally, linear natural features such as tree lines, hedgerows and river corridors are often considered valuable for commuting and semi-natural habitats such as woodland, meadows and waterbodies can provide important foraging resources. Consideration was given to the presence of these features both immediately within and adjacent to the assessment area.

Great Crested Newt (Triturus cristatus)

3.16 An assessment was carried out to identify any potential habitats that may support great crested newt (GCN) and other native amphibians. The aquatic and terrestrial habitats required generally include small, still ponds or water bodies suitable for breeding; and woodland or grassland areas where there is optimal invertebrate prey potential.

Reptiles

3.17 The potential for reptile species on site was assessed during the walkover survey. Possible species include grass snake (Natrix helvetica), smooth snake (Coronella austriaca), adder (Vipera berus), common and sand lizard (Lacerta vivipara and L. agilis) and slow worm (Anguis fragilis). These native reptile species generally require open areas with low, mixed-height vegetation, such as heathland, rough grassland, and open scrub or, in the case of grass snake, waterbody margins. Suitable well drained and frost-free areas are needed so they can survive the winter.

Dormouse (Muscardinus avellanarius)

3.18 During the walkover survey the potential for dormouse to be present on site was assessed. This included observations for suitable habitat such as well-layered woodland, scrub and linking hedgerows, particularly those comprised of species offering suitable food sources such as honeysuckle and hazel, in addition to direct evidence such as characteristically gnawed hazelnuts, chewed ash keys and honeysuckle flowers, or nests.

Water Vole (Arvicola terrestris)

3.19 Water vole potential was assessed during the walkover survey. The potential is identified by the presence of ditches, rivers, dykes and lakes with holes and runs along the banks. Latrines, footprints or piles of food can also be noted.

Otter (Lutra lutra)

3.20 Where desktop review or consultation indicates the presence of otter in a river catchment, the presence of water bodies with good cover and potential holt (den) sites would be noted. Spraint, footprints or food remains can also be noted.

Birds

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

Invertebrates

3.22 As part of the walkover survey the quality of invertebrate habitat and the potential for notable terrestrial and aquatic invertebrate species was considered. There is a wide variety of habitats suitable for invertebrates including wetland areas, heathland, areas of bare sandy soil, ephemeral brownfield vegetation and meadows.

Biodiversity Action Plan priority species/ Species of Principal Importance

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

SURVEYORS

3.24 Daniel Perlaki, who undertook the surveys at site and prepared this report, has an undergraduate degree in Ecology (BSc Hons), a Master's degree in Conservation Science and Policy and is a Graduate member of CIEEM.

3.25 Morgan Taylor, who also undertook the survey, has a bachelors and masters degree in Marine Biology (MSci Hons), a Natural England CL17 Bat Survey Level 2 Class Licence (2015-7369-CLS-CLS) and CL10 Dormouse Survey Licence (2017-30817-CLS-CLS). Morgan is a Chartered Environmentalist, Full member of CIEEM and has over 9 years' experience in ecological surveying and has undertaken assessments of numerous development sites of this type. He leads the Ecology team at Greengage.

3.26 Mike Harris who reviewed and verified this report has a Bachelor's degree in Environmental Biology (BSc Hons), a Natural England Great Crested Newt Licence (2015-17819-CLS-CLS) and Dormouse Licence (2016-21291-CLS-CLS), is a Chartered Environmentalist (CEnv) and is a Full member of CIEEM. Mike has over 17 years' experience in ecological surveying and has undertaken and managed numerous ecological surveys and assessments.

3.27 This report was written by Daniel Perlaki and reviewed and verified by Mike Harris who confirms in writing (see the QA sheet at the front of this report) that the report is in line with the following:

Represents sound industry practice;

Reports and recommends correctly, truthfully and objectively;

Is appropriate given the local site conditions and scope of works proposed; and

Avoids invalid, biased and exaggerated statements.

CONSTRAINTS

3.28 The PEA was undertaken during an optimal time of year during ideal conditions by a suitably qualified ecologist. It was possible to access all areas of the site. There were no constraints to the survey.

4.0 RESULTS

DESK TOP REVIEW

Designations

4.1 Consultations with the local biological record centres (HBIC) and the MAGIC dataset have confirmed that there are no statutory designations of national or international importance within the boundary of the site.

4.2 There are also no statutory designations of international importance with 2km of the site boundary. The nearest statutory designated site is Hazleton Common Local Nature Reserve (LNR), 2.1km north of the site.

4.3 The nearest statutory designated sites of international importance are Solent Maritime Special Area of Conservation (SAC), Chichester and Langstone Harbours Special Protected Area (SPA) and Solent & Isle of Wight Lagoons SAC, approximately 3.5km south of the site.

4.4 Records from HBIC also identified 51 Sites of Importance for Nature Conservation (SINC) within 2km of the site boundary. SINCs are non-statutory designated sites, recognised by local authorities as important wildlife sites.

4.5 Table 4.1 below gives the locations and descriptions of a selection of the nearest/most relevant local designations.

Table 4.1 Closest Non-Statutory Designated Sites within Search Radius

SINC Name and Reference	Approx. Distance from Site	Description
Beech Wood East (HV0041)	Adjacent to western site boundary	Woodland - awaiting further details from HBIC
Cherry Tree Row (HV0040)	180m S	Woodland - awaiting further details from HBIC
Neville's Park Areas 2 & 3 (HV0039)	250m S	Agriculturally unimproved grasslands - awaiting further details from HBIC
Neville's Park East Wood (HV0037)	450m S	Woodland - awaiting further details from HBIC

Biodiversity Action Plans

4.6 UK Biodiversity Action Plans (BAPs) have been developed which set priorities for nationally important habitats and species. To support the BAPs, Species/Habitat Statements (otherwise known as Species/Habitat Action Plans) were produced that provide an overview of the status of the species and set out the broad policies that can

be developed to conserve them. A list of priority species of conservation importance was also developed.

4.7 The UK BAP was succeeded in 2012 by the UK-Post 2012 Biodiversity Framework which informed the creation of the Biodiversity 2020 strategy; England's contribution towards the UK's commitments under the United Nations Convention of Biological Diversity.

4.8 Despite this, the UK BAP priority species lists and conservation objectives still remain valid through integration with local BAPs (which remain valid), and in the form of the Habitats and Species of Principle Importance list (as required under section 41 of the Natural Environment and Rural Communities (NERC) Act).

4.9 There were no UK priority habitats identified on site, however the UK BAP priority habitat Lowland Mixed Deciduous Woodland is present immediately adjacent the site, within the Beech Wood East SINC.

4.10 No ancient woodland is present within the site. The closest ancient woodland is an area of Ancient and Semi-Natural Woodland, approximately 420m south-west of the site.

4.11 Local Biodiversity Action Plans (LBAPs) ensure that national action plans (the UK BAP/Biodiversity 2020) are translated into effective action at the local level and establish targets and actions for locally characteristic species and habitats.

Biodiversity Action Plan for Hampshire[6]

4.12 The following Habitat Action Plans (HAPs) which are components of the wider Hampshire BAP are of relevance to this report due to their presence within or within the vicinity of the site:

Ancient Semi-natural Woodland HAP; and

Ancient Hedgerows HAP.

Species Records

4.13 The information provided in the biological data search from HBIC identified records of a number of protected and BAP priority species within 2km search radius of the site. This species list will be updated upon receipt of a revised records search. Among others, these include the following species of potential relevance to the site:

Reptile species including slow-worm (Anguis fragilis), grass snake (Natrix helvetica), adder (Vipera berus) and common lizard (Zootoca vivipara).

Bird species including nightjar (Caprimulgus europaeus), linnet (Carduelis cannabina), twite (Carduelis flavirostris), house sparrow (Passer domesticus), willow tit (Poecile montanus), marsh tit (Poecile palustris), fire crest (Regulus ignicapilla), and starling (Sturnus vulgaris).

Bat species including Bechstein's bat (Myotis bechsteinii), Brandt's bat (M. brandtii), whiskered bat (M. mystacinus) Natterer's bat (M. nattereri), Leisler's (Nyctalus

leisleri), noctule (Nyctalus noctule), pipistrelle (Pipistrellus sp.), and brown long-eared bat (Plecotus auratus).

Other mammal species including West European hedgehog (Erinaceus europaeus) and hazel dormouse (Muscardinus avellanarius).

Numerous invertebrate records.

2010 / 2011 Surveys

4.14 In addition to the above biological records, the previous surveys identified the following species within or close to the site:

Additional bat species common pipistrelle (Pipistrellus pipistrellus), soprano pipistrelle (P. pygmaeus) and possible noctule (Nyctalus noctula) and serotine (Eptesicus serotinus), including bat activity on the western and eastern site boundaries in 2011.

Bird species recorded within the site in 2011 included skylark (Alauda arvensis), dunnock (Prunella modularis), common whitethroat (Curruca communis) and yellowhammer (Emberiza citronella).

Hazel dormouse recorded within the hedgerow on the eastern boundary and within Beech Wood East to the west in 2010 / 2011.

Common lizard and slow-worm recorded within the site in 2010.

4.15 The species noted above are primarily those known to be in the area that may be impacted by any proposals at the site, or that stand to benefit as a consequence of potential ecological enhancements at the site and inform site-specific mitigation and enhancement recommendations described in the following chapter.

Detailed Description of Site: Habitats

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

- Broadleaved woodland - plantation (A1.1.2);
- Tall ruderal (C3.1);
- Amenity grassland (J1.2);
- Intact hedge – native species-rich (J2.1.1);
- Bare ground (J4); and
- Hardstanding (J3.6).

Broadleaved woodland – plantation

4.17 An area of young plantation woodland along the western edge of the site is present. This appears to have been planted within the previous 5 years to provide a buffer to Beechwood East SINC.

4.18 Species include oak (Quercus robur) and hawthorn (Crataegus monogyna). The ground layer is dense with herbs and grasses including teasel (Dipsacus fullonum), horsetail (Equisetum arvense), greater willowherb (Epilobium hirsutum), creeping thistle (Cirsium arvense), salad burnet (Sanguisorba minor), creeping buttercup (Ranunculus repens), cow parsley (Anthriscus sylvestris), bird's-foot trefoil (Lotus corniculatus), wild carrot (Daucus carota), hop trefoil (Trifolium campestre), white clover (Trifolium repens), purple toadflax (Linaria purpurea), fat hen (Chenopodium album), thyme-leaved speedwell (Veronica serpyllifolia), annual meadowgrass (Poa annua), curly dock (Rumex crispus) and weld (Reseda luteola).

Tall ruderal

4.19 The fringes of the site have been categorised as tall ruderal habitat owing to the encroachment of early colonising vegetation on the previously cleared land. This is dominated by typical ruderal species such as ragwort (Jacobaea vulgaris), fleabane (Pulicaria dysenterica), bristly oxtonge (Helminthotheca echioides), butterfly bush (Buddleia davidii), scentless mayweed (Tripleurospermum inodorum) and Canadian fleabane (Erigeron canadensis).

4.20 Patches of bare ground are present within the ruderal vegetation.

Amenity grassland

4.21 Small areas of well-maintained amenity grassland are present around the marketing suite. These are dominated by ryegrass (Lolium sp.).

Intact hedge – native species-rich

4.22 The eastern boundary of the site is formed by a native hedgerow with trees. Present at the canopy level is oak and willow (Salix sp.). Shrubs include hawthorn, dog rose (Rosa canina), bramble (Rubus fructicosus agg.). The herb layer includes bracken (Pteridium aquilinum), oxeye daisy (Leucanthemum vulgare), hop trefoil, black knapweed (Centaurea nigra), red clover (Trifolium arvense), vetch (Vicia sp.), bird's-foot trefoil, selfheal (Prunella vulgaris), hogweed (Heracleum sphondylium), wild carrot, betony (Betonica officinalis), pendulous sedge (Carex pendula), early purple orchid (Orchis mascula) and valerian (Valeriana officinalis).

4.23 The hedgerow has a well-developed herbaceous edge on both sides.

Bare Ground

4.24 The main body of the site is formed by bare ground with only minor vegetative establishment from common ruderal / ephemeral species such as ragwort, fleabane, bristly oxtongue and greater willowherb. The site is maintained as such, and the bare ground has been profiled to provide vehicular ramps up the south-facing slope.

Hardstanding

4.25 A small area of hardstanding is present around the sales suite to the south of the site. This is well maintained for vehicle movements and parking.

Detailed description of Site: Species

Badger

4.26 Whilst the habitats on the site themselves are largely unsuitable for badgers, the woodland habitat immediately adjacent the site is suitable for foraging and sett building. Therefore, it is possible that badgers would use the site, in addition to habitats off site, as part of their wider foraging territories.

4.27 No direct evidence of badgers within the site were recorded (i.e. latrines, hairs, evidence of foraging). An inspection of the adjacent woodland was undertaken to identify any badger setts. No direct evidence of badgers was recorded within the initial 5-10m of the woodland adjoining the site.

4.28 Overall, the site is considered to have low potential to support badgers.

Bats

Foraging and Commuting

4.29 Records from HBIC and the previous surveys identified a total of eleven bat species within 2km of the site.

4.30 Beechwood East SINC just beyond the western boundary is a mature woodland which is likely to support a diverse assemblage of invertebrate prey for bats. Coleoptera, Diptera and Lepidoptera are likely present in high volumes which will provide foraging opportunities for many bat species. Additionally, the woodland edge provided is likely to provide a useful commuting route as it extends far beyond the site boundaries.

4.31 Additionally, the hedgerow along the eastern boundary likely provides a foraging resource and commuting route, although to a lesser extent. It does not extend beyond the boundaries of the site; however, it is connected to other hedgerows which do.

4.32 The low levels of external lighting also contributes to the value of the site for foraging and commuting bats, and in particular for species susceptible to light pollution.

4.33 Previous surveys undertaken at site recorded foraging and commuting activity by seven species of bat, although the majority of activity was associated with common pipistrelle (Pipistrellus pipistrellus).

4.34 Therefore, the site has been determined to provide high potential to support commuting and foraging bats.

Roosting

4.35 There are no trees or structures on site which have potential to support roosting bats. An assessment of all the trees within the hedgerow along the eastern boundary identified none as possessing potential roosting features. Accordingly, the site itself has negligible potential to support roosting bats.

4.36 However, Beechwood East SINC likely possesses numerous trees with potential roosting features. A detailed scoping exercise of all trees within the SINC was not undertaken, however the woodland in general is considered to have high potential to support roosting bats.

Figure 4.1 Trees within Beechwood East with potential to support roosting bats



Birds

4.37 The woodland adjacent the site has high potential to support numerous notable bird species by providing diverse foraging and nesting opportunities.

4.38 The hedgerow along the eastern boundary also provides foraging and nesting opportunities in the dense understorey and within the mature trees. The presence of berry producing shrubs such as hawthorn and brambles will also provide foraging value for passerine species.

4.39 The bare ground and ruderal habitat is too sparse vegetatively to provide value for ground nesting birds and the young plantation woodland is not suitably developed to provide nesting opportunities. However the bare ground may provide foraging opportunities for insectivorous species, although of low quality.

4.40 The site is therefore considered to have high potential to support nesting birds associated with the hedgerow.

Schedule 1 Species

4.41 To be updated when HBIC data received.

Dormouse

4.42 There are numerous records of dormouse within 2km of the site and previous surveys of the wider masterplan site undertaken in 2011 confirmed their presence on site.

4.43 Hedgerow habitat on site, and woodland immediately adjacent, have not significantly changed and are still considered to be suitable for dormouse owing to the dense vegetation suitable for nesting and presence of foraging resources, although the young plantation woodland has not reached suitable maturity to support the species.

4.44 Overall, the site is considered to have high potential to support dormouse.

Invertebrates

4.45 There are records of several invertebrate species of note within 2km of the site.

4.46 The hedgerow on site possesses numerous mature trees with low levels of deadwood which may provide value for saproxylic Coleoptera. Additionally, the diversity of flowering herbaceous species within the ruderal and bare ground habitat likely provides value for numerous pollinator species, although these habitats are common and widespread in the area and of generally low value.

4.47 Overall, the site is classified as being of low value for notable invertebrate species, and low value for common species.

Great Crested Newt

4.48 Suitable terrestrial habitat is present in the form of plantation woodland, hedgerows and ruderal vegetation. However there is an absence of suitable breeding ponds within 500m of the site. The nearest waterbodies visible on available OS maps and satellite imagery are either now absent or are dry ditches which are unsuitable for GCN breeding. In

accordance, the site is considered to have negligible potential to support great crested newt.

Reptiles

4.49 The low-lying vegetation and bare ground provides shelter, foraging and basking opportunities for common reptiles such as slow worm and common lizard, although it is of limited value and widely represented in the immediate surroundings. However, the hedgerow and woodland edge likely provides valuable hibernacula and refugia, and slow-worm and common lizard have been previously recorded within the site. Overall the site is considered to have high potential to support reptiles, particularly around the edges of the site.

Other BAP/Notable Species

Hedgehog

4.50 Given the presence of hedgehog records within 2km of the site and the presence of dense vegetation at the base of the hedgerow and young woodland which are suitable for shelter and foraging, the site is considered to possess moderate potential value for hedgehog.

Other Protected Species

4.51 Owing to the type of habitats present on site and in the immediate vicinity, the site is considered to have negligible potential to support water vole and otter.

5.0 EVALUATION AND DISCUSSION

BASELINE SUMMARY

5.1 The assessment site and its surroundings have potential to support the following ecological receptors of note, which could therefore be impacted upon by any future prospective development proposals, as indicated in Table 5.2 below. Comment on further recommendations for each receptor is provided; further detail and discussion can be found at paragraph 5.2 onward:

Table 5.1 Baseline Summary

Receptor	Presence/Potential Presence	Comments
Statutory Designated Sites: International importance	Present within 5km	Owing to the distance from the proposed development site (>3.5km), there are no foreseeable detrimental impacts associated with construction of the units. As the proposal is non-residential in nature, no recreational pressures on the SPAs or SACs within 5km are anticipated, therefore further consideration is not required, however this should be confirmed by the competent authority.
Statutory Designated Sites: Local/National importance	Present with 2.1km	The distance of the proposed development site and nature of the proposed development mean detrimental impacts upon the LNR 2.1km north of the site are considered to be negligible during construction, due to the distance between the site and the LNR, and negligible during the operational phase. The construction of three commercial / industrial units is not anticipated to cause any recreational pressures on the LNR. Statutory Designated sites of Local/National importance are not considered further.
Designated Sites: Non-Statutory	Present adjacent to western site boundary	The Beech Wood East SINC is adjacent to the site boundary, with additional SINCs within 500m. These are therefore considered to be at risk from the development without due care and consideration. Impacts such as dust deposition, vibration and noise pollution will need to be carefully assessed and mitigation measures established prior to the commencement of any construction works on site. These measures should be detailed within a Construction Environment Management Plan (CEMP).

Receptor	Presence/Potential Presence	Comments
		The adjacent SINC is also adjacent to a motorway so already subject to noise and light disturbance, however additional disturbance during the operational phase should be mitigated through a considerate lighting plan and buffer planting / screening.
Habitats	Hedgerows present within the site Woodland present immediately adjacent site	All hedgerow and woodland habitat is proposed for retention through the development proposals. Should suitable protection be installed (i.e. fencing, construction exclusion zones around RPAs) and standard pollution control measures be implemented, there are no foreseeable detrimental impacts upon protected habitats. These measures may be detailed within a CEMP which may be secured through planning condition.
Badger	Low potential	The proposed development will not result in the destruction or disturbance of any badger setts owing to the buffer between the development footprint and the woodland edge. Additionally, the only habitat loss is of poor-quality foraging habitat which is present in the wider vicinity. Additionally, there is no evidence of use of this habitat by badgers. Therefore, there are no foreseeable detrimental impacts upon badgers associated with the proposed development.
Foraging and commuting bats	High potential	The main value for foraging and commuting bats on site is the woodland edge along the western boundary, and to a lesser extent the hedgerow along the eastern boundary. The proposed development will not result in the loss of habitat suitable for foraging and commuting bats, however external lighting may impact bat behaviour and act as a deterrent to some species. Bat activity surveys are recommended to confirm the levels of bat activity, species present and ways in which the site is used, both spatially and temporally, in order to identify an approach to mitigation.
Roosting bats	Negligible potential	Whilst the site itself is said to have negligible potential to support roosting bats, the woodland beyond the western boundary is considered to have high potential to support roosting bats owing to the density of mature trees.

Receptor	Presence/Potential Presence	Comments
		As there is no proposed loss of habitat, and the proposed development provides a buffer zone between the development footprint and woodland edge, detrimental impacts upon any roosting bats which may be present are considered unlikely. Bat sensitive lighting should be incorporated to ensure there is no light disturbance.
Birds	High potential	There is no predicted loss of suitable nesting habitat, and loss of only poor-quality foraging habitat for some species. Accordingly, there are no foreseeable impacts upon birds.
Dormouse	High potential	Whilst the hedgerow and woodland edge are considered to have high potential to support dormouse, the proposed development will not result in the loss of hedgerow or woodland edge habitat. Should suitable protection of these habitats be secured, there are no foreseeable impacts upon dormouse.
Reptiles	High potential	The proposals will result in the loss of habitat with potential to support reptiles, although this is likely unevenly distributed across the site. Reptile surveys are recommended to confirm the presence/likely absence of reptiles and identify an approach to mitigation.
Hedgehog	Moderate potential	Whilst hedgehog is not afforded the same level of protection as bats or birds, they are still protected from intentional injury or death under the Wild Mammal Protection Act (see Appendix 1). Measures to protect hedgehog and retain suitable habitat on site for the species, allowing continued connectivity, are therefore described below.
Invertebrates	Low value	Although of low value, the site does offer some opportunities for invertebrates, and enhancement opportunities exist, which are provided below.

DISCUSSION AND RECOMMENDATIONS

5.2 Discussion is provided below on the key ecological receptors that stand to be impacted/benefit from proposed works; high level commentary on appropriate mitigation, compensation and enhancement actions is also provided.

5.3 An Ecological Management Plan (EMP) and CEMP could be produced and implemented for the site providing greater detail on the below, which should be secured through planning condition in accordance with BS 42020: 2013 Biodiversity.

Designated Sites: Non-Statutory

5.4 In order to ensure there are no detrimental impacts upon the adjacent Beechwood East SNCI, suitable protection measures should be put in place. Heras fencing should be installed to provide a construction exclusion zone around either the SNCI itself of the buffer plantation woodland to prevent accidental vehicle collisions. Any potentially hazardous chemicals stored on site should be situated away from the SNCI boundary and no pouring or mixing should be undertaken near the western (or eastern, see below) boundary. Additionally, dust control measures should be implemented to prevent dust deposition upon the adjacent SNCI or buffer zone.

5.5 These protection measures may be detailed within a CEMP, which may be secured by planning condition.

Habitats

5.6 In order to suitably avoid or mitigate any potential adverse impacts upon protected habitats (hedgerows and woodland), the above control measures should be implemented, and set out within a CEMP.

Bats

Foraging and commuting

5.7 As the habitats on site and within the sites zone of influence are considered to provide high potential for commuting and foraging bats, activity surveys, consisting of a walked transect, accompanied by the deployment of static bat detectors, is recommended.

5.8 These surveys should be distributed to cover the seasons when bats are most active. As the 'bat season' is taken to run from April to October, one survey per month until October 2021 is recommended.

5.9 Static bat detectors would be deployed for a minimum of five nights per month to provide a broad overview of the activity levels and types of species using the site. The format of these surveys follows BCT guidance[1].

5.10 Although best set out on completion of the above surveys, the below bullet points provide high level recommendations for the design of wildlife friendly lighting on site, based on guidance provided by the Institute of Lighting Professionals (ILP) and BCT[7]:

- Use of low-UV warm-white LED bulbs with directional, downward facing and shielded lights which point away from green features such as the woodland edge and hedgerow habitats;
- External lights should be subject to curfew controls where possible with lights on movement sensors to reduce light pollution when not needed;

Use of buffer planting to block light spillage into protected sites (already provided through young plantation woodland).

Roosting

5.11 As proposals will not result in the loss of trees with potential to support roosting bats, assuming the aforementioned lighting recommendations are implemented, there are no foreseeable impacts upon roosting bats.

Birds

5.12 Nesting birds, and their nests, are protected from being killed/injured/damaged/destroyed (Appendix 2). As there is no proposed loss of nesting habitat, there are no foreseeable impacts upon nesting birds.

5.13 However, should any clearance of trees or hedgerow be required, it is recommended that this is undertaken outside of the bird nesting season (usually taken to run from March to August inclusive). If clearance cannot be avoided within this period, it must only take place after a Suitably Qualified Ecologist (SQE) has confirmed the absence of nesting birds.

Reptiles

5.14 The proposed development will result in the loss of potentially suitable reptile habitat. As such, a reptile survey is recommended to confirm the presence/likely absence of reptiles from the site. This will identify an approach to mitigation.

Hedgehog

5.15 As proposals do not require the removal of suitable hedgehog habitat, there are no foreseeable impacts upon hedgehogs.

5.16 However, should woodland edge or hedgerow removal be required, clearance should be undertaken in two phases, by cutting to 30cm in the first instance, then to ground level after that. The vegetation should be checked for mammals between these two cuts. Should any hedgehogs be found, they should be moved to a suitable area of habitat that is not subject to clearance.

ENHANCEMENT

5.17 In accordance with the National Planning Policy Framework and local policy drivers (Appendix 1) proposals should provide net gains for biodiversity.

5.18 Green infrastructure is planned at a site wide level, considering wider ecological features and green corridors. The proposed green space should be multifunctional with high floral diversity and support native species where possible.

5.19 The following measures will also help to align the scheme with the targets of the Hampshire BAP.

5.20 The following measures should be included into the landscape proposals:

Use of plant (including trees and shrubs) species of value to wildlife and resilient to climate change as buffers to hedgerows and woodland edges;

Use of hardy, species rich turf in areas of proposed amenity grassland;

Use of invertebrate habitat features such as bee posts, habitat panels and stag beetle loggeries to further enhance the woodland edge and hedgerows; and

Incorporation of bird and bat boxes to target UK and Hampshire BAP priority species on retained mature trees.

6.0 SUMMARY & CONCLUSION

6.1 Greengage was commissioned to undertake a Preliminary Ecological Appraisal (PEA) by Portsmouth City Council of plots 500-502 of Dunsbury Park in Havant.

6.2 This survey aimed to establish the ecological value of this site and the presence/likely absence of notable and/or legally protected species in order to inform appropriate mitigation, compensation and enhancement actions in light of proposed development works.

6.3 The PEA identified the presence of statutory designated sites within 2.1km of the site, however there are no foreseeable impacts owing to the nature of the development. Value for a number of notable and protected species was identified, including bats (foraging and commuting), nesting birds, reptiles, dormouse and hedgehog. Further surveys to determine levels/types of bat activity on site, and further reptile surveys, are required. The results of these surveys should be used to inform the need for additional mitigation and compensation actions required to allow the development to proceed lawfully.

6.4 Mitigation actions for several ecological receptors on site have already been identified and should be included in a CEMP (secured by planning condition), including:

Measures to protect the nearby SINCs during construction; and

Provision of a bat sensitive lighting regime.

6.5 The ecological enhancements specified in this report target UK and Hampshire Biodiversity Action Plan (BAP) species, to help enhance the biodiversity value of the site. These enhancement measures should be described in detail, along with their management prescriptions, within an EMP, which may also be secured by condition. These enhancements should aim to create a net gain in biodiversity value on site.

FIGURE 1 SITE PLAN AND HABITAT MAP

DUNSBURY PARK

Approximate Boundary

Approximate 500-502 Boundary

Habitats

A1.1.2 - Broadleaved woodland - plantation

C3.1 - Other tall herb and fern - ruderal

J1.2 - Cultivated/disturbed land - amenity grassland

J2.1.1 - Intact hedge - native species-rich

J4 - Bare ground

J3.6.1 - Hardstanding

0 10 20 30 40 50 m

N

Greengage

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Fig 1.0 Site Plan an
Habitat Map

Project Number 551772
September 2021
1 to 1,300 at A3
Basemap data: Google Eartl

APPENDIX 1 RELEVANT LEGISLATION AND POLICY

LEGISLATION

Current key legislation relating to ecology includes the Wildlife and Countryside Act 1981 (as amended)[8]; The Conservation of Habitats and Species Regulations 2019 ('Habitats & Species Regulations')[9], The Countryside and Rights of Way Act 2000 (CRoW Act)[10], and The Natural Environment and Rural Communities Act, 2006[11].

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2017

The Conservation of Habitats & Species Regulations replace The Conservation (Natural Habitats, etc.) Regulations 1994 (as amended)[12], and transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive')[13], and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive')[14] into UK law (in conjunction with the Wildlife and Countryside Act).

Regulation 43 and 47 respectively of the Conservation of Habitats & Species Regulations makes it an offence (subject to exceptions) to deliberately capture, kill, disturb, or trade in the animals listed in Schedule 2 (European protected species of animals), or pick, collect, cut, uproot, destroy, or trade in the plants listed in Schedule 5 (European protected species of plant). Development that would contravene the protection afforded to European protected species requires a derogation (in the form of a licence) from the provisions of the Habitats Directive.

Regulation 63 (1) states: 'A competent authority, before deciding to undertake, or give any consent, permission or other authorisation for, a plan or project which —

> (a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects); and
>
> (b) is not directly connected with or necessary to the management of that site;

must make an appropriate assessment of the implications for that site in view of that site's conservation objectives.'

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 (as amended) is the principal mechanism for the legislative protection of wildlife in Great Britain. This legislation is the means by which the Convention on the Conservation of European Wildlife and Natural Habitats[15] (the 'Bern Convention') and the Birds Directive and EU Habitats Directive are implemented in Great Britain.

The Countryside and Rights of Way Act 2000

The Wildlife and Countryside Act has been updated by the CRoW Act. The CRoW Act amends the law relating to nature conservation and protection of wildlife. In relation to threatened species it strengthens the legal protection and adds the word 'reckless' to the offences of damaging, disturbing, or obstructing access to any structure or place a protected species uses for shelter or protection, and disturbing any protected species whilst it is occupying a structure or place it uses for shelter or protection.

The Natural Environment and Rural Communities Act 2006

The Natural Environment and Rural Communities Act 2006 states that every public authority must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity. Biodiversity Action Plans provide a framework for prioritising conservation actions for biodiversity.

Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of species of flora and fauna and habitats considered to be of principal importance for the purpose of conserving biodiversity. The list, a result of the most comprehensive analysis ever undertaken in the UK, currently contains 1,149 species, including for example, hedgehog (Erinaceus europaeus), and 65 habitats that were listed as priorities for conservation action under the now defunct UK Biodiversity Action Plan[16] (UK BAP). Despite the devolution of the UK BAP and succession of the UK Post-2010 Biodiversity Framework[17] (and Biodiversity 2020 strategy[18] in England), as a response to the Convention on Biological Diversity's (CBD's) Strategic Plan for Biodiversity 2011-2020[19] and EU Biodiversity Strategy (EUBS)[20], this list (now referred to as the list of Species and Habitats of Principal Importance in England) will be used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 41 of the Natural Environment and Rural Communities Act 2006 'to have regard' to the conservation of biodiversity in England, when carrying out their normal functions.

Biodiversity Action Plans

Non-statutory Biodiversity Action Plans (BAPs) have been prepared on a local and regional scale throughout the UK over the past 15 years. Such plans provide a mechanism for implementing the government's broad strategy for conserving and enhancing the most endangered ('priority') habitats and species in the UK for the next 20 years. As described above the UK BAP was succeeded in England by Biodiversity 2020 although the list of priority habitats and species remains valid as the list of Species of Principal Importance for Nature Conservation.

Regional and local BAPs are still valid however and continue to be updated and produced.

Detail on the relevant BAPs for this site are provided in the main text of this report.

Legislation Relating to Nesting Birds

Nesting birds, with certain exceptions, are protected from intentional killing, destruction of nests and destruction/taking of eggs under the Wildlife and Countryside Act 1981 (as

amended) and the CRoW Act. Any clearance of dense vegetation should therefore be undertaken outside of the nesting bird season, taken to run conservatively from March to August (inclusive), unless an ecologist confirms the absence of active nests prior to clearance.

Legislation Relating to Bats

All UK bats and their roosts are protected by law. Since the first legislation was introduced in 1981, which gave strong legal protection to all bat species and their roosts in England, Scotland and Wales, additional legislation and amendments have been implemented throughout the UK.

Six of the 18 British species of bat have Biodiversity Action Plans (BAPs) assigned to them, which highlights the importance of specific habitats to species, details of the threats they face and proposes measures to aid in the reduction of population declines.

Although habitats that are important for bats are not legally protected, care should be taken when dealing with the modification or development of an area if aspects of it are deemed important to bats such as flight corridors and foraging areas.

The Wildlife & Countryside Act 1981 (WCA) was the first legislation to provide protection for all bats and their roosts in England, Scotland and Wales (earlier legislation gave protection to horseshoe bats only.)

All eighteen British bat species are listed in Schedule 5 of the Wildlife and Countryside Act, 1981 and under Annexe IV of the Habitats Directive, 1992 as a European protected species. They are therefore fully protected under Section 9 of the 1981 Act and under Regulation 43 of the Conservation of Habitats and Species Regulations 2017, which transposes the Habitats Directive into UK law. Consequently, it is an offence to:

- Deliberately capture, injure or kill a bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time);
- Possess or advertise/sell/exchange a bat (dead or alive) or any part of a bat; and
- Intentionally or recklessly obstruct access to a bat roost.

This legislation applies to all bat life stages.

The implications of the above in relation to the proposals are that where it is necessary during construction to remove trees, buildings or structures in which bats roost, it must first be determined that work is compulsory and if so, appropriate licenses must be obtained from Natural England.

Wild Mammals (Protection) Act 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation.

This makes it an offence to:

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

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

Legislation Relating to Natura 2000 Sites and Habitats Directive Annex I/II Species

European Commission Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora ('EU Habitats Directive'), and Council Directive 79/409/EEC on the Conservation of Wild Birds ('Birds Directive') form the cornerstones of nature conservation legislation across EU member states. Priority species requiring protection across Europe are listed in the Annexes of these Directives. Regulation 63(1) of the Conservation of Habitats and Species Regulations 2017 and Offshore Marine Conservation Regulations, 2007 (as amended) transpose these directives into UK law and set the basis for the designations of protected sites (known as Natura 2000 sites; Special Areas of Conservation under the Habitat Directive and Special Areas of Protection under the Birds Directive) that are of importance for habitats, species or assemblages listed on the directive Annexes. In the UK Ramsar sites are also offered the same level of protection as SPAs and SACs however the qualifying species for the designation may differ; Ramsar sites being designated specifically as important wetland habitats.

Under article 6(3) of the Habitats Directive, where projects stand to have likely significant effect (in accordance with the European Court of Justice ruling of C-127/02 Waddenzee cockle fishing) upon the integrity of conservation objectives (i.e. conservation status of the qualifying species or habitats) within the designated sites then the Competent Authority must undertake an Appropriate Assessment.

PLANNING POLICY

National

National Planning Policy Framework

The National Planning Policy Framework (NPPF) 2019[21] sets out the Government's planning policies for England, including how plans and decisions are expected to apply a presumption in favour of sustainable development. Chapter 15 of the NPPF focuses on

conservation and enhancement of the natural environment, stating plans should 'identify and pursue opportunities for securing measurable net gains for biodiversity'.

It goes on to state: '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'. Alongside this, it acknowledges that planning should be refused where irreplaceable habitats such as ancient woodland are lost.

Local

Havant Local Plan Core Strategy (2011)

Policy CS13 Green Infrastructure

Development will be permitted that:

1. Maintains and manages the network of green infrastructure identified at the sub regional and local levels.

2. Incorporates, where appropriate, improvements to existing green infrastructure through the restoration, enhancement or creation of additional resources.

3. Does not undermine the functional integrity of the green infrastructure.

4. Creates, where appropriate, new green infrastructure (including access management measures) either through on site provision or financial contributions.

Development proposals that adversely affect green infrastructure will not be permitted unless superior alternative provision can be provided or where it is part of a service provider's plans to provide improved local services in equally accessible locations.

Green infrastructure sites will be allocated in the Development Delivery (Allocations) Plan.

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