

# **Land East of Down End**

# **Updating Phase I**

## Report prepared by

Tristanna Boxall BSc (Hons) & Lyndsey McBean BSc (Hons) PGCert Grad CIEEM

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## 1.0 INTRODUCTION

#### 1.1 Brief

This report supports the resubmission of the land east of Downend Road application. The plan comprises 350 dwellings and a revised off-site highways solution to overcome the planning inspector's reasons for refusal dated 5<sup>th</sup> November 2019 (ref: APP/A1720/W/19/3230015).

**Updating Ecological Assessment** 

ECOSA undertook a full season of ecological data collection between 2015 – 2016. All survey effort and associated report outputs were previously accepted by the Council and Natural England (where applicable). Therefore the survey associated with this report was undertaken to ensure the habitats and associated management on site are inline with the original findings in accordance with CIEEM guidelines.

This document should be read in conjunction with the original Ecological Assessment report and subsequent addendum (ECOSA, 2017). Both reports have been prepared in order to ensure the proposals fully comply with nature conservation legislation and policy where applicable.

#### 1.2 Aim

The updating survey and associated report aims to determine if any significant changes have occurred to the ecological value of the site since the completion of previous survey work, as per CIEEM (2019) guidance. This is to establish whether any changes to the ecological baseline require additional or updating ecological surveys and/or alterations to the mitigation and compensation strategy.

Previous consultation with the Council's Ecologist resulted in the request for further information in relation to detailed proposals for the protection of reptile and Great Crested Newt (*Triturus cristatus*) during construction, timings of works, location of onsite receptor site, provisions for the loss of suitable habitat and enhancement/management measures to ensure the long-term suitability of the receptor site during the operational phase.

#### 1.3 Site Location

The site is located at Winnham Farm, Portchester, Fareham, PO16 8PR (central Grid Reference SU 60122 06340). The M27 runs along the northern boundary of the site with the train line to the south. Portchester Memorial Gardens lie to the east of proposals with a Veolia depot and residential dwellings to the west. Towards the east, south and west the wider vicinity is dominated by residential development whereas north of the M27 comprises agricultural land interspersed by patches of woodland.

## 1.4 Legislation

1.4.1 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into UK domestic law. It provides protection for sites and species deemed to be of conservation importance across Europe. It is an offence to deliberately capture, kill or injure species listed in Schedule 2 or to damage or destroy their breeding sites or shelter. It is also illegal to deliberately disturb these species in such a way that is likely to significantly impact on the local distribution or abundance or affect their ability to survive, breed and rear or nurture their young.

The EU Exit instrument makes changes to the three existing instruments which transpose the Habitats and Wild Birds Directives so that they continue to work (are operable) upon the UK's exit from the European Union (EU). These include The Conservation of Habitats and Species Regulations 2017 and The Conservation of Offshore Marine Habitats and Species Regulations 2017. This instrument also amends section 27 of the Wildlife and Countryside Act 1981 to ensure existing protections continue.

The intention is to ensure habitat and species protection and standards as set out under the Nature Directives are implemented in the same way or an equivalent way when the UK exits the EU. There is no change to policy.

Sites designated under the Nature Directives previously contributed to the EU's Natura 2000 network. A national site network is created to retain the concept of a UK network of sites. The 'national site network' is defined as including Natura 2000 sites designated prior to EU exit and those Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated post EU Exit.

Current references to "European site", "European Marine Site", "Special Area of Conservation" and "Special Protection Area" are retained as there is no operability reason for these to change.

Management objectives are established for the national site network. Appropriate authorities are required to manage, and where necessary, adapt the national site network in cooperation with each other to meet the network's management objectives. The management objectives are to:

i. maintain or restore habitats and species listed in the Habitats Directive to a favourable conservation status; and

ii. contribute, in their area of distribution, to ensuring the survival and reproduction of wild birds and securing compliance with the overarching aims of the Wild Birds Directive.

## 1.4.2 The Wildlife and Countryside Act (1981) (as amended)

This is the primary piece of legislation by which biodiversity is protected within the UK. Protected fauna and flora are listed under Schedules 1, 5 and 8 of the Act. They include all species of bats, making it an offence to intentionally or recklessly disturb any bat whilst it is occupying a roost or to intentionally or recklessly obstruct access to a bat roost. Similarly, this Act makes it an offence to kill or injure any species of British reptiles and also makes it an offence to intentionally kill, injure or take any wild bird or to take, damage or destroy their eggs and nests (whilst in use or being built).

## 1.4.3 The Countryside and Rights of Way Act (2000)

This Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

## 1.4.4 Natural Environment and Rural Communities Act (2006)

This places a duty on authorities to have due regard for biodiversity and nature conservation during the course of a development.

## 1.5 Policy

The development seeks to comply with relevant Planning Policy at a local and national level.

## 1.5.1 National Planning Policy and Framework (2019)

The National Planning Policy Framework (NPPF) 2019 supersedes the previous national policy and sets out the Government's vision for biodiversity in England in line with the country's 25 Year Environment Plan. Chapter 15 of this policy outlines key principles related to the natural environment and states that plans should take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure and should provide net gains for biodiversity. Plans should promote the conservation, restoration and enhancement of priority habitats and ecological networks and the protection and recovery of priority species.

## 1.5.2 Fareham Borough Council Local Plan (2015)

The remaining countryside in the Borough has a locally distinctive character. The rivers Meon and Wallington flow through the Borough, the River Hamble forms the western boundary and Portsmouth Harbour part of the southern and eastern boundary. Trees, woodlands and hedgerows contribute greatly to the local distinctiveness of the Borough providing ecological, amenity, recreational and economic value.

Fareham Borough sustains a rich and varied biodiversity, ranging from the internationally important European sites, the Solent and Southampton Water and Portsmouth Harbour Special Protection Areas and Ramsar sites and the Solent Maritime Special Area of Conservation, and the nationally recognised Sites of Special Scientific Interest (SSSI) to the locally designated Sites of Importance for Nature Conservation and Sites of Nature Conservation Value. The Borough Council supports the on-going of survey of habitats and species and designation of Sites of Importance for Nature Conservation. The internationally important sites are protected by European legislation.

The Council recognises that additional growth in the Borough, in-combination with growth in neighbouring authorities, without appropriate management and mitigation, could lead to adverse effects upon the European Sites. It works with the other PUSH authorities to provide further certainty on likely impacts and the implementation of any necessary avoidance or mitigation measures. The Borough Council will also support any further work that may be required on assessing impacts on the New Forest. Fareham Borough Council support the Solent Disturbance and Mitigation Project and will work with partners in the sub-region to develop and implement a strategic approach to protecting European Sites. The Borough Council also supports the 2010 Solent Waders and Brent Goose Strategy and will continue to give suitable protection to identified important sites. The Borough Council will recognise the importance of the whole network of sites to maintain or enhance available feeding and roosting resources. The work will include the development and implementation of green infrastructure strategies in order to improve local access to informal open spaces, the countryside and the coast in less sensitive areas which are easily accessible to the present and future populations living in the major conurbations in South Hampshire.

Fareham also contains Titchfield Haven National Nature Reserve and Hook-with-Warsash, Gull Coppice, and Kites Croft Local Nature Reserves and Swanwick nature reserve. There are many other habitats which are of local value for wildlife, for example, hedgerows, road verges, river valleys and farmland which act as wildlife corridors; and gardens and open spaces in built up areas form part of the overall wildlife diversity of the Borough. The Fareham Local Biodiversity Action Plan provides the basis for future action to preserve and enhance biodiversity. Future development should enhance habitats.

The Development Sites and Policies Plan was adopted in June 2015. It explains that the Natural Environment is a key asset of the Borough, which provides a significant contribution to the quality of life of residents and visitors. It continues with stating it is important to establish the right balance between growth and protecting the natural environment.

## Policy CS4 Green Infrastructure, Biodiversity and Geological Conservation:

Habitats important to the biodiversity of the Borough, including Sites of Special Scientific Interest, Sites of Importance for Nature Conservation, areas of woodland, the coast and trees will be protected in accordance with the following hierarchy of nature conservation designations:

- (i) International Special Protection Areas (SPA), Special Areas of Conservation (SAC) and RAMSAR;
- (ii) National Sites of Special Scientific Interest (SSSI) and National Nature Reserves;
- (iii) Local Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above;
- (iv) Sites of Nature Conservation Value.

Networks of accessible multi-functional Green Infrastructure will be planned around existing green spaces in urban, urban fringe and rural areas and will be appropriate to the extent and distribution of the existing and proposed population.

The Borough Council will seek to enhance biodiversity through development, securing net biodiversity gains and encouraging biodiversity designed into development, particularly in line with the Fareham Local Biodiversity Action Plan (or other similar relevant document), and other cross boundary initiatives such as Biodiversity Opportunity Areas, and the PUSH Green Infrastructure Strategy (or a relevant equivalent document). There are a range of measures that can be incorporated into most types of development in order to enhance local biodiversity, including provision of suitable native tree and hedgerow planting, creation of ponds and wildflower areas, and provision of nesting and roosting features. Development which promotes the restoration, recreation or favourable management of priority habitats or features as an enhancement will be supported.

## **Policy DSP13: Nature Conservation**

Development may be permitted where it can be demonstrated that;

- i. designated sites and sites of nature conservation value are protected and where appropriate enhanced;
- ii. protected and priority species populations and their associated habitats, breeding areas, foraging areas are protected and, where appropriate, enhanced;

- iii. where appropriate, opportunities to provide a net gain in biodiversity have been explored and biodiversity enhancements incorporated; and
- iv. The proposal would not prejudice or result in the fragmentation of the biodiversity network.

## Policy DSP15: Recreational Disturbance on the Solent Special Protection Areas (SPA)

Planning permission for proposals resulting in a net increase in residential units may be permitted where 'in combination' effects of recreation on the Special Protection Areas are satisfactorily mitigated through the provision of a financial contribution that is consistent with the approach being taken through the Solent Recreation Mitigation Strategy. In the absence of a financial contribution toward mitigation, an Appropriate Assessment will be required to demonstrate that any 'in combination' negative effects can either be avoided or satisfactorily mitigated through a developer provided package of measures.

## **1.6 Proposed Development**

The scheme is for the construction of 350 dwellings and associated landscaping, new vehicular access and amenity space.

#### 1.7 Evaluation and Assessment

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's Guidelines for Ecological Assessment in the UK and Ireland (CIEEM, 2018). The guidelines provide a useful framework for assessing ecological impacts at any level.

The following definitions are used for the terms 'impact' and 'effect': Impact – Actions resulting in changes to an ecological feature.

Effect – Outcome to an ecological feature from an impact.

The approach of the guidelines is to assess potential impacts to all features of ecological interest that could be affected by a scheme. As a scheme may have effects beyond its boundaries, it is important to identify the 'zone of influence' of the scheme and to assess the potential for significant ecological impacts throughout this zone as well as those within the application boundaries, for example impacts upon nearby species, habitats and sites designated for their nature conservation value. Where such features are identified, they are first valued and then assessed as to the likely magnitude and significance of potential impacts that may be exerted upon those features by the proposed scheme. 'Significant' impacts are considered to be where they affect the integrity and/or conservation status of a designated site for a habitat or species. All potential significant impacts are considered in the absence of any avoidance, mitigation or compensation to inform the suitable design of such measures

(where necessary), which can then be incorporated into the scheme to reduce such impacts. Finally, an assessment is made to identify any residual impacts upon these features (both positive and negative) that would remain once any impact avoidance, mitigation or compensation measures have been implemented.

All ecological features identified within the site boundaries and the identified zone of influence of the proposals are considered within a defined geographical context, as follows:

- International
- National
- County
- District
- Local
- Site

The guidelines state that ecological features that are valued, under the ecological assessment of a scheme, to be of less than local value are not considered sufficiently valuable for an impact to be considered significant. Therefore, only those features assessed as being of at least local value require avoidance, mitigation and/or compensation. That said, where a feature is of less than local value but where impacts upon this feature hold the potential to result in contravention of relevant wildlife legislation, measures must be implemented to ensure compliance with legislation, regardless of the level of value of the feature.

Potential impacts are considered at all stages of the proposed development. The assessment should consider all types of impact (both direct and indirect) and whether potential impacts are short, medium, long-term, permanent, temporary, reversible, irreversible, positive and/or negative.

#### 2.0 ECOLOGICAL BASELINE

Ecological baseline conditions are those which exist in the absence of proposed activities. The impact assessment determines how the conditions will change in relation to this baseline to facilitate a clear understanding of the effects of a project. This section of the report details the surveys completed on site and the associated results.

#### 2.1 Desk Based Search

#### 2.1.1 Method

A desk-based assessment was carried out by ECOSA as part of the Preliminary Ecological Appraisal. Hampshire Biodiversity Information Centre (HBIC) was consulted in June 2015 for information on non-statutory designated sites and protected and notable species within the vicinity of the site. The desk study was then updated in September 2017.

#### 2.1.2 Results

Five statutory designated sites of nature conservation are situated within a 2km radius of the site and nine non-statutory designated sites of nature conservation (SINC) within a 1km radius of the site (**Table 1**).

Downend Chalk Pit SSSI bounds the northwest site boundary however this is classifying for geological features.

Portsmouth Harbour Ramsar, SPA and SSSI lies 915m southwest of the site. Portsmouth Harbour is classified as a Ramsar site as it consists of large, sheltered estuarine basins supporting extensive intertidal mudflats with *Zostera* beds and significant areas of mainly *Spartina* saltmarsh. The site also includes small, isolated shingle islands supporting scrub and broad-leaved woodland and two saline lagoon habitats. The site supports important overwintering populations of migratory waterfowl. A number of off- site areas of grassland are particularly important feeding sites for overwintering dark-bellied Brent Geese (*Branta bernicla*) and as roosting areas for waders. It is designated an SPA for supporting feeding Brent Goose, Dunlin (*Calidris alpine*), Black-Tailed Godwit (*Limosa limosa*) and Red-Breasted Merganser (*Mergus serrator*).

Portsdown Hill SSSI is an isolated east-west chalk anticline with a long south-facing escarpment which remains un-reclaimed. The lower south-facing slopes support a rich chalk grassland flora and a rich and diverse insect fauna. It lies 1.2km east of the site.

Hawthorn (*Crataegus monogyna*) scrub is extensive and much of the grassland is dominated by Upright Brome (*Bromus erectus*), a tall vigorous species which responds rapidly to lack of grazing. Areas of finer turf dominated by Red Rescue (*Festuca rubra*),

Sheep's Fescue (*Festuca ovina*) and a wide range of small herbs, remains widespread, however, whilst the site supports a number of species of limited distribution, including Hairy Rock-Cress (*Arabis hirsute*), Pale Flax (*Linum bienne*), meadow cranesbill (*Geranium pretense*), horseshoe vetch (*Hippocrepis comosa*), Bastard Toadflax (*Thesium humifosum*), Early Gentian (*Gentianella anglica*), Knapweed Broomrape (*Orobanche elatior*), Bee Orchid (*Ophrys apifera*) and Fly Orchid (*O. insectifera*).

The insect fauna includes a comprehensive range of chalk downland butterflies *Lepidoptera*, beetles *Coleoptera*, bees and allied insects *Hymenoptera*. Of interest is the occurrence in an atypical habitat of the Bush Cricket (*Conocephalus discolor*) and a substantial population of the largest of the British Bush Crickets (*Tettigonia viridissima*).

Table 1. SINCs within 1km of the site.

	Approximate	
Name	Relative	Reason for Designation
runc	Location	Reason for Designation
Fort Nelson Picnic Site	490m NE	Designated for the following criteria  2A – Agriculturally unimproved grasslands.  6A – Sites which support one or more notable species29: upright chickweed <i>Moenchia erecta</i> , hoary cinquefoil <i>Potentilla argentea</i> and shepherd's cress <i>Teesdalia nudicaulis</i> .
		The site also supports pale flax <i>Linum bienne</i> and small blue butterfly <i>Cupido minimus</i> .
Down End Road Verge	520m NW	Designated for the following criteria <sup>30</sup> :  2A – Agriculturally unimproved grasslands.
Skew Road and Nelson Lane Verges	585m E	Designated for the following criteria:  2A – Agriculturally unimproved grasslands.  6A – Sites which support one or more notable species <sup>31</sup> : upright chickweed <i>Moenchia erecta</i> , hoary cinquefoil <i>Potentilla argentea</i> and shepherd's cress <i>Teesdalia nudicaulis</i> .  The site also supports basil thyme <i>Clinopodium acinos</i> and small blue butterfly.
Fort Nelson	655m N	Designated for the following criteria:  2A – Agriculturally unimproved grasslands.  2B – Semi-improved grasslands which retain a significant element of unimproved grassland.
Cams Plantation	700m SW	Designated for the following criteria:

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		1B – Other woodland where there is a significant element of ancient semi-natural woodland surviving.  Designated for the following criteria:
Hill Road Paddock	715m E	2B – Semi-improved grasslands which retain a significant element of unimproved grassland.
Skew Road Meadow	815m E	Designated for the following criteria:  2A – Agriculturally unimproved grasslands.
Anson Grove	900m E	Designated for the following criteria:  2A – Agriculturally unimproved grasslands.  6A – Sites which support one or more notable species: upright chickweed, hoary cinquefoil and shepherd's cress.  The site also supports small blue and Red Data book listed species sainfoin <i>Onobrychis viciifolia</i> and autumn lady'stresses <i>Spiranthes spiralis</i> , and nationally scarce bastardtoadflax <i>Thesium humifusum</i> .
Bathinghouse Grove and Cams Coastline	1km SW	Designated for the following criteria:  1A – Ancient <sup>32</sup> semi-natural <sup>33</sup> woodlands  4A – Semi-natural coastal and estuarine habitats, including saltmarsh, intertidal mudflats, sand dunes, shingle, brackish ponds, grazing marsh and maritime grasslands.  6A – Sites which support one or more notable species: upright chickweed, hoary cinquefoil and shepherd's cress.  The site also supports English scurvygrass <i>Cochlearia anglica</i> and sea wormwood <i>Seriphidium maritimum</i> .

## 2.2 Extended Phase I Survey

## 2.2.1 Method

The original extended Phase I habitat survey was carried out on 18<sup>th</sup> June 2015. The survey involved a walkover of the site to identify the habitat types present and to record evidence of the more commonly encountered protected species. The scope of the protected species was based on the habitats present with particular reference to bats, Badger (*Meles meles*), Dormouse (*Muscardinus avellanarius*), breeding and wintering birds, reptiles, Great Crested Newt and invertebrates.

An updating extended Phase 1 habitat survey was carried out on 8<sup>th</sup> September 2017. This survey was aimed at providing assessment of the ecological features of the site to

determine whether there had been any significant changes to the habitats present. In addition, the survey considered an additional area not previously included within the application boundary, this is the footpath to the east of the site, Upper Cornaway Lane.

## 2.2.2 Results

The following habitats were recorded:

- Scrub;
- Tall ruderal;
- Scattered trees;
- Semi-improved grassland;
- Arable;
- Hedgerow with trees;
- Buildings and hardstanding.

**Scattered Scrub** - Small areas of scattered scrub were present around the farm buildings. Species recorded during the survey included Bramble, Ivy *Hedera helix*, Elder *Sambucus nigra*, Buddleia *Buddleja* species, Burdock *Arctium* species, Dog Rose *Rosa canina*, Bracken *Pteridium aquilinum*, Silver Birch *Betula pendula* and Whitebeam *Sorbus Aria*. Other species recorded around the farm buildings included Common Cat's-Ear *Hypochaeris radicata*, Smooth Sow-Thistle *Sonchus oleraceus*, Holly *Ilex aquifolium*, Cleavers *Galium aparine*, Wall Barley *Hordeum murinum*, Cock's Foot *Dactylis glomerata* and Black Medic *Medicago lupulina*.

A small amount of scrub was present along Downend Road which formed the far western site boundary. Species recorded along the roadside during the survey consisted of Bramble and Old Man's Beard Clematis. Bramble scrub was also present along the footpath on the eastern site boundary, along with a small number of stands of Butcher's Broom *Ruscus aculeatus*.

The dividing bund (where a hedgerow has been historically removed) within the arable fields are of similar species composition to those mentioned above.

Tall Ruderal - The habitat around the farm buildings had become overgrown. Species recorded around the buildings consisted of Common Nettle Urtica dioica, Mallow Malva species, Ribwort Plantain Plantago lanceolata, Spear Thistle Cirsium vulgare, Common Dock Rumex species, Cock's Foot, Common Vetch Vicia sativa, Red Fescue Festuca rubra, Cut-Leaved Cranesbill Geranium dissectum, Ragwort Senecio jacobaea, Yorkshire Fog Holcus lanatus, Doves-Foot Cranesbill Geranium molle, Hogweed Heracleum sphondylium and Cow Parsley Anthriscus sylvestris. Similar species were also recorded along the public footpath (Upper Cornaway Lane) on the eastern site

boundary.

**Scattered Trees** - A small number of Apple trees *Malus domestica* species (approximately 13 trees in total) were present at the corner of the lane (adjacent to the former pigsties). Ash *Fraxinus excelsior* and Sycamore *Acer pseudoplatanus* saplings and Cherry *Prunus* species were recorded at the entrance to the site off Downend Road. Other smaller trees were scattered around the site including occasional Silver Birch *Betula pendula* And Pedunculated Oak *Quercus robur*.

Semi-improved Grassland - A number of horse-grazed paddocks were present in the western area of the site, north and west of the farm buildings. The sward was a mix of tightly grazed grassland and other paddocks where grazing had been relaxed. The grassland was relatively diverse and the species composition limited. The fields were bordered by post and rail fences and treelines. Grass species recorded included Perennial Rye-Grass Lolium perenne, False Oat-Grass Arrhenatherum elatius, Yorkshirefog, Red Fescue Festuca rubra and Creeping Bent Agrostis stolonifera. There was a good diversity of herbaceous species present with Daisy Bellis perennis, Bolbous Buttercup Ranunculus bulbosus, Ribwort Plantain, Dandelion Taraxacum officinale aggregate, Red Bartsia Odontites vernus, Common Ragwort, White Clover Trifolium repens, Smooth Sow-Thistle, Selfheal Prunella vulgaris, Blue Fleabane Erigeron acer, Black Knapweed Centaurea nigra, Common Centaury Centaurium erythraea, Common Mouse-Ear Cerastium fontanum, Bristly Oxtongue Picris echioides, Greater Plantain Plantago major, Broad-Leaved Dock, Spear Thistle, Red Fescue, Common Bent Agrostis capillaris, Common Vetch, Red Clover Trifolium pratense, Common Nettle, Common Cat's-Ear Hypochaeris radicata, Cut-Leaved Cranesbill, Herb bennett Geum urbanum, Agrimony Agrimonia eupatoria and Scentless Mayweed Tripleurospemum inodorum.

The margins of the paddocks are out of reach of grazing horses and therefore have a longer sward. Species recorded during the survey here consist of teasel *Dipsacus* species, red valerian *Centranthus ruber*, common nettle, white dead nettle *Lamium album*, germander speedwell *Veronica chaemydrys*, fat hen *Chenopodium album*, doves-foot cranesbill, columbine *Aquilegia* species, soft brome *Bromus hordeaceus*, common sorrel *Rumex acetosa*, creeping cinquefoil *Potentilla reptans*, field bindweed *Convolvulus arvensis*, ox-eye daisy *Leucanthemum vulgare*, hogweed, cow parsley, common poppy *Papaver rhoeas*, barren brome *Anisantha sterilis*, mugwort *Artemisia vulgaris*, hoary cress *Lepidium draba*, charlock *Sinapis arvensis*, black medic and white bryony *Bryonia dioica*.

To the north of the main access road a narrow strip of more species rich grassland is present. Additional species here included small scabious *Scabiosa columbaria*, hoary ragwort *Jacobaea erucifolia*, ploughman's spikenard *Inula conyzae*, perforated St. John's-wort *Hypericum perforatum*, wild marjoram *Origanum vulgare*, wild basil

Clinopodium vulgare, stone parsley Sison amomum, greater stitchwort Stellaria media, fleabane Pulicaria dysenterica and meadow vetchling Lathyrus pratensis.

**Arable** - Two large arable fields, containing Barley at the time of the Phase 1 survey in June 2015 and Broad Bean stubble during the September 2017, were divided by a vegetated bund (former hedgerow).

A moderate diversity of arable plant species was recorded on the site during the updating survey. Species present included Common Poppy, Great Mullein *Verbascum thapsus*, Common Field Speedwell *Veronica persica*, Doves-Foot Cranesbill, Field Madder *Sheradia arvensis*, Black-Bindweed *Fallopia convolvulus*, Sun Spurge *Euphorbia helioscopia*, Dwarf Spurge *Euphorbia exigua*, Sharp-Leaved fluellen *Kickxia elatine*, Round-Leaved fluellen *Kickxia spuria*, Fool's Parsley *Aethusa cynapium*, Common Fumitory *Fumaria officinalis*, Annual Mercury *Mercurialis annua*, Swine-Cress *Coronopus squamatus*, Perennial Sow-Thistle *Sonchus arvensis*, Henbit Deadnettle *Lamium amplexicaule*, Wild Pansy *Viola tricolor*, Scarlet Pimpernel *Anagallis arvensis* and Bladder Campion *Silene vulgaris*.

This is a higher diversity than was recorded in the previous survey, this was considered likely to be as a result of a change in cropping of the site.

Hedgerow with Trees - Hedgerows ran along the boundary of the arable fields to the east and south. These hedgerows had a moderate diversity of species across their entire extent. Species recorded during the survey include Pedunculate Oak, Ash, Beech Fagus sylvatica, Buckthorn Rhamnus cathartica, Yew Taxus baccata, Hawthorn, Holly, Hazel, Elder, Wild Privet Ligustrum vulgare, Russian Vine Fallopia baldschuanica, Black Bryony Dioscorea communis, Field Maple Acer campestre, Buddleia, Cherry Laurel Prunus laurocerasus, Bramble, Spindle Euonymus europaea, Dog Rose, Dogwood Cornus sanguinea and Traveller's Joy. The ground flora was generally species poor and dominated by Nettle and Cleaver's. These hedgerows were managed yearly by flailing during September.

The footpath (Upper Cornaway Lane) extending from the south-east of the site was flanked by a double hedgerow with Hawthorn, Elder, Bramble, Traveller's Joy, Spindle, Sycamore and Hazel with the ground layer being dominated by Stinging Nettle, Rye-Grass and Creeping Bent with Wood Avens, White Deadnettle and Herb Robert.

**Treelines** - The treeline along the railway embankment, forming the southern site boundary, extended along the entire length of the site. Species recorded during the survey included Mature Pedunculated Oak, Hazel, Sycamore, Wild Privet, Hawthorn, Lime *Tilia platyphyllos x cordata*, Ash, Blackthorn *Prunus* spinosa, Dog Rose and Spindle *Euonymus europaeus*. Much of the treeline was located outside of the site boundary

A treeline and woodland edge was present along the north-west site boundary. Tree species present here included Horse Chestnut *Aesculus hippocastanum*, Pedunculated Oak and Ash. The ground flora was dominated by Stinging Nettle.

**Buildings and Hardstanding** - The site contained a number of farm buildings set within areas of gravel and concrete hardstanding.

No evidence of Badgers was recorded during the Phase 1 survey, during any of the subsequent species surveys carried out at the site or during the updating Phase 1 survey. The site offered suitable foraging habitat in the form of the paddocks, field margins, hedgerows and scrub. However it was considered the railway embankment forming the southern site boundary provided the best opportunities for Badgers to construct setts and provides connectivity with further suitable habitat in the wider area.

Bird species recorded during the Phase 1 survey and the updating Phase 1 survey included Red-Legged Partridge Alectoris rufa, Magpie Pica pica, Wood Pigeon Columba palumbus, Black-Headed Gull Larus ridibundus, Carrion Crow Corvus corone, Goldfinch Carduelis carduelis, Green Woodpecker Picus viridus, House Sparrow Passer domesticus, Linnet Linaria cannabina, Nuthatch Sitta europaea, Robin Erithacus rubecula, Stock Dove Columba oenas, Dunnock Prunella modularis, Chiffchaff Phylloscopus collybita, Blackcap Sylvia atricapilla, Blue Tit Cyanistes caeruleus and Song Thrush. House Sparrow and Song Thrush are both red listed species of conservation concern.

A record of West European Hedgehog *Erinaceus europaeus* was identified approximately 150m south of the site within a garden. Hedgehogs are a BAP species and were considered likely to forage within the paddocks and along the hedgerows of the site, possibly also the arable fields.

## 2.2.3 Valuation

The main habitats on site, the arable fields and horse-grazed paddocks, were considered to be generally of lower ecological value. Habitats on site of greater ecological value included trees and hedgerows which were generally located around the edges of the site and around the farm buildings. There was a moderately diverse arable weed community but no particularly rare species were recorded during the survey. None of the habitats on site are species diverse or of a rare nature.

## 2.3 Assessment of Buildings and Trees to Support Roosting Bats

## 2.3.1 Method

During the Phase I Assessment all buildings (Figure 1) and trees on the site and immediately on the site boundary were subject to an assessment as to their potential

to support roosting bats.





## 2.3.2 Results

No direct evidence of bat roosting activity was recorded during the survey. The farm buildings on site were of mainly pre-fabricated construction and lack any roof voids. The Ivy-clad disused barn (Building E) had low potential for supporting roosting bats. All other buildings surveyed on site have negligible potential to support roosting bats.

No trees were identified during the extended Phase 1 habitat survey or the updating survey as having any obvious/visible suitable bat roosting features. However, many of the trees adjacent to the site boundary, notably along the southern edge, were Ivy clad and therefore any potential roosting features which may be present were not visible from a ground level inspection. As the trees on the site boundaries will not be affected

by the proposals, no further investigations were carried out.

## 2.4 Phase II Bat Surveys

## 2.4.1 Method

The Ivy clad disused barn (Building E) was subject to a single Phase 2 dusk emergence survey, in accordance with best practice guidance for a building with low suitability for roosting bats. The single dusk emergence survey commenced 15 minutes before sunset and went on until two hours after sunset. The survey was carried out by three experienced and suitably qualified ECOSA positioned at previously identified vantage points around the barn.

#### 2.4.2 Results

No emergences were recorded during the Phase 2 dusk emergence bat survey on Building E. The survey recorded three species of bat commuting across the site: Common Pipistrelle, Soprano Pipistrelle *Pipistrellus pygmaeus* and Long-Eared bat species.

#### 2.4.3 Evaluation

The level of commuting and foraging activity recorded by the surveyors positioned around the barn was relatively low but considered typical of the agricultural nature of the site and taking into account the building's location. The survey suggested an absence of roosting bats within the barn building located on the far western edge of the site. None of the other buildings on site were considered to offer any suitability for roosting bats.

## 2.5 Phase II Bat Activity Transect

## 2.5.1 Methods

A total of seven Phase 2 bat transect surveys were carried out between April and October 2016 (inclusive) to allow an assessment of the status of foraging and commuting bats at the site to be made. The transect survey was punctuated by regular point counts, during which the surveyors stopped walking for a period of five minutes to record bat activity at that point. Point count locations were situated at key habitat features such as treelines and hedgerows.

#### 2.5.2 Results

The bat transect surveys recorded four species of bat at the site: Common Pipistrelle, Soprano Pipistrelle, Noctule *Nyctalus noctula* and *Myotis* bat species. Bat activity levels recorded during each transect were relatively low. Common Pipistrelle was the most common species recorded, with fewer registrations of Soprano Pipistrelle and *Myotis* bat species. Bat activity was fairly evenly spread around the site although activity was slightly increased along the southern boundary where the site abuts the railway line,

and the north-westerns corner where the site is adjacent to the woodland surrounding the depot.

#### 2.6 Phase II Static Bat Data Collection

#### 2.6.1 Methods

A programme of automated surveys was completed across the site between April and October 2016 inclusive, using remote bat detectors placed within suitable bat foraging and commuting habitat on site.

#### 2.6.2 Results

Nine different species during the survey period April to October; Common Pipistrelle, Soprano Pipistrelle, Nathusius' Pipistrelle, Noctule, Serotine, Long-Eared bat species, Barbastelle, *Myotis* bat species and Greater Horseshoe *Rhinolophus ferrumequinum*.

## 2.6.3 Evaluation of Bat Activity on Site

Foraging and commuting bat activity was relatively low although expected for a predominantly arable site. Areas of particular bat activity during the transect surveys were associated with the hedgerows bounding the site. However, activity was also recorded along the "bund" where a hedgerow has been removed in the past.

The static detectors recorded a total of ten species of bat using the site which is a good diversity of bat species. Foraging and commuting activity was picked up during each of the months (April to October) in varying numbers and varying species diversity. Greater horseshoe, was only recorded on the static detectors during the month of May. Barbastelle was recorded in September and October and Nathusius' Pipistrelle recorded in May, June, August and October.

Of the species recorded around the site, Nathusius' Pipistrelle, Barbastelle and Greater Horseshoe are particularly rare species. The number of recordings relating to these species was low in comparison to the rest of the bat species but, as these are such rare species, for a site such as this, numbers were expected to be relatively low. The site was considered to be of **local importance** to the majority of foraging and commuting bat species but of **county importance** for Barbastelle, Nathusius' Pipistrelle and Greater Horseshoe.

## 2.7 Dormouse Survey

## 2.7.1 Methods

The Phase 2 dormouse survey was undertaken in order to establish the presence or likely absence of dormouse from the site.

The survey involved the erection of 50 Dormouse tubes in suitable habitat across the

site in April 2016. An ecologist returned to check the nest tubes between the months of April and October 2016 at monthly intervals. In accordance with survey guidance, absence of Dormouse should not be assumed for a search effort of less than 20 points. The level of survey effort carried out at the land at Winnham Farm site provided a search effort of 22 points.

#### 2.7.2 Results

No Dormice or evidence of Dormouse were recorded during the Phase 2 survey. A single Wood Mouse *Apodemus sylvaticus* nest was recorded.

#### 2.7.3 Evaluation

The survey suggested that Dormouse were likely absent within suitable habitat on site.

## 2.8 Wintering Bird Survey

#### 2.8.1 Methods

Eleven wintering bird surveys were undertaken across the site during the period from November 2015 to March 2016 inclusive. The surveys aimed to determine the presence of notable or protected wintering bird species with particular reference to those associated with the Solent Wader and Brent Goose Strategy 2010, and internationally designated sites in the vicinity of the survey site, namely the Solent Southampton and Portsmouth Harbour SPA/Ramsar.

The surveys involve counts carried out within four hours of high tide, with a preference for the period two and a half hours either side of high tide. This period is when wintering birds associated with the SPA/Ramsar are most likely to be utilising inland feeding habitat.

#### 2.8.2 Results

Brent Goose Information from the 2010 Strategy, 'Goose Watch' and HBIC revealed that Brent Goose have never been recorded from the site, or from within 500m of the site. During the eleven wintering bird surveys carried out during 2015-2016, no Brent Geese were recorded using or flying over the site.

Waders Information from the 2010 Strategy, 'Goose Watch' and HBIC revealed that waders have never been recorded from the site, or from within 500m of the site. During the eleven wintering bird surveys carried out during 2015-2016 no waders were recorded using or flying over the site.

Throughout the survey period a small number of Black-Headed Gull *Chroicocephalus ridibundus* were recorded using the fields in the eastern half of the site. During the survey on 14<sup>th</sup> December 2015 the fields were being ploughed. This attracted a large

number of Gulls *Larus* species which were feeding on invertebrates being uncovered by the ploughing activities. During this survey, 350 black-headed gull, 50 Common Gull *Larus canus*, 125 Herring Gull *Larus argentatus* and one Mediterranean Gull *Ichthyaetus melanocephalus* were recorded.

## 2.8.3 Evaluation

A combination of the distance of the site from the intertidal habitat and lack of waterlogged conditions are likely to result in the lack of waders on site. Brent Geese are much more likely to use sites within close proximity to the coast and therefore, the site was considered unlikely to provide an important feeding area for this species.

Given the extremely low level of activity and poor quality of the on-site habitat for waders, Brent Geese and waterbirds, further survey work in relation to wintering birds was not considered necessary.

## 2.9 Reptile Survey

#### 2.9.1 Methods

The reptile survey was undertaken between April – May 2016. It consisted of distributed refugia across areas of suitable on-site habitat. Typically, this included areas of rough grassland and "edge" habitats with good structural diversity and areas with exposure to the sun. Habitat which is particularly shaded or lacking in structural diversity was not included within the reptile survey. The survey was focussed on the northern and western areas of the site. The semi-improved paddocks in the west of the site were under continual horse-grazing and were not included in the survey. The southern and eastern site boundaries provided unsuitable habitat for reptiles at the time of the survey.

#### 2.9.2 Results

A peak count of fifteen adult Slow-Worm and one Common Lizard were recorded during the Phase 2 survey (**Figure 2**). Juvenile Slow-worm were also recorded, indicating the species are breeding on site.



Figure 2. Reptile Survey Results (GoogleMaps, 2020).

#### 2.9.3 Evaluation

The survey data suggested that the site supported a low population of Common Lizard and a good population of Slow-Worm. the survey results indicated that other species of reptile, grass snake and adder, are likely to be absent from the site. However, the M27 corridor to the north and the railway line to the south both offer good, continuous habitat for reptile and are connected to the site.

## 2.10 Great Crested Newt Survey

## 2.10.1 Methods

## 2.10.1.1 HSI

Guidelines state that a pond, within 500m of a development site, must be surveyed if it holds potential to support newts (Natural England, 2013). To adhere to such guidelines, a Habitat Suitability Index (HSI) was carried out on the on-site pond. This considers the following factors when calculating the ponds suitability to support GCN (*Triturus cristatus*):

- SI1 = geographical location
- SI2 = pond area
- SI3 = pond permanence
- SI4 = water quality
- SI5 = pond shading
- SI6 = number of waterfowl

- SI7 = occurrence of fish
- SI8= pond density
- SI9 = suitability of surrounding terrestrial habitat
- SI10 = macrophyte (aquatic plant) content

These criteria are used to calculate a score according to ARG guidelines (ARG, 2010) using the Oldham (2000) calculation formulae. This gives a score between 0 and 1 of the suitability of the pond for GCN with:

0.00 – 0.50: Poor suitability for GCN

0.51 - 0.59: Below average suitability for GCN

0.60 - 0.69: Average suitability for GCN

0.70 - 0.79: Good suitability for GCN

0.80 - 1.00: Excellent suitability for GCN

For ponds of average or above, further surveys are often recommended.

HSI assessments were completed of Ponds 5-6 in 2016 by ECOSA (**Fig 3**), access could not be arranged for Ponds 1-4. These results are supplemented with updated HSI assessments of ponds 1-3 during January 2019 by Adam Jessop BSc (Hons) MSc Ecology Director of Ecosupport Ltd as part of the nearby Northfield Park development (P/18/1437/FP). An updated assessment of Pond 4 was completed by Julie Trevellick with assistance from Lewis Lakudzala, both of Ecosupport Ltd and an assessment of Pond 5 was completed by Lyndsey McBean BSc (Hons) PGCert GradCIEEM of Ecosupport Ltd, these were all completed in June 2020. Two attempts were made to access Pond 6 by the client, however access was not granted (see **Appendix 1**). An additional pond was located immediately west of Ponds 1-3 in Portchester Memorial Gardens and was also subject to a HSI by Adam Jessop in January 2019.

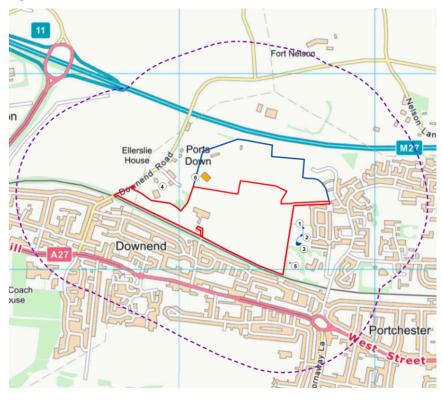


Figure 3. Ponds within 500m (ECOSA, 2017).

## 2.10.1.2 eDNA

eDNA surveys of Ponds 5 and 6 were completed on 18<sup>th</sup> April 2016. Access was only possible to two of these waterbodies (Pond 5 and 6). Due to the assessed low likelihood of GCN presence in Ponds 1-3 & 5 in 2020 and the disappearance of Pond 4 since the previous surveys in 2016, these ponds were not subject to updated eDNA surveys.

## 2.10.1.3 Phase II Survey

In 2016 inconclusive results were returned from the samples of Pond 5; it could not be determined if great crested newt eDNA was present or absent in any of the samples submitted. As a result, presence/likely absence great crested newt surveys were carried out at Pond 5 to ensure the assessment was as robust as possible. The survey methods employed for the single pond which was surveyed included torch searches, sweep netting, Dewsbury trapping and bottle trapping. Currently Natural England guidance requires that a minimum of three of the four recognised methods are utilised as part of any Phase 2 great crested newt survey. Dewsbury trapping, although a highly effective survey technique, is not recognised by Natural England as an accepted survey method in terms of data needed to support species licences. Therefore, this survey method was used as a fourth, additional method to augment survey efficacy.

The surveys were carried out between mid-May and mid-June 2016 inclusive. In

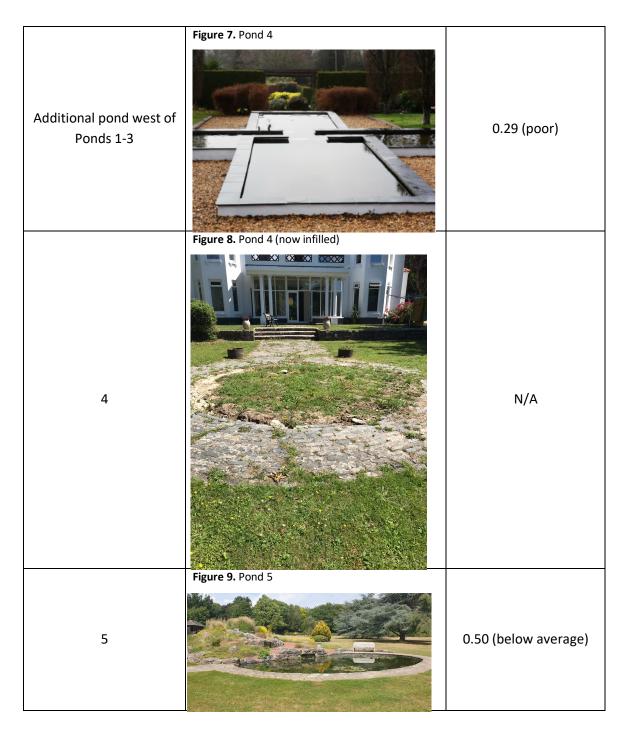
accordance with Natural England guidance, two of the required surveys were carried out between mid-April and mid-May.

## 2.10.2 Results

The results of the HSI assessments of the ponds completed in 2020 are shown in **Table 2** below.

**Table 2**. Results of the updated HSI assessments of Ponds 1-5 completed in 2020.

Pond Number	Figure	HSI score
1	Figure 4. Pond 1	0.55 (below average)
2	Figure 5. Pond 2	0.55 (below average)
3	Figure 6. Pond 3.	0.28 (poor)



The eDNA assessment on Pond 6 completed in 2016 concluded that GCN were likely absent. Similarly, the Phase II assessment on Pond 5 in 2016 concluded it is unlikely GCN were present.

## 2.10.3 Evaluation

In the updated surveys Ponds 1-3 and 5 were considered of poor-below average suitability for supporting GCN. Pond 4 had been infilled in the time between the initial surveys and the updated surveys and is considered to hold negligible suitability for GCN. Although Pond 6 could not be accessed for an updated assessment, based on

both the surveys carried out in 2016 and aerial imagery, Pond 6 is considered unlikely to hold potential for GCN.

#### 3.0 UPDATING WALKOVER

## 3.1 Methodology

#### 3.1.1 Walkover

The updating walk over survey was carried out by Tristanna Boxall BSc (Hons) (Natural England Class Level 2 Bat and Class Level 1 Great Crested Newt License Holder) and Lyndsey McBean BSc (Hons) PGCert Grad CIEEM (Natural England Class Level 1 Bat and Class Level 1 Dormouse License Holder) in January 2020. This comprised a visual assessment of the site and the surrounding landscape, broadly based upon the methodology outlined within the Joint Nature Conservation Committee's (JNCC) *Phase I habitat survey handbook* (2003). The habitats present were noted, with particular focus upon their potential to support protected species. This assessment included a thorough search for evidence of protected species across the site.

## 3.1.2 Assessment of Buildings to Support Roosting Bats

All farm buildings (**Figure 1**) were assessed as to their potential to support roosting bats. The externals were examined, using 8 x 42 Avian Trekker binoculars and a high-powered torch, for any suitable features which bats may use to enter the internals or an external roost and also to search for signs of bats (such as droppings or feeding remains) and/or bats themselves. Access was gained into the internals to search for evidence of roosting bats. The survey was carried out in accordance with *Bat Surveys for Professional Ecologists; Good Practice Guidelines* (3<sup>rd</sup> edition), published by the Bat Conservation Trust (Collins, J. (ed), 2016).

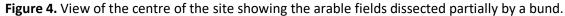
## 3.2 Results

#### 3.2.1 Walkover

The habitats recorded were in line with those previously noted (Section 2.2.2).

- Scrub;
- Tall ruderal;
- Scattered trees;
- Semi-improved grassland;
- Arable;
- Hedgerow with trees;
- Buildings and hardstanding.

**Arable** – The site is dominated by actively farmed arable land (**Figure 4**).





**Scrub** – The southern boundary fence line has been colonized by Bramble scrub and has created a linear feature running parallel to the train line (**Figure 5**).

Figure 5. Scrub along the southeastern boundary.



**Hedgerow** – A hedgerow runs along the eastern boundary of the site (**Figure 6**) before leading to a short stretch of fence line running towards the east (north of Northfield Park) (**Figure 7**). This then rejoins a hedgerow leading to the footpath.



Figure 6. Eastern hedgerow dominated by Buckthorn, Hawthorn and Holly.

Figure 7. Fence between two stretches of hedgerow adjacent to Northfield Park.



**Semi-improved grassland** – The updating walkover noted a reduction in the grassland buffer along the southeastern boundary however other lengths of improved grassland

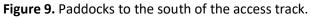
were recorded in line with the original report, including the central bund (illustrated in **Figure 4** above).

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In addition, a proportion of the site is currently utilized as grazing paddocks (**Figure 8** and **9**) in contrast to other areas on site, these are subject to continual grazing and thus have a limited sward structure.

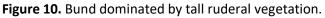
Figure 8. Paddocks to the north of the farm buildings.







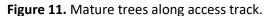
**Tall Ruderal** – Adjacent to the north of the farm yard and associated building lies a bund (**Figure 10**). Although the survey was undertaken during the winter months, the species is sward structure is in line with the previous classification of tall ruderal.





**Tree line** – The southern tree line along the railway embankment extends along the entire length of the site (**Figure 9** above). Species recorded during the survey included the same assemblage recorded in 2015 and 2019 (dominated by Oak, Hazel, Sycamore and Hawthorn).

A tree line/woodland edge is present along the north-west site boundary and extends along the access track (Figure 11).





A number of mammal breakthroughs were recorded along the southern boundary however these were considered likely to belong to Fox (*Vulpes vulpes*). A low number of Rabbit (*Oryctolagus cuniculus*) warrens were also noted along the central bund however no evidence of legally protected and/or notable species was recorded whilst on site.

## 3.2.2 Assessment of Buildings to Support Roosting Bats

All of the Buildings on site were considered to have negligible potential to support roosting bats (**Table 2**). Building E, which was previously subject to a single Phase II emergence survey, has since fallen into a worse state of repair and is now considered to have negligible potential to support roosting bats. Three owl pellets, considered likely to belong to Tawny Owl (*Strix aluco*), were recorded within Building E. These

were considered to be at least over a year old. In addition, a number of old bird nests were recorded in the farm buildings.

Table 2. Buildings on site.

1 abic 2. L	Buildings on site.	
Building	Photo	Bat Roost
		Potential
A		Negligible
В		Negligible





#### 4.0 IMPACTS IN THE ABSENCE OF MITIGATION

This chapter considers the likely ecological impacts of the proposals, in the absence of mitigation. The potential impacts are identified in reference to the likely biophysical changes associated with the scheme. Only impacts to ecological features or resources identified within **Section 2** are considered within this chapter. In many cases, whilst a potential negative impact is identified at this stage, avoidance measures or mitigation can be implemented to ensure no residual negative impacts. Avoidance and mitigation measures to ensure that no significant impacts occur and ecological enhancements are detailed in **Section 5**.

#### 4.1 Pre-Construction

Development of the site will entail the demolition of existing buildings, clearance of vegetation and topsoil stripping which would result in damage to, and physical loss of, habitats present on the site.

Clearance work taking place adjacent to hedgerows and trees could adversely affect these habitats through damage by machinery and particularly by root zone compaction. This would have a **certain adverse impact** to habitat of local value.

Stripping of grassland habitats will result in the loss of bat foraging habitat. This would have a **likely negative impact** at a county level. Should clearance take place whilst reptiles are on site there is risk of death or injury could occur causing an offence under the Wildlife and Countryside Act, 1981. This would have a **likely negative impact** at a local level.

It is considered unlikely amphibians, specifically GCN will be negatively impacted by proposals as it is considered unlikely they are within the ponds identified within 500m of the site. As a result, it is currently considered there will be a **likely negligible impact**. However, updating surveys will be undertaken to add confidence to this.

The demolition of buildings, if undertaken during bird nesting season, has the potential to negatively impact upon nesting birds. This would have a **likely negative impact** at a local level.

Potential indirect impacts to Badgers and Hedgehogs, associated with the construction phase, are considered to comprise disturbance by lighting, and the disruption to habitat connectivity. The loss of commuting corridors and foraging habitat would result in a **likely negative impact** at a site level.

## 4.2 During Construction

Development works taking place adjacent to boundary trees and hedgerows could adversely impact these habitats through damage by machinery and particularly by root zone compaction. This would have a **likely adverse impact** at a local level.

Noise generation within close proximity to boundary vegetation poses a risk of disturbance towards nesting birds. This may cause nest abandonment. This would have a **likely adverse impact** at site level.

Open excavations at night pose a threat to commuting and foraging nocturnal wildlife (i.e. Badgers and/or Hedgehogs can become trapped). There is a **potential negative impact** at site level.

The use of artificial lighting during construction could negatively impact upon commuting and foraging nocturnal species. If this lighting impacts upon the boundary woodland and/or hedgerows this would have a **likely adverse impact** to habitats of county value and associated protected species (bats).

## 4.3 Operational

#### 4.3.1 Increased Recreational Disturbance

Downend Chalk Pit SSSI is the nearest designated site and although its south-eastern corner abuts the site, the proposals will not give rise to negative impacts on this site, either during the construction phase or the operational phase of the development. The site is important for its geology (including fossils) and this site will not be affected by the proposals.

Fort Nelson Picnic site and Fort Nelson itself are located some 490m and 655m north of the site (respectively). Public access is encouraged to these areas and it is likely that the increase in residents in the area will result in an increase in visitors to these sites. However, an increase in visitor numbers is not likely to result in impacts which will compromise the ecological importance of these sites.

As the development falls within 5.6km of Special Protection Areas within and around the Solent Special Protection Areas (SPAs), it falls in the zone within which Natural England believes a net increase in recreational disturbance resulting from new development 'would be likely to have a significant effect' upon the status of the SPA, should suitable measures not be implemented. This would have a **negative impact at an international level**.

## 4.3.2 Increased Lighting

Increased levels of artificial light can cause disturbance and disruption to bats. Though several bat species can take advantage of artificial lighting systems for foraging, feeding off the insects they attract, other species avoid them. Studies have shown that, although Noctules, Leisler's, Serotine and Pipistrelle bats swarm around white mercury and metal halide street lights, this behaviour is not true for all species. The slower flying broad winged species such as Long-eared bats, Myotis species, Barbastelle and Horseshoe bats generally avoid streetlights (BCT, 2009). Artificial lighting is also thought to increase the risk of predation. For example, observations have been made of Kestrels (*Falco tinnunculus*) hunting at night under the artificial light along motorways (BCT, 2009). Therefore, increased light levels may lead to increases in mortality. If light levels increase significantly and is widespread across the site this would have a **likely negative impact** upon commuting and foraging bats of country value.

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#### 5.0 MITIGATION AND COMPENSATION

Mitigation refers to measures that can be undertaken to avoid or reduce ecological impacts. Compensation refers to measures taken in order to offset potential significant impacts.

# **5.1 Pre-Construction**

#### 5.1.1 Site Design

Boundary vegetation has been retained wherever possible with sufficient buffers afforded to hedgerows and mature trees. The landscape strategy has enhanced the site in terms of its biodiversity value through native planting. Green corridors will be created running both in a north-southerly and east-westerly direction. There will be 7.5ha of public open space which will include landscaped area utilising native species. The SUDS will also include native species.

Provision will be made to promote site connectivity and extended foraging ranges and opportunities for the European Hedgehog, as per best practice. Holes measuring 10cm x 10cm will be made at the base of boundary fences/gravel boards into and between each garden and the surrounding habitats. Small signage will be installed on the fence above both sides of these access points to ensure they remain open upon completion of the development. The People's Trust for Endangered Species provide such signage, the purchase of which also supports conservation efforts: <a href="https://ptes.org/shop/hedgehog-highways-signs/hedgehog-highway-labels/">https://ptes.org/shop/hedgehog-highways-signs/hedgehog-highway-labels/</a>

#### 5.1.2 Protective Fencing

Tree protective fencing will protect boundary vegetation from direct impact and from severance or asphyxiation of the roots. Fences must be installed at the distance of the branch spread away from the tree trunk (British Standard 5837:2012 Trees in relation to construction) at a distance half the height of the tree and be of chestnut paling or of another similarly robust style of fencing. No vehicles should enter the protective ring fencing and no materials should be stored within their circumference. All protective fencing must be in place prior to any construction machinery arriving on site, before any works on site get underway, and will remain in place until all work is completed. This will minimise the level of disturbance within the boundary vegetation during construction.

#### 5.1.3 Reptiles

A site wide Reptile Mitigation Strategy will be implemented involving the capture and translocation of reptiles from within the area of impact to be retain on site within a receptor area. Please note an updating reptile survey is required to inform the production of this Strategy and is programmed to take place in September 2020.

### 5.1.4 Nesting Birds

Any vegetation clearance and demolition of farm buildings will take place outside of bird nesting season (i.e. removal will not take place between March – September). If this isn't possible any removal will need to be supervised by an ecologist. If an active nest is identified a 5m buffer will be established, within which no works will be able to take place until the Ecologist has confirmed the chicks have fledged and the nest is no longer active.

A Tawny Owl box will be erected within a mature tree on site, prior to the demolition of Building E, to provide continued opportunities for Tawny Owl on site.

# **5.2 During Construction**

#### 5.2.1 Mammals

A means of escape (e.g. a ramp) will be left in excavations over night in case of animals falling in. A member of staff on site should be responsible for ensuring that this is carried out before leaving the site each day.

## 5.2.2 Lighting

During the construction phase of the development, no works are to be undertaken between dusk and dawn, with lighting also limited to daylight hours where necessary.

## 5.3 Operational

#### 5.3.1 Recreation

In order to mitigate for the likely increases in residential pressure upon this SPA, the Solent Recreation Mitigation Strategy (SRMS) has been introduced in collaboration with Natural England, comprising a partnership of all local councils. Mitigation towards the SPA must be provided for all new recreational developments within the 5.6km disturbance zone of the SPA. The simplest method of providing a necessary suitable and appropriate level of mitigation is via financial contributions, which, from 1<sup>st</sup> April 2019, are calculated on a sliding scale as follows (for any net increase in residential dwellings which, for this development, is one):

- £346 for each 1 bedroom dwelling
- £500 for each 2 bedroom dwelling
- £653 for each 3 bedroom dwelling
- £768 for each 4 bedroom dwelling
- £902 for each 5 bedroom (or more) dwelling

These contributions are used to enable the continued use of the coastline in a way that reduces the risks to the bird species of international importance that use the area, for example funding a team of rangers and implementing initiatives to encourage

responsible dog walking (Solent Recreation Mitigation Partnership, 2014). It is considered that the contribution, in compliance with the recommendations presented within the associated documentation, provides a suitable level of mitigation for the potential adverse impacts associated with the proposed scheme upon the Solent SPA.

**Updating Ecological Assessment** 

The contribution can be made as follows:

- 1) Prior to planning permission being granted or by completing the SDMP Agreement and sending the completed form along with mitigation contribution to the Planning Agreements Officer at the Local Planning Authority; or
- 2) By completing a Unilateral Undertaking before planning permission is granted with an undertaking that the payment will be made before the development is implemented. Please note, this option incurs an administration fee payable to the LPA.

## 5.3.2 Lighting

Where possible the ideal scenario would be to have no light at all at locations used by bats. Where lighting is necessary lighting guidelines (2013) have informed the following mitigation and avoidance measures.

## Type of Light

As people perceive areas illuminated with white light as safer, brighter and more comfortable than areas lit with yellow light (Knight, 2010) there has been a shift towards the use of white lights in outdoor lighting applications. Those lights with the lowest negative impacts include narrow spectrum lights with no UV content, Low pressure sodium and warm white LED and directional down lights, which illuminate below the horizontal plane. The following key principles can also reduce potential negative impacts on bats and wildlife in general:

- Avoid blue-white short wavelength lights: these have a significant negative impact on the insect prey of bats. Use alternatives such as warm-white (long wavelength) lights as this will reduce the impact on insects and therefore bats
- Avoid lights with high UV content: (e.g. metal halide or mercury light sources), or reduce/completely remove the UV content of the light. UV has a high attractiveness to insects leading to direct insect mortality at street lights thereby reducing the availability of insect prey (Frank 2006; Bruce-White & Shardlow 2011). Use UV filters or glass housings on lamps which filter out a lot of the UV content.

# Spacing and height of units

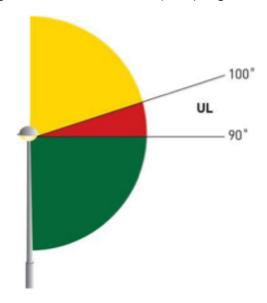
Increasing the spacing between light units will reduce the intensity and spread of the light to inimize the area illuminated and give bats an opportunity to fly in relatively dark areas between lights. Reducing the height of light units will keep the light as close

to the ground as possible, reducing the volume of illuminated space. This will also give bats a chance to fly over the light units in the dark area above the light (as long as the light does not spill above the vertical plane).

## **Reducing spill**

Attention will be paid to avoid the upward spread of light near to and above the horizontal plane to inimize trespass and sky glow. It is important to avoid lighting above 90° and 100° (Figure 12 below).

Figure 12. Taken from Stone (2013) original ref: (ILP 2011).



## 5.3.3 Nesting Bird Features

To replace nesting opportunities for Swallows, Swallow boxes and/or Swift Bricks will be introduced to at least 10% of new dwellings. Sparrow Terrace features will also be erected on at least 10% of new dwellings.

# **6.0 IMPACTS AFTER MITIGATION & COMPENSATION**

**Table 3** below demonstrates how the appropriate Mitigation either reduces the magnitude of the impact, if not removes it entirely.

**Table 3.** Impacts in the absence of mitigation with residual impacts following execution of mitigation.

Impact	Mitigation / Compensation	Residual Impacts
Damage/death of boundary trees	All retained vegetation will be protected by fencing.	With the appropriate level of protection there will be likely negligible impacts.
Disturbing breeding birds	All retained vegetation will be protected by fencing. All vegetation removal and demolition to take place outside of nesting bird season.	With the appropriate level of protection and timing of works of breeding birds habitat, combined with increasing both nesting opportunities and foraging resources there will be likely positive impacts.
Loss of habitat for foraging and commuting bats	Areas of the site are set to be retained. In addition, any new landscaping and lighting will be inline with <b>Section 5.3.2</b> to reduce impacts.	This will result in <b>likely negligible</b> impacts.
Loss of Tawny Owl roost  Death / injury of	Owl box to be erected on site prior to demolition.  A site wide Reptile Mitigation	This will result in a likely negligible impact.  There will be likely negligible
reptiles  Death / injury of Badgers and/or	Strategy is to be produced and followed.  Escape ramps to be utilised during construction. Landscape	This will reduce the impact to likely negligible.
mammals	plan to provide native species, foraging opportunities and green corridors for continued commuting opportunities.	
Increased lighting	A sensitive lighting strategy (using information provided in <b>Section 5.3.2</b> ) will be devised and implemented.	Once operational the development will result in an unavoidable increase in artificial lighting however with sensitive methods in place the impact is likely to be reduced to a minor negative impact.
Increased Visitor Pressure on SPA	Financial contributions to be provided and 7.5ha of open space to be created. A Shadow HRA has been produced as part	Once operational the development will result in an unavoidable increase in residents and therefore increased

of the original application.	recreational pressure however it
	it considered likely the impacts
	will be limited to minor negative
	impact.

In some cases, it is considered likely the development may in fact result in a gain for biodiversity (see **Section 7** below).

#### 7.0 ENHANCEMENTS

Enhancements will be implemented to increase the value of the site in comparison to the baseline.

**Updating Ecological Assessment** 

## 7.1 Native Planting

The original appraisal recommended that:

"Landscape proposals for the site include native species, of local province ideally, wherever possible. Where not appropriate to use native species, species known to benefit wildlife will be used. Native species planting should reflect species which are found in the local area to ensure appropriate. An ecologist should be consulted on the landscape proposals to ensure that biodiversity gains are realised, important habitats (such as the hedgerows and mature trees) are appropriately protected and any existing gaps in boundary vegetation is planted up to strengthen linear features. The SUDS design should be sensitive to wildlife and an ecologist should feed into the development of this. The habitats on site will be managed to promote biodiversity enhancement and appropriate management prescriptions will be included in the LEMP. In line with policy CS4, green infrastructure should be incorporated into the scheme where possible to do so".

Fruit bearing trees, providing food sources for birds and small mammals during the autumn and winter and nest sites during the spring and summer, should be utilised. Species that should be considered include:

- Hawthorn,
- Elder,
- Alder Buckthorn (Frangula alnus),
- Wild Cherry (Prunus avium),
- Crab Apple (Malus sylvestris).

Shrubs to be considered within the landscape planting include:

- Holly,
- Dogwood (Cornus sanguinea),
- Privet (Ligustrum vulgare),
- Dog Rose (Rosa canina),
- Guelder Rose (Viburnum opulus).

Key species are Willow, Oak and Birch as they can support high numbers of insects. In addition, once matured they can eventually provide roosting opportunities for bats (see **Table 4** below).

**Table 4.** Tree species for foraging and roosting potential (Gunnel et al. 2012).

Native Tree species	Roosting potential	Supporting foraging
Oak	Very good	Very good
Willow	Minimal	Very good
Beech	Very good	Good
Ash	Good	Good
Elm	Good	Good
Birch	Minimal	Very good

A wildflower mixture, tolerant to damp conditions, will be sown within the SUDs areas.

#### **7.2** Bats

Bat boxes will be incorporated into at least 10% of the new dwellings. The 1FR Bat Tube is designed to be installed on the external walls of buildings, either flush or beneath a rendered surface. It has been specifically designed to meet the requirements of the species of bats that inhabit buildings, including those which what been recorded on site. It has an integrated wooden panel onto which bats can cling, and a ridged entrance slope that makes it easy for bats to enter and leave the box safely. The design maintains stable climatic conditions, providing bats with a safe and stable roosting environment. This style of bat box requires no maintenance as droppings fall out of the entrance ramp.

The Enclosed Bat Box 'C' from Ibstock is designed for Pipistrelle species, and can be integrated directly into the brickwork of new buildings. The inside of the box is designed to create several roosting zones that are ideal for crevice-dwelling bats. The bottom entrance means that no maintenance is required as droppings simply fall out of the bottom.

In general, bats seek warm spaces when rearing young. For this reason, bat boxes should be located where they will receive at least partial sunlight (facing south, southwest or south-east). However, installing bat boxes in more than one orientation will allow for a choice of roosting conditions. To increase the chances of bats roosting in a bat box, the boxes will be placed adjacent to vegetation features so as to be located near to existing flight paths.

The bat boxes will be installed a minimum of 2m above ground level, although 5-7m is preferable to prevent disturbance from people and predators. The features should also be positioned near the eaves or gable apex of buildings to minimise disturbance.

# 7.3 Nesting Birds

To ensure bird have safe opportunities for nesting on site a total of 35 bird boxes will be erected. Those constructed of woodcrete are favorable, as they will last longer than wooden boxes. In addition, boxes with a variety of entrance holes sizes and open fronted designs will be selected, to suit a variety of species, as follows:

- **32mm entrance hole** will attract Great Tit, Redstart, Nuthatch and House Sparrow.
- **26mm entrance hole** suits Blue, Marsh, Coal and Crested Tit and possibly Wren.

#### 8.0 CONCLUSION

The findings of the updating Phase I Survey are in line with the original survey effort undertaken by ECOSA (2016 and 2017). The majority of the site is considered to be of limited ecological value as it is arable land under crop rotation. The habitat types and management are considered to be in accordance with those previously recorded and therefore the suitability and potential for legally protected and/or notable species is unchanged.

The key features are the boundary hedgerows and mature trees and the central bund and paddock edges where the sward supports reptiles. The site supports nine bat species which have been recorded foraging and commuting around the site. Similarly, nesting bird habitat is present in the form of the boundary hedgerows, scattered scrub, trees and farm buildings.

Previous surveys have concluded Dormice, GCN and wintering birds are likely absent from the site and therefore unlikely to be negatively impacted.

A range of measures were outlined within the original reports to avoid as many impacts as possible in the first instance through sensitive design. Where impacts on wildlife/habitats are unavoidable, appropriate mitigation measures have been proposed. Updating Reptile and GCN surveys will be undertaken in April 2020 to provide up to date information to support the production of a Reptile Mitigation Strategy and, if applicable, GCN Mitigation Strategy.

To ensure the proposals result in gains for biodiversity, enhancement will be implemented through appropriate planting and provision of nesting/roosting opportunities for birds and bats. If the recommendations within this report are followed the scheme has the potential to result in biodiversity gains.

#### 9.0 REFERENCES

Bat Conservation Trust (BCT) (2012). *Bat surveys: Good practice guidelines*. 2<sup>nd</sup> edition. Bat Conservation Trust, London.

CIEEM (2018). *Guidelines for Ecological Impact Assessment in the United Kingdom*. Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2016) 'Bat Surveys for Professional Ecologists; Good Practice Guidelines' (3<sup>rd</sup> edn). The Bat Conservation Trust, London.

English Nature (2004). Bat Mitigation Guidelines. A. J. Mitchell-Jones, English Nature.

ECOSA (2017) 'LAND AT WINNHAM FARM, THE THICKET, PORTCHESTER, FAREHAM, HAMPSHIRE. ECOLOGICAL ASSESSMENT'

Fareham Borough Council (2015) 'Local Plan Part 2: Development Sites and Policies' Available online at: <a href="http://www.fareham.gov.uk/PDF/planning/LP2DSPAdopted.pdf">http://www.fareham.gov.uk/PDF/planning/LP2DSPAdopted.pdf</a>

Fareham Local Biodiversity Action Plan <a href="https://www.fareham.gov.uk/pdf/planning/bap.pdf">https://www.fareham.gov.uk/pdf/planning/bap.pdf</a>

Froglife (1999). Reptile Survey: An introduction to planning, conducting and surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

HGBI (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI, c/o Friglife, Halesworth. Unpubl.

HMSO (1981). The Wildlife & Countryside Act 1981. HMSO, London.

HMSO (2000). *The Countryside and Rights of Way Act 2000*. HMSO, London. Herpetofauna Groups of Britain & Ireland. (1998). *Evaluating local mitigation/translocation programmes: maintaining best practice and lawful standards.* 

HGBI advisory notes for Amphibian and Reptile Groups (ARGs). HGBI c/o Froglife, Halesworth, Suffolk.

JNCC (2003). *Handbook for Phase 1 Habitat Survey*. Joint Nature Conservation Committee, Peterborough.

Natural England (2007). Badgers and Development: A Guide to Best Practice and

Licencing. Interim Guidance Document. Natural England.

Natural England (2009). *Protection of Badgers Act 1992 (as amended): Interpretation of 'Disturbance' in relation to Badgers occupying a sett*. June 2009. Natural England.

Natural England (2009). Protection of Badgers Act 1992 (as amended): Guidance on 'Current Use' in the definition of a Badger Sett. June 2009. Natural England.

Natural England (2011). *Badgers and Development – A Guide to Best Practice and Licencing*. Interim Guidance Document, revised 12/11. Natural England.

Natural England (2014). *Environmental Management – Guidance. Badgers: Protection and Licences*. Available from: <a href="https://www.gov.uk/guidance/badgers-protection-surveys-and-licences">https://www.gov.uk/guidance/badgers-protection-surveys-and-licences</a>

Natural England (2018). *Badgers: Surveys and Mitigation for Development Projects*. Available from: https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects

Natural England (2018). Wild Birds: Surveys and Mitigation for Development Projects. Available from: https://www.gov.uk/guidance/wild-birds-surveys-and-mitigation-for-development-projects

# APPENDIX 1- Letters attempting access permission for an updated assessment of Pond 6



Miller Homes Unit 3 Faraday Office Park Rankine Road Basingstoke RG24 8QB

tel: 0870 336 4200 www.millerhomes.co.uk

Head of Estates Veolia Downend Road Fareham PO17 6AL

28<sup>th</sup> May 2020

Dear Sir/ Madam,

#### Re: Newt Surveys at Veolia Depot - Downend Road, Portchester

I am writing to you as a representative of Miller Homes. We have been promoting land of Downend Road for houses.

As part of our preparation for the application we would like to examine the ponds on your land to establish whether there are any newts in them.

If you could contact me on the details below to arrange a convenient time for our ecologist to visit.

Yours faithfully,

Mark Jackson Strategic Planning Director Tel: 0870 336 4246 Mob: 07920703944

Email: mark.jackson@miller.co.uk

Registered Office: Miller Homes (UK) Limited Miller House, 2 Lochside View Edinburgh Park, Edinburgh, EH12 9DH Registered in Scotland: SC255429

the place to be



Miller Homes Unit 3 Faraday Office Park Rankine Road Basingstoke RG24 8QB

tel: 0870 336 4200

www.millerhomes.co.uk

Head of Estates Veolia Downend Road Fareham PO17 6AL

11<sup>th</sup> June 2020

Dear Sir/ Madam,

#### Re: Newt Surveys at Veolia Depot - Downend Road, Portchester

Further to my letter of  $28^{\text{th}}$  May I am writing to see whether we would be able to gain access to the ponds in your depot.

As part of our preparation for the application we would like to examine the ponds on your land to establish whether there are any newts in them.

If you could contact me on the details below to arrange a convenient time for our ecologist to visit.

Yours faithfully,

Mark Jackson Strategic Planning Director Tel: 0870 336 4246

Mob: 07920703944

Email: mark.jackson@miller.co.uk

Registered Office: Miller Homes (UK) Limited Miller House, 2 Lochside View Edinburgh Park, Edinburgh, EH12 9DH

Registered in Scotland: SC255429

the place to be  $^{\circ}$