

Ecological support, management & solutions



Ecological Mitigation & Enhancement Strategy

Colt International New Lane, Havant

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For **Drew Smith Group**

1.0 INTRODUCTION	4
1.1 BRIEF	4
1.2 SITE LOCATION AND DESCRIPTION	5
1.3 PROPOSED DEVELOPMENT	6
2.0 RELEVANT LEGISLATION & POLICY	8
2.1 LEGISLATION	8
2.1.1 <i>The Conservation of Habitats and Species Regulations (2017)</i>	8
2.1.2 <i>The Wildlife and Countryside Act (1981) (as amended)</i>	8
2.1.3 <i>The Countryside and Rights of Way Act (2000)</i>	8
2.1.4 <i>Natural Environment and Rural Communities Act (2006)</i>	8
2.1.5 <i>The Protection of Badgers Act (1992)</i>	8
2.2 POLICY	9
2.2.1 <i>National</i>	9
2.2.2 <i>Local</i>	11
2.3 BIODIVERSITY ACTION PLANS & UK POST-2010 BIODIVERSITY FRAMEWORK	13
3.0 SUMMARY OF ECOLOGICAL RECEPTORS	14
3.1 INTRODUCTION	14
3.2 SURROUNDING DESIGNATED SITES	14
3.3 ON-SITE HABITATS AND SPECIES	14
3.3.1 <i>Habitats</i>	14
3.3.2 <i>Species</i>	15
4.0 POTENTIAL IMPACTS IN THE ABSENCE OF AVOIDANCE, MITIGATION, COMPENSATION AND ENHANCEMENT	16
4.1 INTRODUCTION	16
4.2 DESIGNATED SITES	16
4.3 HABITATS	16
4.4 PROTECTED & NOTABLE SPECIES	16
5.0 ECOLOGICAL AVOIDANCE, MITIGATION, COMPENSATION AND ENHANCEMENT STRATEGY	18
5.1 INTRODUCTION	18
5.2 UPDATING / ADDITIONAL ECOLOGICAL SURVEYS	18
5.2.1 <i>Updating Mammal Survey</i>	18
5.3 AVOIDANCE AND MITIGATION	18
5.3.1 <i>SRMS</i>	18
5.3.2 <i>Vegetation Clearance</i>	19
5.3.3 <i>Tree & Scrub Protection</i>	20
5.3.4 <i>Spoil Pile Removal</i>	20
5.3.5 <i>Excavations</i>	20
5.3.6 <i>Roofing Underlining</i>	21
5.3.7 <i>Toolbox Talk</i>	21
5.3.8 <i>Works Restrictions</i>	21
5.3.9 <i>Lighting</i>	21
5.4 COMPENSATION & ENHANCEMENT	21

5.4.1 Introduction.....	21
5.4.2 Landscape Planting	22
5.4.3 Bird Boxes and Bricks.....	23
5.4.4 Bat Boxes.....	25
5.4.5 Log Pyramid.....	26
5.4.6 Log Piles.....	27
5.4.7 Habitat Connectivity.....	28
6.0 REFERENCES	30
7.0 APPENDICES	31
APPENDIX 1. PROPOSED DEVELOPMENT.	31
APPENDIX 2. SIGNAGE FOR PROTECTIVE FENCING.	32
APPENDIX 3. ECOLOGICAL ENHANCEMENT PLAN SHOWING APPROXIMATE LOCATION OF ENHANCEMENT FEATURES TO BE INSTALLED ON SITE.	33

1.0 INTRODUCTION

1.1 Brief

Ecosupport Ltd. was commissioned by Drew Smith Group to produce an Ecological Mitigation and Enhancement Strategy to support the redevelopment of the former Colt international industrial site off New Lane, Havant. This document has been produced to allow for the discharge of Condition 5 of the active planning permission for the residential and employment development of the site APP/18/00244.

Condition 5 requires the following:

Prior to development commencement of any specific phase of the development hereby approved (or such other date in development as may be agreed in writing with the Local Planning Authority) an ecological mitigation and enhancement strategy shall be submitted to and agreed in writing by the Local Planning Authority. It shall include (but not necessarily be restricted to): details of all measures (methods, location, number type, and ongoing maintenance) to compensate and enhance the site post-development. All ecological mitigation and enhancement features shall be permanently retained and maintained.

Reason: To protect biodiversity in accordance with the Conservation Regulations 2017, Wildlife & Countryside Act 1981, the NERC Act (2006), National Planning Policy Framework and Policy CS11 of the Havant Borough Local Plan (Core Strategy) March 2011.

This document is based in full upon the ecological assessment presented within the following report, which was submitted in support of the planning application, a Bat Emergence Survey letter report from 2017, as well as consultation from Havant Ecologist, Tristan Norton, on May 15th 2018. Furthermore this strategy is based upon the most current site plan:

- *Preliminary Ecological Appraisal Colt International, New Lane, Havant (White, young & Green) February 2017*
- MHA 18-197 site plan

Avoidance and mitigation measures have been recommended within this document to ensure all phases of the proposed development comply in full with wildlife legislation and relevant planning policy. Further, ecological enhancements have been included to ensure the proposed development results in net increases for biodiversity as per planning policy.

No ecological survey can conclusively confirm absence of a protected species. Care should be taken during all construction works in the unlikely event that any protected wildlife is present on site that has not been included within this report.

This report does not include recommendations relating to Japanese Knotweed.

A search for the presence of Tree Preservation Orders (TPOs) on site has not been undertaken.

Should the proposed development not be underway within 18 months of the date of issue of this report, it is strongly recommended that further ecological consideration be undertaken.

1.2 Site Location and Description

The site is located at the former Colt International industrial site (approximate central Ordnance Survey Grid Reference SU 72617 08008) (**Figure 1**). At the time of ecological assessment in 2017 the site comprised a number of buildings, areas of hard standing, managed amenity grassland, isolated patches of dense scrub, a concrete lined ditch and scattered trees around the site boundaries. The site was considered to hold relatively low ecological value, although the potential for a range of protected bat species was identified. Further bat survey work carried out by WYG confirmed likely absence of bat roosts. Furthermore, anecdotal information from previous employees of the industrial site suggest that birds nesting on site included herring gulls (*Larus argentatus*). The site lies within a relatively urbanised area dominated by residential development. The site lies approximately 0.38km away from Barton's Copse an ancient semi-natural woodland and 2.7km from the Solent & Southampton Water Special Protection Area (SPA).

Figure 1. Aerial photograph of the site, with approximate red line boundary illustrated in red (Google Maps, 2019).



Figure 2. The site in the wider context of the local area (Google Maps, 2019).



1.3 Proposed Development

Outline permission exists for the redevelopment of the site to provide 95 dwellings between two and four storey buildings (32 flats and 63 houses) with associated access, parking and landscaping, subject to conditions. See **Figure 3/ Appendix 1** for proposed development plans.

Figure 3. Proposed development plans



2.0 RELEVANT LEGISLATION & POLICY

2.1 Legislation

2.1.1 *The Conservation of Habitats and Species Regulations (2017)*

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.

In order for activities that would be likely to result in a breach of species protection under the regulations to legally take place, a European Protected Species (EPS) licence must first be obtained from Natural England.

2.1.2 *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). Further, the Act requires the identification and subsequent protection of Sites of Special Scientific Interest (SSSIs).

The Wildlife & Countryside Act (1981) states that it is an offence to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9 art II of the Act. This list comprises over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrots Feather (*Myriophyllum aquaticum*).

2.1.3 *The Countryside and Rights of Way Act (2000)*

This Act strengthens the Wildlife & Countryside Act by the addition of "reckless" offences in certain circumstances, such as where there is the likelihood of protected species being present. The Act places a duty on Government Ministers and Departments to conserve biological diversity and provides police with stronger powers relating to wildlife crimes.

2.1.4 *Natural Environment and Rural Communities Act (2006)*

This places a duty on Local Authorities to consider the conservation of biodiversity in their policy and decision making procedures and 'in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'.

2.1.5 *The Protection of Badgers Act (1992)*

The Protection of Badgers Act (1992) makes it an offence to:

- Kill or injure Badgers;

- Damage a Badger sett or any part of it;
- Destroy a Badger sett;
- Obstruct access to, or any entrance of a Badger sett;
- Disturbing a Badger when it is occupying a sett.

If a proposed development may contravene any of the above points then a licence would be required from Natural England and an appropriate mitigation scheme proposed.

2.2 Policy

2.2.1 National

The revised National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2019) outlines a number of more robust measures to ensure the impacts of development upon the Country's biodiversity interests are appropriately mitigated against whilst also seeking to achieve a 'net gain'. The key policy test relating to developments and biodiversity is outlined below.

Chapter 15. Conserving and Enhancing the Natural Environment

170. Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

171. Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining

and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.

172. Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development⁵⁵ other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:

a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;

b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and

c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.

173. Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.

Habitats and Biodiversity

174. To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

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

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

176. The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;

b) listed or proposed Ramsar sites; and

c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

177. The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.

2.2.2 Local

The relevant local policy for the site is the Havant Borough Adopted Core Strategy 2011-2026 (Havant Borough Council, 2011). The following policies are pertinent to this report:

Policy CS11: Protecting and Enhancing the Special Environment and Heritage of Havant Borough

Policy CS11 ensures that the natural environment will be protected and that permission will only be granted for development that:

- *Ensures the key landscape and built form principles set out in the Havant Borough Townscape, Landscape and Seascape Character Assessment are protected and where possible enhanced by partnership working with developers, groups and the wider community.*
- *Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.*

- *Has particular regard to the following hierarchy of nature conservation designations within the borough (as identified on the Proposals Map): (i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar [International], (ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves [National], (iii) Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above [Local].*
- *Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation.*
- *Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly on the coast, to reduce harm to nature conservation interests.*
- *Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh.*
- *Protects wildlife habitats and wildlife corridors to prevent the fragmentation of existing habitats and to allow species, for example Brent Geese, to respond to the impacts of climate change by making provision for habitat adaptation e.g. coastal managed realignment and species migration.*
- *Responds to the emerging evidence from the Solent Disturbance and Mitigation Project, the published recommendations, and future related research.*

Policy CS12 Chichester Harbour Area of Outstanding Natural Beauty (AONB)

This policy aims to protect the integrity of Chichester Harbour AONB and will only permit development that assess its impacts on the AONB, is appropriate for the economic, social and environmental wellbeing of the area and will mitigate any detrimental impacts on the designated site.

DM8 Conservation, Protection and Enhancement of Existing Natural Features

Development will only be permitted where it protects and enhances local habitats and landscape distinctiveness and which addresses all of the relevant criteria as set out below:

- 1. Protects natural features of nature conservation and/or amenity importance on the site, for example trees, woodlands, hedgerows, soils, streams, stream corridors, springs, ditches or ponds from damage, destruction and a deterioration in quality.*
- 2. Sympathetically incorporates existing features into the overall design of the scheme including measures taken to ensure their continued survival.*
- 3. Provides new landscape works that integrate successfully with the local environment and existing natural features, using local materials and plant species and making provision for future maintenance of new landscape works associated with new developments.*
- 4. Ensures sequences of greenspaces are maintained and protects the attractiveness and visual amenity of all green open spaces that contribute to the identity of the borough.*

2.3 Biodiversity Action Plans & UK Post-2010 Biodiversity Framework

The UK Post-2010 Biodiversity Framework (JNCC & DEFRA, 2010) supersedes the UK Biodiversity Action Plan 1992-2012 (UKBAP), setting out goals relating to nature conservation at a UK scale, for example the reduction and reversal in the decline of threatened species and improving the status of biodiversity. The specific habitats and species contained within the UKBAP continue to be regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

3.0 SUMMARY OF ECOLOGICAL RECEPTORS

3.1 Introduction

An Extended Phase I Habitat Survey was undertaken in January 2017 by Ecologists from WYG, followed by bat emergence / re-entry surveys on Building 2 in May and June 2017, also undertaken by WYG.

3.2 Surrounding Designated Sites

Chichester Harbour AONB lies 1.93km to the south of the site, while Chichester and Langstone Harbours SPA is 3.3km to the south and Portsmouth Harbour SPA is 8.0km to the south-west of the application site.

Sixteen Sites of Importance for Nature Conservation (SINCs) were identified within 2km of the site; Barton's Copse & The Slip (0.38km to the NW), Battins Copse (0.62km to the E), High Lawn (0.77km to the NW), Great Copse, Havant (0.78km to the NW), Wakesfords Copse, Havant (0.79km to the NW), Southleigh Forest (1.01km to the W), Lower Beacon Field (1.03km to the N), Thicket Lawn (1.03km to the NE), Thicket Bottom Woods & Lake (1.06km to the NW), Hammond's Lands Copse (1.1km to the N), Thicket Bottom (1.23km to the NW), Oaklands Woodland (1.48km to the NW), Oaklands Meadows 1 & 2 (1.55km to the NW), Middle Clearing (1.85km to the NE), Havant Thicket (1.95km to the E), and Warblington Castle Farm East D (1.99km to the S).

3.3 On-site Habitats and Species

3.3.1 Habitats

The following broad habitat types were recorded on site during the 2017 assessment. A habitat map may be found in the 2017 report by WYG (WYG, 2017).

Bare Ground – The majority of the site comprised hard standing, used for parking on the east and west sides of the site, with a connecting road along the southern area, connecting the two car parks.

Amenity Grassland – Managed amenity grassland was present with low floral diversity, dominated by Perennial Rye-grass (*Lolium perenne*).

Improved Grassland – An steep bank with low-diversity grassland that was less intensively managed was located between the western car park and the buildings. It had several recently-dug holes from foxes.

Dense Scrub – Small areas of dense scrub were present around the edges of the western car park, dominated by Common Bramble (*Rubus fruticosus*).

Running Water – Three running water features were identified within / adjacent the site. One fast running water drain, lined with concrete, approximately 30cm deep, was in the south-eastern corner of the site. One slow flowing stream was identified immediately to the south of the site and another concrete, surface water drain was at the base of the improved grassland bank with very little water.

Buildings – Four buildings were on site. The largest was the main factory building (B1), dominated the center of the site and had a concrete structure, several extensions and a pitched corrugated metal and composite roof, while one office area had a flat concrete roof. The second building (B2) was a small, deteriorated wooden structure with a pitched asbestos roof. The third building (B3) was a small metal structure with a pitched metal roof and the fourth building (B4) was a small, brick and render building in good condition with a flat composite roof.

Scattered Trees – Scattered trees were recorded around the southern and western boundaries of the site, with species noted including Ash (*Fraxinus excelsior*), Sycamore (*Acer pseudoplatanus*), Silver Birch (*Betula pendula*), Oak (*Quercus robur*), conifers (*Pinophyta* sp.) and Poplar (*Populus* sp.). Two mature oaks were also recorded in the north-eastern corner of the site.

3.3.2 Species

Badgers – Holes were present in the steep bank on the western portion of the site, that were considered to be of sufficient size for badgers. However, they are more likely caused by foxes. The site was considered to have low potential for badgers.

Bats - Phase II Bat Surveys were undertaken on Building 2 which was considered to hold moderate potential to support roosting bats. No roosting bats were recorded within the building, indicating a likely absence of roosting bats.

Two mature trees in the northeastern corner of the site were considered to have some potential for roosting bats. They will be retained under the final plans and will therefore not be adversely impacted.

Habitats on site were not considered to provide suitable bat foraging habitat.

Birds – The buildings were considered to provide moderate potential for nesting and wintering birds. The pitched factory roofs regularly support nesting Herring Gulls (*Larus argentatus*) according to eyewitness accounts and are suitable for other species.

Great Crested Newt – Although there were flowing water bodies on site, they were not considered suitable for Great Crested Newts. Due to a lack of suitable waterbodies within the site's vicinity the presence of Great Crested Newts was considered highly unlikely.

4.0 POTENTIAL IMPACTS IN THE ABSENCE OF AVOIDANCE, MITIGATION, COMPENSATION AND ENHANCEMENT

4.1 Introduction

Based upon the findings of the 2017 ecological assessments and the current master plan for the site, the following potential ecological impacts are considered likely should a suitable avoidance, mitigation and compensation strategy not be implemented (such a strategy is detailed in **Section 5** of this report).

4.2 Designated Sites

The development site lies within the boundaries of the Solent Recreation Mitigation Strategy (SRMS) within which it is considered that, unmitigated, all development that will result in a net increase in residential units hold the potential to adversely impact upon the Solent and Southampton Water SPA via increased recreational pressure (SRMS, 2017).

4.3 Habitats

The proposed development will require clearance of some of the scattered trees and scrub on site. Uncompensated, this will result in an overall reduction in the ecological value of the site.

Should suitable protection of retained scrub and tree habitat not be implemented during the construction phase of the development, damage via accidental encroachment of machinery or compaction/severance of roots could result in their harm/death.

4.4 Protected & Notable Species

Bats – From the master plan it appears the two mature Oaks in the north-eastern corner of the site will require removal – these trees were considered to have low suitability for roosting bats. Should roosting bats be utilising these trees, unmitigated and uncompensated their felling would result in the permanent loss of the roost, as well as potentially resulting in harm/death of any resident bats, which constitutes an offence under wildlife legislation.

Although the habitat on site is not considered good quality for foraging or community bats, it is possible that bats could occasionally utilise the site for foraging and commuting; such usage could also be disturbed should a sensitive lighting scheme not be implemented. Increased levels of artificial light can cause disturbance and disruption to bats. Though several bat species take advantage of artificial lighting systems for foraging due to the insects lighting can attract, other species avoid them.

Many night-flying insects are attracted to light, especially those lamps that emit an ultra-violet component and particularly if it is a single light source in a dark area (BCT, 2009). Studies have shown that, although Noctule, Leisler's Bat, Serotine and Pipistrelle bats swarm around white mercury and metal halide streetlights, this behaviour is not true for all species. The slower-flying broad winged species such as Long-eared Bats, *Myotis* species and Barbastelle bats generally avoid streetlights (BCT, 2009). In addition it is also thought that insects are attracted to lit areas from further afield resulting in depletion of feeding sources elsewhere.

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.

Bright light may also reduce social flight activity and cause bats to move away from the lit area. Studies have shown that continuous lighting along roads creates barriers which some bat species cannot cross. For example, Daubenton's Bat *Myotis daubentonii* move their flight paths to avoid street lamps (BCT, 2009).

The construction phase of the development will require areas of the amenity grassland, scrub and trees to be cleared, which will result in a decrease in the site's value as a foraging resource for bats. The completed development will include areas of greenspace in excess of those currently present; therefore, the proposals will result in a long-term increase in foraging opportunities for bats on site.

Badgers – Due to the active nature of Badgers and the time that has elapsed since the initial site survey, there exists the potential for Badger setts to have been constructed. Should any setts be present within the works area or within 20m of the works area there exists the potential for direct impacts to the sett and any Badgers that may be present, which would constitute an offence under wildlife legislation. Further, there exists the potential for Badgers (and other wildlife) to become trapped in open excavations and pipework during the construction phase of the development should suitable preventative measures not be implemented.

Nesting Birds – Some of the scrub and trees on site will require removal under the proposals. In addition, the buildings may support nesting birds. Dependent upon the timing of clearance works and demolition, nesting birds and their nests/young/eggs could be directly adversely impacted if present, which would constitute an offence. The nesting bird season is considered to span March-August inclusive (Natural England, 2015). Should retained vegetation not be suitably protected during the construction phase there exists the potential for active nests to be damaged/destroyed/disturbed via accidental damage to vegetation, depending upon the timing of works. In addition, active nests may be damaged/destroyed/disturbed if demolition of the buildings takes place during nesting season.

5.0 ECOLOGICAL AVOIDANCE, MITIGATION, COMPENSATION AND ENHANCEMENT STRATEGY

5.1 Introduction

The following strategy is provided to reduce the ecological impact of all phases of the proposed development as far as possible, as well as ensuring the proposals result in overall positive outcomes for biodiversity as per national and local planning policy.

Please note, this strategy may require a detailed update following the completion of the recommended updating mammal survey should evidence of badgers be found.

Any updates to / deviations from this strategy must be undertaken by a suitably experienced Ecologist and agreed in writing with Havant Borough Council prior to implementation.

5.2 Updating / Additional Ecological Surveys

5.2.1 Updating Mammal Survey

Due to the potential for Badger setts to be constructed between the 2017 surveys and the commencement of construction works an updating Badger walkover survey will be undertaken by a suitably experienced Ecologist, a maximum of one month prior to works commencing. The walkover will cover all land within the site boundaries plus 30 metres (wherever possible) due to the potential for subterranean tunnels to extend up to 20m from a sett entrance.

Should any setts or potential setts be identified further survey will be required to determine the level of activity, species of use and potential for impacts to occur. If impacts to an active Badger sett cannot be avoided the sett will require closure – this must be undertaken under a suitable mitigation and where relevant compensation strategy informed by a suitably experienced Ecologist and under a suitable licence from Natural England. Works within the vicinity of the sett will not commence until such measures have been implemented to ensure compliance with legislation.

Due to the evidence that active Red Fox dens were on site, the updating mammal survey will also search for evidence Red Foxes. Should any active Red Fox dens be identified within/adjacent to the works area during the updating walkover survey, one-way gates will be installed and closely monitored for a period of 21 days by the Ecologist, after which the entrances will be permanently blocked. Dens will only be closed during the period July-December to avoid the maternity season where dependent cubs may be present within dens.

5.3 Avoidance and Mitigation

5.3.1 SRMS

The site lies within the vicinity of the Solent SPAs. In order to mitigate for the likely increases in recreational pressure upon this SPA, due to the high densities of wildfowl and waders for which the area is predominantly protected, 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, at the time of report issue, are calculated on a sliding scale as follows (for any net increase in residential dwellings which, for this development, is one):

- £337 for each 1 bedroom dwelling
- £487 for each 2 bedroom dwelling
- £637 for each 3 bedroom dwelling
- £749 for each 4 bedroom dwelling
- £880 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 SDMP, provides a suitable level of mitigation for the potential adverse impacts associated with the proposed scheme upon the Solent SPA.

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 of £75.

5.3.2 Vegetation Clearance

The following method of vegetation clearance will ensure no adverse impacts occur to nesting birds, as well as any other wildlife that may be present.

Please note, the following clearance works must not be undertaken until the completion of the updating mammal walkover surveys, as detailed in Section 5.2, has been completed to a suitable level. Should a Badger sett be identified, the following advice may require updating prior to implementation to ensure compliance with wildlife legislation.

Where management of grassland on site has continued regularly, this management regime will be continued at all times prior to and during the construction works to ensure the sward does not develop into a suitable structure to support wildlife.

Scrub vegetation and any grassland/ruderal vegetation that has developed into a taller height through lack of management will be removed in a staged fashion to passively encourage any wildlife present into surrounding retained boundary vegetation whilst protecting any wildlife present. An initial cut will be made to a minimum height of 20cm, followed by a second cut to ground level. Clearance will be undertaken using hand held

machinery by or under the supervision of a suitably experienced Ecologist, in a directional fashion towards boundary vegetation.

Timing will be as follows:

First cut: September - February to avoid the bird nesting season. Care will be taken not to disturb roots or deadwood if clearance is undertaken during the winter months to avoid impacts to hibernating wildlife.

Second cut: April/May (weather dependent), to coincide with the end of the hibernation season for small mammals/reptiles. Any required stump grinding can be undertaken April-September.

Should the first cut be required during the nesting bird season due to project deadlines, clearance must be preceded by a Phase II Nesting Bird Survey, undertaken by a suitably experienced Ecologist a maximum of 24 hours prior to clearance. Should any active nests be identified, they must be protected by a minimum of a three-metre buffer until the chicks have fledged and the nest has been deemed inactive by the Ecologist.

Upon completion of the above clearance strategy, all vegetation within the works area must be maintained via regular management at a maximum height of 8cm at all times until roots are removed to ensure it does not redevelop into habitat suitable to support protected species. If at any time redevelopment of any such habitat occurs, the above strategy must be repeated prior to works commencing in the area.

5.3.3 Tree & Scrub Protection

Protective fencing will safeguard all retained trees and scrub from direct impact and from severance and/or asphyxiation of the roots during construction works. Fences must be installed at the distance of the branch spread from the trunk (BSI, 2012) / at a distance of half the height of the tree, and be of chestnut paling, Heras fencing or similar. No vehicles will enter the protective ring fencing and no construction materials will be stored within their protective area. All fencing must be installed prior to any construction works being undertaken (including the arrival of machinery on site), and remain in place until all work is completed. Suitable signage must be installed along all protective fencing (see **Appendix 2**).

5.3.4 Spoil Pile Removal

Should any spoil piles be present on site from the demolition of the buildings, these must be removed between April-September to avoid the usual hibernation period for wildlife. During the hibernation period, wildlife is particularly vulnerable. Removal of spoil piles must be preceded by a check for mammal holes – if any holes are identified these must be suitably assessed by the Project Ecologist, with mitigation implemented where necessary, to ensure compliance with wildlife legislation.

5.3.5 Excavations

All excavations on site will be covered nightly and/or include a suitable escape ramp for the protection of wildlife such as Badgers, Foxes and Hedgehogs (a suitable escape route can be provided by wooden planks placed at a 45 degree angle or provision of a sloping end wall).

Any temporarily exposed open pipe systems will be suitably capped when not in use to prevent access by wildlife.

5.3.6 Roofing Underlining

In-line with Natural England (2015) guidance roofing felt should be utilised as apposed to Breathable Roof Membrane (BRM) for all roofing works as there is considerable evidence to suggest that BRM poses a threat to bats occupying loft voids due to entanglement of bats in the fibres (Natural England, 2015).

5.3.7 Toolbox Talk

Prior to commencing work, a site induction will be delivered by the site manager to all contractors detailing the requirements of the Ecological Avoidance, Mitigation, Compensation and Enhancement Strategy to ensure works comply in full with all relevant wildlife legislation and policy. Information detailing the strategy will also be provided on a poster in the site office.

5.3.8 Works Restrictions

In order to avoid any disturbance to bats, construction works will, as far as possible, be limited to daylight hours and will not be undertaken between 30 minutes prior to dusk through to dawn.

5.3.9 Lighting

A sensitive lighting scheme must be implemented through all phases of the development in compliance with the following best practice (Bat Conservation Trust, 2009):

- Use of low-pressure sodium or LED lighting instead of metal halide lamps;
- Lighting should be directed to where it is needed through careful design of the luminaire and by using accessories such as hoods, cowls, louvres and shields;
- Use of planting as a barrier as and where appropriate;
- Use of sensor-operated lighting wherever possible, with the timers restricted to the minimum possible;
- Installation of security lighting only where absolutely necessary.

Additional guidance is provided in *Guidance Notes for the Reduction of Obtrusive Light* (ILP, 2011), which provides a greater level of detail on how light spill can be reduced.

Lighting will in particular avoid the southern boundary where there are scattered trees and an off-site flowing water body, which are more suitable habitat for bats.

5.4 Compensation & Enhancement

5.4.1 Introduction

The following features will be included within the site to compensate for the loss of any ecological features, with other features detailed to enhance the overall ecological value of the site to ensure the proposals result in overall positive outcomes for biodiversity as per planning policy. See **Appendix 3** for a plan of ecological compensation and enhancement features.

5.4.2 Landscape Planting

The proposed development includes the retention of the majority of the site boundary vegetation, as well as new areas of public greenspace and private residential gardens. The final detailed landscape scheme will include the following elements:

Ornamental Planting

In line with the CIEEM guidance (2012) and to comply with national and local policy, any proposed ornamental planting will favour local, native species over non-natives wherever possible. Where possible species will comprise those that produce berries, fruit and nectar to provide feeding opportunities for a range of wildlife. Evening-scented species will enhance the site's potential to support foraging bats.

Trees & Scrub

Wherever possible, boundary trees and associated understory scrub will be retained. A landscape buffer will be included along the southern site boundary; this will reduce any potential light spill onto the tree belt, thereby reducing any disturbance to foraging or commuting bats.

Wherever existing trees require removal under the proposals they will be replaced within the landscape scheme. Replacement trees will comprise native species of local provenance, with species that produce berries, nuts and nectar favoured.

As per the current master plan, tree planting will also be undertaken within the private residential gardens. These will also comprise native species of local provenance, with species that produce berries, nuts and nectar favoured.

Suitable tree and shrub species can include Spindle, Elm, Elder, Wild Privet, Guelder-rose, Field maple, Crab Apple, Hazel, Honeysuckle, Dog-rose, Rowan and Holly.

Grassland

Where amenity grassland is proposed within communal areas, some of this should be allowed to develop into a longer, more structured sward via a reduced management regime. In particular, such planting will be implemented at the base of boundary vegetation and within the landscape buffer.

These areas will be seeded with a suitable, native meadow mix, such as Emorsgate EM2 Standard General Purpose Meadow Mixture¹, which includes a combination of grasses and wildflowers. Such seeding will increase the site's potential to support invertebrates, which will in turn provide foraging opportunities for a broad range of wildlife including breeding birds and bats. Where a longer sward is to be encouraged, this will be managed via an annual hay cut to a minimum height of 15cm in September, once the wildflowers have set seed, to maintain a tussocky structure and control vigorous grasses. All arisings will be raked and piled in designated areas adjacent to boundary vegetation to provide sheltering and hibernating opportunities for small mammals, reptiles and amphibians.

¹ <https://wildseed.co.uk/home>

5.4.3 Bird Boxes and Bricks

To compensate for the reduction in bird nesting habitat associated with the demolition of buildings and the removal of some vegetation, a number of bird boxes will be installed. A range of specifications will be included, as follows, to provide opportunities for a variety of species:

- 4 x Open Fronted Nest Boxes to provide suitable nesting habitat for species such as Robins, positioned at a height of 4-5 metres onto mature trees (**Figure 4**)
- 4 x Circled Fronted Nest Boxes to provide suitable nesting habitat for a range of garden and woodland species, such as Tits, positioned at a height of approximately 4-5 metres on the northern and eastern aspects of suitable boundary trees to reduce predation and exposure to extreme elements; (**Figure 5**)
- 6 x Schwegler 9A House Martin Nest Boxes, or similar, positioned at the eaves of new buildings on a sheltered aspect at least 4 metres above the ground, all together in a group to allow for the establishment of colonies; they must be positioned so as not to be above any windows or doorways, where they may cause disturbance due to droppings. (**Figure 6**)

In addition, 31 Swift bricks will be incorporated into the brickwork of the new buildings on site. The Ibstock 'Eco Home for Swifts' brick will be installed (**Figure 7**) as this is a discreet and attractive box. The brick will be installed on high walls in shaded areas out of direct sunlight and away from windows. The installation of such boxes has also been shown to be beneficial for House Sparrows (*Passer domesticus*) which are a nationally declining species.

Figure 4. Example of open fronted nest box (NHBS, 2019)



Figure 5. 1B Schwegler nest box, example of circle-fronted nest box (NHBS, 2019)



Figure 6. Schwegler 9A house martin nest box to be installed at eaves (NHBS, 2019)



Figure 7. Ibstock eco home for swifts that will be incorporated into the new buildings.



5.4.4 Bat Boxes

To provide roosting opportunities for bats on site, the following bat roost features will be installed:

- 33 x Ibstock Bat Brick C will be incorporated into the fabric of some of the new buildings (**Figure 8**). This feature does not allow access to bats into the internals of buildings, but provides roosting opportunities for a range of bat species known to be present on site and/or in the local area. The bat bricks should be located away from artificial light and facing vegetation;
- 5 x Schwegler 2FE Wall-mounted Bat Shelter will be installed on the exterior of new buildings (**Figure 9**). This feature provides summer shelter to several species of bats and is secured to the building with screws. It should be located away from artificial light facing a south or east aspect;
- 4 x Schwegler 2F General Purpose Bat Box, installed at a height of 4-6m on retained trees within the site boundaries (**Figure 10**). The boxes should face a variety of directions to provide differing thermal characteristics.

Please note once occupied, bat boxes are legally protected and can only be disturbed by a licensed Ecologist. New residents should be made aware of the legal protection status of bat roosts upon purchase of the properties containing these features.

Figure 8. Ibstock bat brick C (NHBS, 2019)



Figure 9. Schwegler 2FE Wall-mounted shelter (NHBS, 2020)



Figure 10. Schwegler 2F general purpose bat box (NHBS, 2019)



5.4.5 Log Pyramid

To provide additional opportunities for wildlife such as stag beetles and other invertebrates on site, one log pyramid will be constructed within the scattered trees along the southern boundary (**Figures 11 and 12**). PTES provides the following advice for their construction:

- Create a 'log pyramid', with logs standing on their end, partially buried (at least 50cm below the ground);
- Use wood from broadleaved trees;
- Logs should be at least 20cm in diameter;
- Site log pyramids in at least partial shade to prevent desiccation;
- Allow plants to grow over the log pyramid to increase water retention and provide shade.

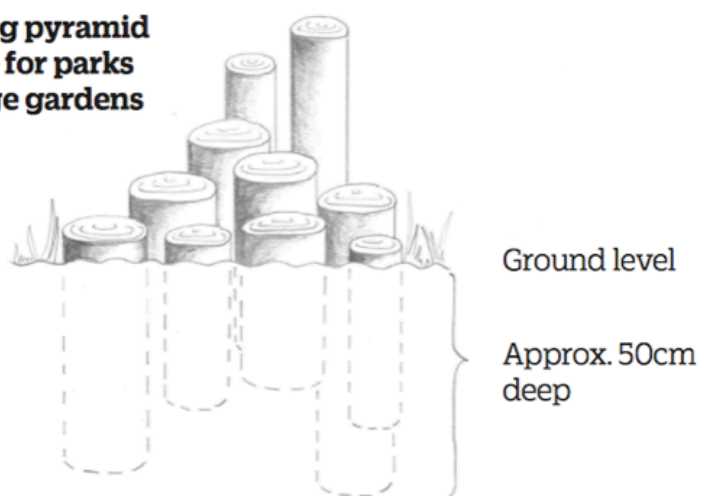
Such features also provide habitat opportunities for a range of other wildlife, such as reptiles, amphibians, small mammals and foraging birds and bats.

Figure 11. Log pyramid (PTES, 2018).



Figure 12. Log pyramid design (PTES, 2018).

**Large log pyramid
suitable for parks
and large gardens**



5.4.6 Log Piles

In addition to the log pyramid, two log piles will be installed on site. These may be constructed from the logs from felled trees on site. The logs will be stacked sideways on top of each, with the bottom layer partially buried approximately 5-10cm in the ground. The log pile will also be secured with wire, wrapped around and stapled to the logs. In this way, the log piles cannot be moved by the new residents or people on the site. Soil, leaves, and/or sticks will be added on top of the log pile to add an extra layer of insulation for any wildlife that may hibernate in the log piles.

The log piles will provide additional habitat opportunities for wildlife such as reptiles, amphibians and small mammals.

5.4.7 Habitat Connectivity

To enhance habitat connectivity both around the site and with the wider landscape, as well as providing enhanced on-site opportunities for wildlife, wherever possible hedgerows should be planted along plot boundaries. Species planted should as detailed in **Section 5.4.2**. 'Stepping stones' will also be included across the site via pockets of landscaping and the planting of scattered trees throughout the development.

Any new fencing installed will have at least 2 gaps present within the gravel boards of each fence line to allow for movement of Hedgehogs into the wider area. The gaps will be at least 13 cm high by 13 cm wide. Small signage will be installed (**Figure 13**) at these 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.

Figure 13. Example of Hedgehog Highway signage to be placed above fence gaps provided to allow movements between gardens (PTES, 2019).



6.0 REFERENCES

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7.0 APPENDICES

Appendix 1. Proposed development.



Appendix 2. Signage for protective fencing.



Appendix 3. Ecological enhancement plan showing approximate location of enhancement features to be installed on site.

