

ELM GROVE, HAYLING ISLAND, HAMPSHIRE

ECOLOGICAL IMPACT ASSESSMENT

Final Document

November 2019

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EclA • HRA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

ECOSA, Ten Hogs House, Manor Farm Offices, Flexford Road, North Baddesley, Hampshire, SO52 9DF
Tel: 02380 261065 Email: info@ecosa.co.uk Web: www.ecosa.co.uk

Registered Office: 3-4 Eastwood Court, Romsey, Hampshire, SO51 8JJ Registered in England No: 6129868
Ecological Survey & Assessment Limited is a Trinity Consultants Company



ECOSA Quality Assurance Record

This report has been produced in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing 2017 (CIEEM, 2017). The Ecological Impact Assessment and report has been prepared in line with the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018) and survey work has been undertaken in line with references within CIEEM's Source of Survey Guidance (CIEEM, 2017).

Description:	Ecological Impact Assessment
Produced For:	MH Architects
Issue:	Draft
Report Reference:	5019.F0
Date of Issue:	4 th November 2019
Date of Survey Works:	12 th September 2019
Author:	 Hugh Turner MSc GradCIEEM Ecologist
Checked by:	 Georgina Timmis BSc (Hons) MCIEEM Senior Ecologist
Reviewed by:	 Samantha Munslow BSc (Hons) MCIEEM CEnv Principal Ecologist

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ECOLOGICAL IMPACT ASSESSMENT

Table of Contents

EXECUTIVE SUMMARY.....	1
1.0 INTRODUCTION	2
1.1 Background.....	2
1.2 The Site	2
1.3 Aims and Scope of Report.....	2
1.4 Site Proposals.....	3
2.0 PLANNING POLICY CONTEXT	4
2.1 Introduction	4
2.2 Planning Policy	4
2.2.1 <i>National Policy</i>	4
2.2.2 <i>Local Policy</i>	5
3.0 METHODS.....	6
3.1 Introduction	6
3.2 Zone of Influence	6
3.3 Scoping.....	6
3.4 Desk Study	6
3.4.1 <i>Multi-Agency Geographic Information for the Countryside</i>	6
3.4.2 <i>Other Sources of Information</i>	7
3.5 Field Survey.....	7
3.5.1 <i>Phase 1 Habitat Survey</i>	7
3.5.2 <i>Protected and Notable Species Appraisal</i>	8
3.6 Field Survey Details.....	10
3.7 Field Survey Limitations	10
4.0 BASELINE ECOLOGICAL CONDITIONS.....	12
4.1 Introduction	12
4.2 Statutory Designated Sites	12
4.3 Habitats.....	12
4.3.1 <i>Desktop Study Results</i>	12
4.3.2 <i>Field Survey Results</i>	13
4.4 Notable and Legally Protected Species	14
4.4.1 <i>Bats</i>	14
4.4.2 <i>Otter</i>	18
4.4.3 <i>Badger</i>	18
4.4.4 <i>Hazel Dormouse</i>	18
4.4.5 <i>Water Vole</i>	19
4.4.6 <i>Birds</i>	19
4.4.7 <i>Reptiles</i>	19
4.4.8 <i>Great Crested Newt</i>	19
4.4.9 <i>Invertebrates</i>	20
4.4.10 <i>Other Relevant Species</i>	20
4.5 Summary of Key Ecological Features	20
5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ ENHANCEMENT MEASURES	21
5.1 Introduction	21
5.2 Scheme Design	21
5.3 Designated Sites	21

5.3.1	Potential Impacts and Effects	21
5.3.2	Mitigation and Compensation Measures	21
5.3.3	Enhancement.....	22
5.4	Habitats.....	22
5.4.1	Potential Impacts and Effects	22
5.4.2	Mitigation and Compensation Measures	22
5.4.3	Enhancement.....	22
5.5	Bats.....	22
5.5.1	Potential Impacts and Effects	22
5.5.2	Mitigation and Compensation Measures	23
5.5.3	Enhancement.....	23
5.6	Badger	23
5.6.1	Potential Impacts and Effects	23
5.6.2	Mitigation and Compensation Measures	23
5.6.3	Enhancement.....	23
5.7	Birds.....	24
5.7.1	Potential Impacts and Effects	24
5.7.2	Mitigation and Compensation Measures	24
5.7.3	Enhancement.....	24
5.8	Other Relevant Species.....	24
5.8.1	Potential Impacts and Effects	24
5.8.2	Mitigation and Compensation Measures	24
5.8.3	Enhancement.....	24
5.9	Residual and Cumulative Effects.....	25
6.0	CONCLUSIONS	26
6.1	Conclusion	26
6.2	Updating Site Survey	26
7.0	REFERENCES	27

Map 1 Site Location Plan

Appendix 1 Site Proposals Plan

Appendix 2 Sites Designated for Nature Conservation

Appendix 3 Relevant Legislation

Appendix 4 Appraisal Criteria for Bats

Appendix 5 Statutory Designated Sites within the Desktop Study Area

EXECUTIVE SUMMARY

Ecological Survey and Assessment Ltd (ECOSA) have been appointed by MH Architects to undertake an Ecological Impact Assessment to support a planning application for the redevelopment of Elm Grove, Hayling Island. The site is located in the centre of Hayling Island, Hampshire and comprises two industrial buildings with car park and storage area. The proposals entail redevelopment of the site for sheltered accommodation.

The main findings of the Ecological Impact Assessment are:

- The site is located approximately 0.58 kilometres to the west of the Chichester and Langstone Harbours Ramsar site and SPA, Solent Maritime SAC and Chichester Harbour SSSI;
- The site comprises two buildings, hardstanding, ephemeral vegetation, scattered trees and bare earth;
- Previous bat surveys undertaken at the site recorded bats as being likely absent from the site. The site has low suitability for foraging and commuting bats and suitability for foraging badger, breeding birds and European hedgehog;
- The identified impacts as a result of the proposals include recreational impacts to designated sites, loss of habitats, loss of potential bat roosting features, harm and/or disturbance of nesting birds and mammals becoming trapped in excavations;
- Mitigation and compensation measures include contributions to the Solent Strategy, planting of native species, provision of replacement bat roosting and bird nesting features and preventing mammals from becoming trapped during construction works;
- Enhancement measures to increase the biodiversity of the site include providing additional bat roosting and bird nesting features post development;
- Given the impacts identified, and the mitigation, compensation and enhancement measures proposed it is considered that the proposals accord with all relevant local and national planning policy; and
- Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by MH Architects to undertake an Ecological Impact Assessment to support a planning application for the redevelopment of Elm Grove, Hayling Island, Hampshire PO11 9EH (hereafter referred to as the site).

ECOSA were previously appointed by Planning Issues on behalf of their client Churchill Retirement Living Ltd to carry out a Phase 1 walkover survey and bat survey in 2015 (ECOSA, 2015).

1.2 The Site

The site is located in Hayling Island, Hampshire, centred on National Grid Reference (NGR) SZ 7226 9969 (**Map 1**).

Elm Grove is situated in the centre of Hayling Island, Hampshire. The site is approximately four kilometres east of the city of Portsmouth and seven kilometres south of the town of Havant. The site is located within a largely urban environment with a small supermarket and semi-detached housing to the south, Elm Grove road to the west, residential housing and playing fields to the north and an allotment site to the east.

The site itself comprises two commercial buildings together with associated car parking and a number of metal container storage units.

1.3 Aims and Scope of Report

The information within this report is based on a field survey and desktop study carried out during September and October 2019 and the bat survey carried out in September 2015. The report describes the habitats and species (hereafter referred to as ecological features) within the site's Zone of Influence (Paragraph 3.2), and provides a detailed assessment of potential ecological effects of the proposed development of the site. It identifies the need for any measures to avoid, mitigate or compensate for significant adverse effects¹ on ecological features and outlines enhancements to the site's ecology to be implemented as part of the development. The objectives of the assessment are:

- To provide baseline information on ecological features within the site's Zone of Influence;

¹ For the purposes of this assessment a 'significant' adverse effect is one which will have an adverse effect on the ecological feature at the site level or higher.

- To assess, characterise and quantify the effects on ecological features, including cumulative effects, and identify effects in the absence of any mitigation;
- To set out measures to avoid, mitigate and compensate for significant ecological effects in accordance with the 'mitigation hierarchy'²; and
- To outline opportunities for enhancement in order to achieve a net gain for biodiversity.

1.4 Site Proposals

The proposals entail the demolition of the existing buildings and subsequent construction of sheltered accommodation and retail unit with flats.

The Ecological Impact Assessment is based on the proposals plan produced by MH Architects, dated September 2019 (Job No. 190-30, Drawing No. 001 Revision P1) (**Appendix 1**).

Planning permission is being sought as soon as possible with construction proposed to commence soon after permission has been granted.

² In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and 'Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

2.0 PLANNING POLICY CONTEXT

2.1 Introduction

This section summarises the planning policy in relation to ecology and biodiversity within the Havant Borough Council administrative area. This information is then used to assess the compliance of the scheme in relation to relevant planning policy and where necessary used to inform the necessary mitigation, compensation and enhancement measures (see Section 5.0).

2.2 Planning Policy

2.2.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. The original document was published in 2012 with a revised NPPF published in February 2019. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 11 of the NPPF *"Plans and decisions should apply a presumption in favour of sustainable development"*. However, Paragraph 177 goes on to state that *"The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site."*

The NPPF sets out that development proposals should not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 170 states that the planning system should contribute to and enhance the natural environment by *"...minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures..."*.

A number of principles are set out in Paragraph 175, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Specific reference is also made to the protection of irreplaceable habitats³, including ancient woodland⁴. Where loss to irreplaceable

³ The NPPF defines irreplaceable habitats as *"Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen."*

⁴ Natural England defines ancient woodland as *"An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)."*

habitats occurs planning permission would normally be refused unless there are wholly exceptional reasons and an adequate compensation strategy is in place. Paragraph 175 also states *"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"*. Protection of sites proposed as SPAs, SACs and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states *"the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat"*. Paragraph 99 states *"it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the Proposed Project Development, is established before planning permission is granted"*.

2.2.2 Local Policy

Local planning policy within Havant Borough is provided by the Havant Borough Core Strategy March 2011 with two policies referring in part ecology and biodiversity:

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

This policy refers in part to biodiversity stating that planning permission will be granted for development that protects and where possible enhances the borough's statutory and non-statutory designated habitats and features of biological interest through appropriate adaptation and mitigation measures, has particular regard for nature conservation designations with international designations given the highest regard, protects wildlife habitats and corridors to prevent fragmentation and to allow species to adapt to climate change and acknowledges the emerging evidence from the Solent Disturbance and Mitigation Project and published recommendations and further research.

Policy DM9: Development in the Coastal Zone.

This policy refers to the protection of the coastal zone. The relevant part of the policy with regards to ecology states that permission will only be granted in the coastal zone where it can be demonstrated that there will be no harmful effects on nature conservation within the Chichester and Langstone Harbour SSSIs and SPA, Solent Maritime SAC and Ramsar site, or any SINC and Local Nature Reserves.

3.0 METHODS

3.1 Introduction

This section details the methods used during the field survey and desktop study carried out as part of the Ecological Impact Assessment. Any significant limitations to the assessment are also considered.

3.2 Zone of Influence

To define the total extent of the study area for this assessment (Zone of Influence⁵), the proposed scheme was reviewed to establish the spatial scale at which ecological features could be affected. The appropriate survey radii for the various elements of the assessment (i.e. desktop study and field survey) have been defined in the relevant sections below. These distances are determined based on the professional judgement of the ecologist leading the appraisal, taking into account the characteristics of the site subject to appraisal, its surroundings and the nature and scope of the proposals.

3.3 Scoping

Protected species considered within this appraisal are those species/species groups considered likely to be encountered given the geographical location and context of the site. These are discussed within the results section (Section 4.0) of the current report. Where such a species is unlikely to be present on site a justification for likely absence is provided. Species considered likely absent from the site are not then considered in the assessment of ecological effects and mitigation measures section (Section 5.0) of this report.

3.4 Desk Study

A full biological record centre desktop study was not undertaken as part of this assessment. This was not considered necessary given the limited scale of impacts and the nature of on-site and surrounding habitats.

3.4.1 Multi-Agency Geographic Information for the Countryside

The Multi-Agency Geographic Information for the Countryside (MAGIC) (DEFRA, 2019) database was reviewed on 16th October 2019 to establish the location of statutory designated sites located within the vicinity of the site. This included a search for all internationally and nationally designated sites such as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), Wetlands of International Importance (Ramsar sites), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs) within one kilometre of the site. Where appropriate, the desk study search area has been extended to take account of any

⁵ The Zone of Influence (Zoi), as defined by CIEEM, is the area over which ecological features may be subject to significant effects as a result of the proposed project and associated activities.

appropriate statutory designated sites which need consideration in terms of potential in-direct effects and which support particularly mobile species⁶. The Impact Risk Zones (IRZ) were also obtained from MAGIC, which are used to help guide and assess planning applications for likely effects on SSSIs.

Sites within two kilometres of the site boundary where European Protected Species Mitigation (EPSM) licences have been granted were reviewed. This information allows a greater understanding of the potential for European protected species to be present in the local area.

3.4.2 Other Sources of Information

Online mapping resources, at an appropriate scale, were used to identify the presence of habitats such as woodland blocks, ponds, watercourses and hedgerows, in the vicinity of the site. These habitats may offer resources and connectivity between the site and suitable habitat in the local area, which may be exploited by local species populations.

The presence of ponds or other waterbodies within a 500 metre radius of the site in particular are noted in relation to great crested newt. The 500 metre radius is a standardised search radius to assist in the assessment of the suitability of a site and its surrounding habitat to support this species, based on current Natural England guidance (English Nature, 2001) and the previous report and bat surveys carried out by ECOSA (ECOSA, 2015).

3.5 Field Survey

The field survey broadly followed standard Phase 1 habitat survey methodology (JNCC, 2010) and included a search for evidence of, and an assessment of the site's suitability to support, protected and notable species as recommended by CIEEM (CIEEM, 2017). The field survey covered all accessible areas of the site, including boundary features.

3.5.1 Phase 1 Habitat Survey

An assessment was made of all areas of vegetation within the site based on the standardised Phase 1 habitat survey methodology (JNCC, 2010)⁷. This involved identification of broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate. A list of characteristic plant species for each

⁶ Search areas for bat records are based upon information contained within Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London. Relevant distances for consideration of impacts on SPAs, SACs, Ramsar sites have been based on current published guidance available through web-based sources.

⁷ The standard JNCC Phase 1 habitat survey methodology involves the production of a Phase 1 map showing the location and extent of habitat types, however, given the limited size and complexity of the site surveyed a Phase 1 habitat map has not been produced in this instance.

vegetation type was compiled and any invasive species⁸ encountered as an incidental result of the survey recorded.

3.5.2 Protected and Notable Species Appraisal

A preliminary appraisal of the site's suitability to support legally protected and notable species was carried out. The following species/species groups were considered during the appraisal.

Bats

The survey conformed to current Bat Conservation Trust guidelines (Collins, 2016). An assessment was made of the suitability of buildings and trees on the site and immediately on the site boundary to support roosting bats based on the presence of Potential Roosting Features such as loose or missing roof tiles or lifted lead flashing for buildings and holes, cracks, splits, loose bark and ivy cladding for trees. A detailed external and internal inspection of accessible structures was undertaken to compile information on potential and actual bat entry/exit points; potential and actual bat roosting locations; any evidence of bats found.

An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The assessment of the suitability of the site to support roosting, foraging and commuting bats is based on a four-point scale as detailed in **Appendix 4**.

Otter

The otter appraisal was based on an assessment of the suitability of the habitat present within the site to support otter by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), proximity of the site to freshwater and potential important feeding resources (such as fisheries), presence of habitat features which could provide opportunities for resting places and/or holts (such as tunnels, hollows at the base of trees and presence of dense, undisturbed habitat). During the survey attention was paid to the presence of evidence such as spraints, feeding remains, footprints and slides.

Badger

The survey involved an assessment of the suitability of the site to support badger. Evidence of the species was recorded as an incidental result of the Phase 1 habitat survey and included locating badger setts, paths, and signs of territorial activity such as latrine sites.

⁸ Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). The survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

Hazel Dormouse

The appraisal for the suitability of the site to support hazel dormouse was based on an assessment of habitat features that may indicate that the species is present. This includes the presence of key food sources such as hazel and bramble, or plants used as nesting material such as honeysuckle and clematis. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features in determining the suitability of the site for hazel dormouse.

Water Vole

The water vole appraisal was based on an assessment of the suitability of the habitat present within the site to support water vole by reference to habitat type (such as rivers, streams, ditches, wetlands, reed beds, lakes, ponds and reservoirs), bank structure and the bank side vegetation. Water voles generally require sloping banks in which to burrow and well-developed bank side vegetation to provide shelter and food. During the survey attention was paid to the presence of burrows, latrines, feeding remains, trails and footprints.

Birds

The appraisal of breeding birds on the site was based on the suitability of habitat present to support nesting bird communities, the presence of bird species that may potentially nest within the available habitat and evidence of nesting such as old or currently active nests.

The assessment of wintering birds was based on an assessment of the suitability of the habitat on site to support important wintering bird species and populations. Particular attention was paid to the suitability for the site to support wintering farmland bird species, waders and wildfowl.

Reptiles

The reptile appraisal was based on an assessment of the suitability of the habitat present within the site to support a population of reptiles. Reptiles particularly favour scrub and rough grassland interfaces and the presence of these is a good indication that reptiles may be present on-site. In addition, reptiles may utilise features such as bare ground for basking, tussocky grassland for shelter and compost heaps and rubble piles for breeding and/or hibernating.

Great Crested Newt

The appraisal of the site to support great crested newt included establishing the presence of suitable aquatic habitats such as ponds, lakes or other waterbodies within or adjacent to the site and the presence of suitable terrestrial habitat. Waterbodies that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable

for this species. The suitability of on-site ponds and terrestrial habitat is considered in relation to the presence of ponds within the wider area, as identified within the desktop study (Paragraph 3.4.2), and their suitability to be used as a network.

Invertebrates

An assessment was made of the suitability of the site to support diverse communities of invertebrates. The assessment was based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, varied woodland structure, sunny woodland edges with a diverse flora, waterbodies and water courses and areas of free draining soil exposures. During the field survey there was no attempt made to identify species present as this is a more specialist area of ecological assessment reserved for targeted surveys.

Other Relevant Species

An assessment was made of site suitability for other notable species such as more rarely encountered protected species, Species of Principal Importance for the Conservation of diversity in England notified under Section 41 of the NERC Act 2006 and as listed in the England Biodiversity List, and Local Biodiversity Action Plan (LBAP) species⁹, specific to the study region.

Invasive Species

During the field survey any incidental records of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) were recorded. However, it should be considered that the survey was not specifically aimed at assessing the presence of these species and further specialist advice may need to be sought.

3.6 Field Survey Details

The field survey was carried out by Hugh Turner, Ecologist of ECOSA on 12th September 2019. The weather conditions were warm and cloudy with approximately 50-100% cloud cover, an ambient temperature of 21.5 °C and a light wind.

During the survey, the surveyor was equipped with a ladder, 10x40 binoculars, a high powered torch and a digital camera.

3.7 Field Survey Limitations

Ecological surveys are limited by factors which affect the presence of plants and animals such as the time of year, migration patterns and behaviour. The field survey has therefore not produced a complete list of plants and animals and in the absence of

⁹ LBAPs identify local priorities for biodiversity conservation by translating national targets for species into effective action at the local level and identifying targets for species important to the local area.

evidence of any particular species should not be taken as conclusive proof that the species is absent or that it will not occur in the future.

Online mapping resources provide an indication of habitat features present in the wider area, but do not provide a detailed assessment of habitat types.

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Introduction

This section details the results of the field survey and desktop study undertaken as part of the Ecological Impact Assessment for the site. It assesses the baseline ecological conditions of the site at the time the desktop study was completed and based on the ecological features recorded during the field survey carried out during September and October 2019.

4.2 Statutory Designated Sites

There are five statutory designated sites of nature conservation interest situated within one kilometre of the site boundary. These are:

- Chichester and Langstone Harbours (Ramsar) – Located 0.58 kilometres east of the site and designated for supporting notable intertidal and wetland habitats, wintering bird populations, invertebrate assemblages and higher plant species;
- Solent Maritime (SAC) – Located 0.58 kilometres east of the site and designated for supporting notable intertidal and wetland habitats, wintering bird populations, invertebrate assemblages and higher plant species;
- Chichester and Langstone Harbours (SPA) – Located 0.58 kilometres east of the site and designated for supporting notable intertidal and wetland habitats, wintering bird populations, invertebrate assemblages and higher plant species;
- Chichester Harbour (SSSI) – Located 0.58 kilometres east of the site and designated for supporting notable intertidal and wetland habitats, wintering bird populations, invertebrate assemblages and higher plant species; and
- Sinnah Common (SSSI) - Located 0.93 kilometres south of the site and designated for supporting notable grassland and dune habitats and assemblages of nationally scarce higher plant species.

Further details of the statutory designations listed above are provided in **Appendix 5**.

4.3 Habitats

4.3.1 Desktop Study Results

Consultation with the MAGIC database produced no records of notable habitats adjacent to or on site.

4.3.2 Field Survey Results

Habitats are described in general terms using standard Phase 1 habitat survey terminology. The main habitats recorded on site during the Phase 1 habitat survey were as follows:

Scattered Trees

A number of scattered trees are located along the southern boundary of the site (**Figure 1** and **Figure 2**). Species recorded include sycamore *Acer pseudoplatanus*, elder *Sambucus nigra* and horse chestnut *Aesculus hippocastanum*.



Figure 1: Sycamore and elder trees on site



Figure 2: Horse chestnut tree

Ephemeral/Short Perennial

Ephemeral vegetation is located around the edges of the hardstanding car park (**Figure 3**) and to the east of the site (**Figure 4**). Species recorded in this area include great plantain *Plantago major*, ribwort plantain *Plantago lanceolata*, Yorkshire fog *Holcus lanatus*, creeping thistle *Cirsium arvense*, smooth sow thistle *Sonchus oleraceus*, bristly ox tongue *Picris echioides*, buddleia *Buddleja david*, broad leaved dock *Rumex obtusifolius*, bramble *Rubus fruticosus* aggregate and dandelion *Taraxacum officinale* aggregate.



Figure 3: Ephemeral vegetation at the edge of car park



Figure 4: Ephemeral vegetation in bare area to east of the site

Treeline

A Leyland cypress *Cupressus x leylandii* treeline is located along the eastern boundary of the site **Figure 5**.



Figure 5: Leyland cypress treeline

Other Habitats

Other habitats on site include buildings and hardstanding. The buildings are described in greater detail in Paragraph 4.4.1.

Summary

The habitats on site are limited in extent and support a low diversity of common and widespread plant species. The habitats on site are considered to be of low ecological value.

4.4 Notable and Legally Protected Species

4.4.1 Bats

Desktop Study Results

Consultation with the MAGIC database produced one record of a granted EPSM licence with regards to bats within the desktop study area. The licence allows the destruction of a resting place for common pipistrelle *Pipistrellus pipistrellus* and soprano pipistrelle *Pipistrellus pygmaeus*. The licence was granted in 2017 and is located approximately one kilometre to the south-east of the site.

ECOSA previously carried out a bat emergence survey of the on-site buildings in September 2015 (ECOSA, 2015). During the survey, no bats were recorded emerging from the buildings and therefore roosting bats were considered as being likely absent from the buildings.

Building Assessment

The site contains two commercial buildings, a furniture store and a carpet store. No evidence of bats was identified in either building. Both buildings contain a small number of features with potential to support small numbers or individual roosting bats including under weather boarding and under tiles, however as there has been no significant changes in the condition of the buildings since the previous bat emergence/re-entry surveys undertaken in 2015, and due to the presence of nearby street lighting that may illuminate roosting features, it is considered unlikely that bats will have begun roosting within the buildings, therefore bats are considered likely absent from the site. The results of the building assessment are provided in **Table 1**.

Tree Assessment

The trees on site range in age from immature to semi-mature. The trees on site do not support any potential bat roosting features and are assessed as having negligible suitability to support tree roosting bats.

Foraging and Commuting Habitat

The trees and hedgerows in the site boundaries provide a small amount of medium quality foraging habitat for bats. The wider area is largely urban offering low quality foraging habitat, within the exception of the allotment gardens to the east of the site which are likely to support a diversity of invertebrates and provides a small area of moderate quality habitat. The site is considered to have low suitability to be used by foraging bats. The boundary hedgerows do not link potential roost sites with high quality foraging areas and are unlikely to be used as significant commuting routes for bats.

Table 1: Building Assessment – Summary of Features with Bat Roost Potential and Evidence of Bat Roost Activity

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Furniture Store	 Figure 6: Furniture Store at Elm Grove  Figure 7: Roof void present within Furniture Store  Figure 8: Small gap in soffit of building	Two storey commercial building (Figure 6) with rendered brick walls. One section (western end) of the roof is pitched and clad with slate tiles with wooden soffit boxes. The majority of the building is flat roofed or very shallow pitched roofed with bitumen felt and no roof void. Internally, the building contains one roof void (Figure 7). The void is well-sealed. The roof is timber framed and lined with bitumen roofing felt.	The internal roof void is well sealed with no visible access points. Externally the building is generally well sealed with a small number of features providing potential roosting opportunities for small groups or individual bats. These features include; a small gap under a slate tile on the southeast corner, a small cavity in the soffit box on the northeast corner and a small cavity in the brickwork on the northeast wall (Figure 8).	No evidence of roosting bats was recorded during the survey.	Low suitability however, bats are considered likely absent from the building

Surveyed Feature	Figure	Building Description	Description of Potential Bat Roost Features	Evidence of Bat Roost Activity and Location	Assessment of Suitability for Roosting Bats
Carpet Store	 Figure 9: Carpet Store building	Two storey commercial building (Figure 9) with rendered brick walls and wooden cladding. The building has multiple shallow pitched roofs with bitumen felt and no roof voids.	Externally the building is generally well sealed. Only one potential roost feature was identified during the survey, a small gap under the wooden cladding along the western aspect of the building.	No evidence of roosting bats was recorded during the survey.	Low suitability however, bats are considered likely absent from the building

4.4.2 Otter

Desktop Study Results

Consultation with the MAGIC database produced no records of granted EPSM licences with regards otter *Lutra lutra* within the desktop study area, however, this does not confirm the absence of the species in the local area.

Field Survey Results

The site is dominated by buildings and hardstanding and does not support suitable habitats to support otter and therefore, the species is not considered further in this report.

4.4.3 Badger

Field Survey Results

No evidence of badger was recorded on site during the survey. The site is dominated by buildings and hardstanding and do not support any opportunities for sett building. The ephemeral vegetation on site, while limited in extent, provides some foraging habitats for badger and the site has some connectivity to off-site habitats via allotments to the east of the site. Overall the site is assessed as having suitability for foraging badger.

4.4.4 Hazel Dormouse

Desktop Study Results

Consultation with the MAGIC database produced no records of granted EPSM licences with regards to hazel dormouse *Muscardinus avellanarius* within the desktop study area, however, this does not confirm the absence of the species in the local area.

Field Survey Results

The trees around the site boundary provide a low diversity of native species which provide low quality foraging and nesting habitat for hazel dormouse. The wider area contains areas of broadleaved woodland but there are no links between these areas of woodland and the site. The poor quality habitat on site is too limited in extent to support a viable population of dormice and therefore overall the site is considered to be unsuitable for hazel dormouse and therefore the species is not considered further in this report.

4.4.5 Water Vole

Field Survey Results

The site is dominated by buildings and hardstanding and does not support suitable habitats to support water vole *Arvicola amphibius* and therefore, the species is not considered further in this report.

4.4.6 Birds

Field Survey Results

During the survey, house martin *Delichon urbicum* nests were recorded on the northern elevation of the Furniture Store building. The scattered trees and buildings provide good nesting opportunities for breeding birds. The site is dominated by buildings and hardstanding and is therefore unsuitable for wintering birds.

4.4.7 Reptiles

Field Survey Results

The site predominantly comprises areas of hard standing and buildings which offer no suitable reptile habitat. The small amount of short ephemeral vegetation and the base of hedgerows provide a small area of poor quality habitat providing limited potential for reptiles with few features suitable for foraging and basking reptiles. The allotment gardens to the east of the site provide suitable reptile habitat with some connectivity to the site. Due to the very limited amount of suitable habitat on site, overall the habitat on site is assessed as being unsuitable for reptiles and therefore this species group is not considered further in this report.

4.4.8 Great Crested Newt

Desktop Study Results

Consultation with the MAGIC database produced no records of granted EPSM licences with regards to great crested newt *Triturus cristatus* within the desktop study area, however, this does not confirm the absence of the species in the local area.

A review of ordnance survey mapping and aerial photography identified a single pond within 500m of the site. This is a pond within arable land approximately 300 metres west of the site; this pond is separated from the site by two busy roads.

Field Survey Results

The hedgerows along the site boundary provide a small amount of suitable terrestrial newt habitat, with the majority of the site being unsuitable due to the expanse of hard standing, buildings and bare ground. Due to the very small amount of suitable terrestrial habitat on site and due to the distance from the nearest pond which has poor habitat

links to site, the site is assessed as being unsuitable for great crested newt and therefore the species is not considered further in this report.

4.4.9 Invertebrates

Field Survey Results

The site is likely to support a range of common and widespread invertebrate assemblages. While individuals of notable species may occur on site, it is considered unlikely that the habitats on site are important resources for large assemblages of notable or protected invertebrates. The habitat on site is unsuitable for protected or notable invertebrates and therefore this species group is not considered further in this report.

4.4.10 Other Relevant Species

Field Survey Results

The site is dominated by buildings and hardstanding and the ephemeral habitats on site are limited in extent and may provide some foraging or commuting opportunities for European hedgehog *Erinaceus europaeus*. The site has some connectivity to off-site habitats via allotments to the east of the site. Overall the site is assessed as having suitability for European hedgehog.

4.5 Summary of Key Ecological Features

The following features are those with greatest ecological value that lie within the site's Zone of Influence:

- The site is located approximately 0.58 kilometres to the west of the Chichester and Langstone Harbours Ramsar site and SPA, Solent Maritime SAC and Chichester Harbour SSSI and 0.93 kilometres to the north of Sinnah Common SSSI;
- The site has low suitability for roosting bats, however based on the previous surveys they are considered likely absent;
- The site has low suitability for foraging and commuting bats;
- The site has suitability for foraging badger;
- The site has suitability for breeding birds; and
- The site has suitability for European hedgehog.

5.0 ASSESSMENT OF ECOLOGICAL EFFECTS AND MITIGATION/COMPENSATION/ ENHANCEMENT MEASURES

5.1 Introduction

This section assesses the ecological effects of the proposed development scheme on the identified ecological features as identified in Section 4.0. Methods for addressing potential impacts and effects on ecological features have been approached in accordance with the mitigation hierarchy¹⁰ with avoidance of impacts prioritised where possible. Where significant adverse effects cannot be avoided other forms of mitigation are prioritised over compensation. Enhancement measures have been detailed, where relevant, in order to not only minimise the impacts on biodiversity but also to provide enhancement in accordance with Paragraph 170 of the NPPF (Paragraph 2.2.1). It is anticipated that mitigation, compensation and enhancement measures will be secured through the planning process.

5.2 Scheme Design

The proposed development entails the demolition of the existing buildings on site and subsequent construction of 39 units of sheltered accommodation with associated garden landscaping, new retail building and two residential flats. External lighting will be introduced as part of the proposals.

The potential ecological impacts and effects of these proposals, in the absence of mitigation, are described for each ecological feature below. For each ecological feature, measures to mitigate and/or compensate for significant effects are described.

5.3 Designated Sites

5.3.1 Potential Impacts and Effects

Given the distance of the site from the nearest designated sites, there are no direct impacts anticipated with regards to designated sites. The results will result in a net increase in residents, which will cause an increase in recreational pressure on nearby designated sites and lead to an increase in nitrogen discharge into the Solent.

5.3.2 Mitigation and Compensation Measures

Where a net gain in dwellings is proposed within the Solent Maritime SAC and the Chichester and Langstone Harbours Ramsar site and SPA buffer (a 5.6 kilometre buffer), in accordance with the Solent Recreation Mitigation Strategy, a contribution should be made towards off-site mitigation measures. The contribution required will be determined based on the number of bedrooms within the new sheltered

¹⁰ In accordance with CIEEM Ecological Impact Assessment guidance (CIEEM, 2018) a sequential process is adopted to address impacts on features of ecological interest, with 'Avoidance' prioritised at the top of the hierarchy and 'Compensation/Enhancement' at the bottom. This is often referred to as the 'mitigation hierarchy'.

accommodation development (Bird Aware Solent, 2017). If this financial contribution is secured, it is considered that the local authority will conclude that there will be no adverse impact on the integrity of the Solent Maritime SAC and the Chichester and Langstone Ramsar site and SPA.

To ensure there is not a net increase in nitrogen discharge into the Solent as a result of the proposals, a nitrogen neutrality strategy will be developed, detailing the measures to be undertaken, which may include changing off-site land use to leach nitrogen.

5.3.3 Enhancement

No enhancement measures are proposed with regards to designated sites.

5.4 Habitats

5.4.1 Potential Impacts and Effects

The proposals will result in the loss of approximately 0.1 hectares of ephemeral vegetation and one scattered tree. The remaining trees and the Leyland cypress tree line will be retained on site.

5.4.2 Mitigation and Compensation Measures

Retained trees should be left with a suitable buffer enforced by Heras-type fencing to prevent accidental damage to retained habitats during construction works.

New planting will comprise native species or plant species known to be beneficial for wildlife instead of cultivars. These may include hazel *Corylus avellana*, honeysuckle *Lonicera periclymenum*, holly *Ilex aquifolium* and guelder rose *Viburnum opulus*. New areas of grassland will comprise a locally appropriate native mix.

5.4.3 Enhancement

The proposed planting measures will compensate for habitat loss and result in a net gain in habitat diversity on site.

5.5 Bats

5.5.1 Potential Impacts and Effects

During the previous 2015 survey works it was assessed that bats are likely absent from the building, therefore there will be no direct impacts to bats as a result of the proposals. New external lighting may disturb foraging and commuting bats.

In England, bats and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, all bat species are protected

under the Conservation of Habitats and Species Regulations 2017. Refer to **Appendix 3** for details.

5.5.2 Mitigation and Compensation Measures

New external lighting will comprise hooded luminaires directed away from vegetation, particularly the boundary habitats and the off-site woodland to the north-west. Ideally the bulbs will be LED and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on wildlife. The new lighting will be task related, associated with specific entrance/exit points of the development. The lux level will be as low as possible to allow the task to be carried out safely and effectively. Guidance on task related lighting levels and mitigation options as described within the Bats and Artificial Lighting in the UK report will be followed (Institution of Lighting Professionals, Bat Conservation Trust, 2018).

5.5.3 Enhancement

As a measure of enhancement, will be installed two Build-in WoodStone Bat Boxes (or bat boxes of a similar design, will be incorporated into the new building to provide additional roosting opportunities post development.

New planting recommended in Paragraph 5.4.2 will provide new foraging and commuting habitats for bats.

5.6 Badger

5.6.1 Potential Impacts and Effects

Badger may become trapped in excavations during construction works. The proposals will result in the loss of badger foraging habitats.

Badger are protected from killing and injury, and their setts protected from damage and interference, under the Protection of Badgers Act 1992. Refer to **Appendix 3** for details.

5.6.2 Mitigation and Compensation Measures

A timber ramp should be placed in excavations left open overnight to allow trapped animals of their own accord.

New planting recommended in Paragraph 5.4.2 will replace lost badger foraging habitats.

5.6.3 Enhancement

No enhancement measures are proposed with regards to badger.

5.7 Birds

5.7.1 Potential Impacts and Effects

Nesting birds may be harmed and/or disturbed during demolition and vegetation clearance works if undertaken during the nesting bird season. The proposals will result in a loss of nesting bird habitats.

All birds, their nests, eggs and young are legally protected, with certain exceptions, under the Wildlife and Countryside Act 1981 (as amended). Refer to **Appendix 3** for details.

5.7.2 Mitigation and Compensation Measures

Demolition and vegetation clearance works should be undertaken outside the breeding bird season of March to August, inclusive, or if not possible, an ecologist should be present immediately prior to clearance to check vegetation. Active nests should be left with a suitable buffer until nesting ends.

Two House Martin Nests (or house martin nest boxes of a similar design) will be installed onto the new building to replace the lost house martin nests.

New planting recommended in Paragraph 5.4.2 will replace lost nesting bird habitats.

5.7.3 Enhancement

One Vivara Pro Seville 32mm WoodStone Nest Box (or bird nest boxes of a similar design) and one Vivara Pro Barcelona WoodStone Open Nest Box Nest Box (or bird nest boxes of a similar design) will be installed on suitable trees on site to provide additional nesting opportunities post development.

5.8 Other Relevant Species

5.8.1 Potential Impacts and Effects

European hedgehog may become trapped in excavations during construction works. The proposals will result in the loss of European hedgehog habitats.

5.8.2 Mitigation and Compensation Measures

A timber ramp should be placed in excavations left open overnight to allow trapped animals of their own accord.

New planting recommended in Paragraph 5.4.2 will replace lost European hedgehog foraging habitats.

5.8.3 Enhancement

No enhancement measures are proposed with regards to European hedgehog.

5.9 Residual and Cumulative Effects

Given the mitigation and compensation measures outlined above, no significant residual effects are anticipated on any of the species considered. Therefore, there will be no cumulative effects on local populations as a result of the development.

6.0 CONCLUSIONS

6.1 Conclusion

As there has been no material change to the buildings on site since the previous survey, and due to the presence of nearby street lighting, it is considered that roosting bats are still likely absent from the site. The site has suitability for foraging and commuting bats, foraging badger, breeding birds and European hedgehog. The site is also located within the Solent Maritime SAC and Chichester and Langstone Harbours Ramsar site and SPA buffer. Adverse impacts on these ecological features have been identified and appropriate mitigation measures proposed. Post-development, no residual or cumulative impacts are anticipated. The site will be enhanced for bats through the installation of additional bat roosting features and for breeding birds through the installation of additional nesting features, resulting in an overall net gain for biodiversity. As such it is considered that the proposals will accord with all relevant national and local planning policy in relation to ecology including Policy CS11 and DM9 of the Core Strategy and the NPPF (see Section 2.0).

6.2 Updating Site Survey

Given the mobility of animals and the potential for colonisation of the site over time, updating survey work may be required, particularly if development does not commence within 18 months of the date of the most recent relevant survey.

7.0 REFERENCES

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Map 1 Site Location Plan

ELM GROVE, HAYLING ISLAND, HAMPSHIRE

ECOLOGICAL IMPACT ASSESSMENT

Map 1 - Site Location Plan

Client: M H Architects

Date: September 2019

Status: Final

KEY

 Site Boundary



Scale at A4: 1:10,000

0 100 200 400 Metres



ECOSA

Ecological Survey & Assessment

A Trinity Consultants Company

ECOSA Ltd., Ten Hogs House, Manor Farm Offices,
Flexford Road, North Baddesley, Hampshire SO52 9DF
Telephone: 02380 261085 Email: info@ecosa.co.uk
Web: www.ecosa.co.uk

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Appendix 1 Site Proposals Plan

Client Approval					
X	A - Approved				
X	B - Approved with comments				
X	C - Do not use				
Rev.	Revision Note/Purpose of Issue	Drw By	Date	Chk By	Date



- A: Planting including shrubs, native species to encourage biodiversity.
- B: Private paths in light coloured paving.
- C: Block paving of varying lengths to main pathways and private entrances, material continues through communal ground floor entrance and lobby areas
- D: 1800 mm dark grey metal security gates to garden/ path entrances to suit Secured by design Guidance.
- E: External timber and brick clad bin stores
- F: Sheffield hoops for visitor cycles
- G: 1800mm Brick Wall

Sheltered Housing Development

Elm Grove, Hayling Island,
Hampshire
Hamlet Homes

Drawing title									
Site Location Plan									
-:-									
& Block Plan									
Drawn	Date	Checked	Date	Scale at A1					
NKS	Sept 19	CP	Sept 19	1:1250 & 1:500					
Job No.	Pro.	Org.	Zone	Level	Type	Role	No.	Rev.	
19-130	EGV	MHA	XX	00	DR	A	001	P1	
Purpose of Issue									
PRELIMINARY									

Ground Floor Bicentennial Building
Southern Gate 1Chichester
West Sussex PO19 8EZ

1: 01243 774748
e: admin@mharchitects.co.uk
www.mharchitects.co.uk

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Appendix 2 Sites Designated for Nature Conservation

Statutory Sites

Internationally Designated Sites - Ramsar Sites, Special Areas of Conservation and Special Protection Areas

Special Protection Areas (SPA) and Special Areas of Conservation (SAC) form a network of protected sites across the European Union called Natura 2000 sites. In the United Kingdom the primary legislative protection is afforded to these sites under the Conservation of Habitats and Species Regulations 2017 (as amended).

Ramsar sites are designated as wetlands of international importance which are afforded similar legislative protection to Natura 2000 sites.

SACs are sites which support internationally important habitats or internationally important assemblages or populations of species. SPAs are designated for supporting internationally important populations of birds listed in the annexes of the Birds Directive. SACs, SPAs and Ramsar sites are generally also designated as Sites of Special Scientific Interest.

Under Regulation 63 of the Conservation of Habitats and Species Regulations 2017 (as amended) there is a legal requirement that competent authorities, such as local planning authorities, need to consider whether plans or projects are likely to have a significant adverse effect on Natura 2000 sites or Ramsar sites, either alone, or in combination with other plans or projects. In the event that a likely significant effect cannot be ruled out, on the basis of objective information, then the competent authority must undertake an "Appropriate Assessment" to fully assess the plan or project against the site's conservation objectives. Unless certain defined derogation tests can be met, the competent authority may not authorise nor undertake any plan or project which adversely affects the integrity of a Natura 2000 site or Ramsar site.

Nationally Designated Sites – Sites of Special Scientific Interest and National Nature Reserves

Sites of Special Scientific Interest (SSSI) receive legal protection under the Wildlife and Countryside Act 1981 (as amended). Such sites are designated to protect specific areas of biological or geological interest of national importance. Such sites also generally receive strict protection through the planning system.

National Nature Reserves (NNR) are also usually designated as SSSIs and are specifically managed for their wildlife value. They receive legal protection through the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). As with SSSIs, these sites generally receive strict protection through the planning system.

Locally Designated Sites – Local Nature Reserves

Local Nature Reserves (LNR) are designated by local authorities under the National Park and Access to the Countryside Act 1949. These are generally designated not only for their local wildlife value but also for education, scientific and recreational purposes. These sites generally receive protection from development through the planning system.

Appendix 3 Relevant Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017. They are afforded full protection under Section 9(4) of the Act and Regulation 43 of the Regulations. These make it an offence to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
 - To impair its ability to survive, breed, or rear or nurture their young;
 - To impair its ability to hibernate or migrate;
 - To affect significantly the local distribution or abundance of that species;
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection; or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat *Rhinolophus ferrumequinum*;
- Lesser horseshoe bat *Rhinolophus hipposideros*;
- Bechstein's bat *Myotis bechsteinii*;
- Barbastelle *Barbastella barbastellus*; and
- Greater mouse-eared bat *Myotis myotis*.

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Badger

The Protection of Badgers Act 1992 consolidates previous legislation (including the Badgers Acts 1973 and 1991 Badgers (Further Protection) Act 1991). It makes it an offence to:

- Kill, injure or take a badger;
- Attempt to kill, injure or take a badger; or
- To damage or interfere with a sett.

The 1992 Act defines a badger sett as 'any structure or place which displays signs indicating current use by a badger'.

Breeding Birds

With certain exceptions, all wild birds, their nests and eggs are protected by Section 1 of the Wildlife and Countryside Act 1981 (as amended). Therefore, it is an offence, to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built; or
- Intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls. Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young; or
- Intentionally or recklessly disturb the dependent young of any such bird.

Species and Habitats of Principal Importance in England

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 41 (S41) of the Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The England Biodiversity List is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. There are currently 943 species of principal importance and 41 habitats of principal importance included on the England Biodiversity List.

Appendix 4 Appraisal Criteria for Bats

The criteria used to assess the suitability of roosting and foraging/commuting habitat for bats is based on industry guidelines and outlined in **Table 2**¹¹.

Table 2: Criteria used to Assess Suitability of Roosting and Foraging/Commuting Habitat for Bats

Suitability	Description of roosting habitats	Commuting and foraging habitats
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch or scrub.
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.

¹¹ Table adapted from (Collins, 2016)

Appendix 5 Statutory Designated Sites within the Desktop Study Area

Details of statutory designated sites within the desktop study area, as listed in Paragraph 4.2, are provided in **Table 3**.

Table 3: Statutory Designated Sites Located Within the Desktop Study Area

Designation	Name	Approximate Relative Location	Reason for Designation
Ramsar site	Chichester and Langstone Harbours	Approximately 0.58 kilometres to the east	The site is designated under Ramsar Criterion 1, 5 and 6. Criterion 1 – Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. Criterion 5 – Assemblages of international importance: 76480 waterfowl, count in winter (5 year peak mean 1998/99 – 2002/2003) Criterion 6 – species/populations occurring at levels of international importance. Qualifying species/populations (as identified at designation) Species with peak counts in spring/autumn: - Ringed plover <i>Charadrius hiaticula</i>; - Black-tailed godwit <i>Limosa limosa islandica</i>; and - Common redshank <i>Tringa totanus totanus</i>. Species with peak counts in winter: - Dark-bellied brent goose <i>Branta bernicla bernicla</i>; - Common shelduck <i>Tadorna tadorna</i>; - Grey plover <i>Pluvialis squatarola</i>; - Dunlin <i>Calidris alpina alpina</i>. Species/populations identified subsequent to designation for possible future consideration under criterion 6: Little tern <i>Sterna albifrons</i>.
SAC	Solent Maritime	Approximately 0.58 kilometres to the east	Annex I habitats that are a primary reason for selection of this site: - Estuaries; - Spartina swards (<i>Spartinion maritimae</i>); and - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>). Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site: - Sandbanks which are slightly covered by sea water all the time; - Mudflats and sandflats not covered by seawater at low tide; - Coastal lagoons; - Annual vegetation of drift lines; - Perennial vegetation of stony banks;

Table 3: Statutory Designated Sites Located Within the Desktop Study Area

Designation	Name	Approximate Relative Location	Reason for Designation
			- Salicornia and other annuals colonizing mud and sand; and - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes). Annex II species present as a qualifying feature, but not a primary reason for site selection: Desmoulin's whorl snail <i>Vertigo moulinsiana</i>.
SPA	Chichester and Langstone Harbours	Approximately 0.58 kilometres to the east	The site qualifies for supporting the following Annex I species: Breeding - Little tern, 100 pairs representing up to 4.2% of the breeding population in Great Britain; and - Sandwich tern <i>Sterna sandvicensis</i>, 158 pairs representing up to 1.1% of the breeding population in Great Britain. On passage - Little egret <i>Egretta garzetta</i>, 137 individuals representing up to 17.1% of the population in Great Britain. Over winter - Bar-tailed godwit <i>Limosa lapponica</i>, 1,692 individuals representing up to 3.2% of the wintering population in Great Britain; and - Little egret, 100 individuals representing up to 20.0% of the wintering population in Great Britain. This site also qualifies by supporting populations of European importance of the following migratory species: On passage - Ringed plover, 2,471 individuals representing up to 4.9% of the Europe/Northern Africa - wintering population. Over winter - Black-tailed godwit, 1,003 individuals representing up to 1.4% of the wintering Iceland - breeding population; - Dark-bellied brent goose, 17,119 individuals representing up to 5.7% of the wintering Western Siberia/Western Europe population; - Dunlin, 44,294 individuals representing up to 3.2% of the wintering Northern Siberia/Europe/Western Africa population; - Grey plover, 3,825 individuals representing up to 2.5% of the wintering Eastern Atlantic - wintering population; - Redshank <i>Tringa totanus</i>, 1,788 individuals representing up to 1.2% of the wintering Eastern Atlantic - wintering population; and - Ringed plover, 846 individuals representing up to 1.7% of the wintering

Table 3: Statutory Designated Sites Located Within the Desktop Study Area

Designation	Name	Approximate Relative Location	Reason for Designation
			Europe/Northern Africa - wintering population. The site qualifies by regularly supporting in excess of 20,000 individual waterfowl over winter.
SSSI	Chichester Harbour	Approximately 0.58 kilometres to the east	Chichester Harbour is a large estuarine basin in which at low water extensive mud and sandflats are exposed, drained by channels which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of habitats which have important plant communities. The extensive intertidal mudflats are the feeding grounds, at the relevant times of year for internationally important numbers of ringed plover, grey plover, redshank, black-tailed godwit, dunlin, sanderling <i>Calidris alba</i> , curlew <i>Numenius arquata</i> and greenshank <i>Tringa nebularia</i> (the latter two in autumn particularly). Bar-tailed godwit numbers are of European importance. Amongst the wildfowl, shelduck, teal <i>Anas crecca</i> and dark-bellied brent goose numbers are of international importance with 5% of the world population of the latter.
SSSI	Sinnah Common	Approximately 0.93 kilometres to the south	The site is notified for its coastal habitats including the following: pioneer shingle vegetation, maritime shingle grassland which includes dry acid grassland and lichen rich acid grassland, mobile dune, semi-fixed dune, dune heath and an associated small area of saltmarsh. The site is also notified for the chiding pink <i>Petrorhagia nauteuillii</i> an endangered plant which occurs at just two sites in Britain, and for its outstanding assemblage of nationally scarce plants including little robin <i>Geranium purpureum</i> , Nottingham catchfly <i>Silene nutans</i> , bulbous meadow-grass <i>Poa bulbosa</i> , bearded fescue <i>Vulpia fasciculata</i> subsp <i>ambigua</i> , dune fescue <i>Vulpia fasciculata</i> , suffocated clover <i>Trifolium suffocatum</i> , smooth cat's-ear <i>Hypochaeris glabra</i> , stiff saltmarsh-grass <i>Puccinella rupestris</i> , mossy stonecrop <i>Crassula tillaea</i> , toothed medick <i>Medicago polymorpha</i> and dotted sedge <i>Carex punctata</i> .