



ecosupport



Point View

Ecological Survey

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1.0 INTRODUCTION

1.1 Overview

Ecosupport Ltd. were commissioned by Mr & Mrs Brown to undertake a Preliminary Ecological Appraisal (PEA) of Point View, 10 Western Parade (also referred to as 'the site') on 28th November 2019. This report provides further ecological information about the site, particularly in relation to bats, requested as part of the submitted Planning Application (Ref: APP/19/00421).

NB: *Should the proposed development not be underway within 18 months of the date of survey, an updated walkover should be undertaken by a suitably experienced Ecologist to determine if any significant changes have occurred to the ecological value of the site, as per CIEEM (2019) guidance.*

This survey does not constitute a full site assessment for invasive species such as Japanese Knotweed. A search for the presence of Tree Preservation Orders (TPOs) on site has not been undertaken.

This survey takes no account of seasonal variation or fluctuations in the presence of any species that might take up residence following this report. Lack of signs of a particular species does not confirm its absence, merely that there was no indication of its presence at the time of survey.

1.2 Aims of Survey

A PEA is the first phase in identifying any ecological impacts that may arise as a result of the proposed development and determines whether or not (and which) Phase II Protected Species Surveys are required. The objectives of the survey were as follows:

- Identify and classify any priority habitats;
- Assess the ecological value of the site;
- Identify any signs of protected species and potential features that may support them (particularly in relation to roosting bats);
- Identify all relevant legislation and policy;
- Make recommendations for further survey work as necessary.

1.3 Site Description & Location

Point View is situated along 10 Western Parade, Emsworth (**Figure 1**). (Approximate central Ordnance Survey Grid Reference SU 74193 05375). The site comprises of the 'Point View' dwelling and an outbuilding to the rear, with associated parking and landscaping. The site is bound to the north, east and west by neighbouring dwellings and associated gardens. To the south, just beyond a gravel track is Chichester Harbour. The immediate surrounding landscape is dominated by built footprint, with a mixture of rural and urban creating the wider landscape. Patches of farmland with hedgerow networks are intercepted by residential areas and roads.

Figure 1. Location of Point View, within the context of the wider landscape. The red line illustrates the approximate site boundary (Google Maps, 2019).



1.4 Proposed Works

The submitted Planning Application (APP/19/00421) should be referred to for further details regarding the proposed development at this site. In summary, the works are understood to be as follows;

- To demolish the existing dwelling;
- To construct 1 three bed detached house, including balconies to the front and a single storey extension to the rear. It is understood that the outbuilding to the rear will be incorporated into the new development, with works limited to roofing works.

2.0 RELEVANT LEGISLATION & POLICY

One of the aims of this report is to demonstrate that the proposed works complies with relevant legislation and Planning Policy. This section details the following, with which the development would need to comply.

2.1 | Legislation

2.1.1 Overview of Legal Protection for Bats

All bat species, and their roosts, are afforded full legal protection in the UK, by a selection of legislation (both domestic and international). Under this collection of legislation (please see below), it is an offence to:

- Deliberately take, injure or kill a wild bat;
- Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats;
- Damage or destroy a bat roost or maternity site (even if bats are not occupying a roost at the time of such impact);
- Intentionally or recklessly obstruct access to a bat roost.

This interpretation is provided by the Bat Conservation Trust (2019).

2.1.2 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.

2.1.3 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 over 30 plants including Japanese Knotweed (*Fallopia japonica*), Giant Hogweed (*Heracleum mantegazzianum*) and Parrots Feather (*Myriophyllum aquaticum*).

2.1.4 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.

2.1.5 Natural Environment and Rural Communities Act (2006)

The Natural Environment and Rural Communities (NERC) Act 2006 requires that public bodies have due regard to the conservation of biodiversity. This means that Planning authorities must consider biodiversity when planning or undertaking activities. Section 41 of the Act lists species found in England which were identified as requiring action under the UK Biodiversity Action Plan and which continue to be regarded as conservation priorities under the *UK Post – 2010 Biodiversity Framework*.

2.2 Planning Policy

The development would seek to comply with relevant Planning Policy at a local, regional and national level.

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 reasons and a suitable compensation strategy exists; and

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

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

Havant Borough Core Strategy (2011)

Part of the 'Vision for Havant Borough in 2026' is to protect and enhance biodiversity. Similarly, policy 'CS11: Protecting and Enhancing the Special Environment and Heritage of Havant Borough' states that planning permission will only be granted when development protects and where possible enhances the borough's statutory and non-statutory designated habitats and features of biological interest. and features of biological interest and prevents the fragmentation of existing habitats.

The strategy states that protection and enhancement will be achieved by appropriate adaptation and mitigation measures. It also has particular regard for nature conservation designations with international designations given the highest regard and supports an ongoing programme of surveys of habitats and species and designations of SINCS.

3.0 METHODOLOGY

3.1 Desk Study

3.1.1 Designated Sites

A search utilising online resources was undertaken to establish the presence of any nearby designated sites.

3.2 Field Survey

3.2.1 Habitats

The PEA was carried out by Holly Maynard MRes, BSc (*Hons*) and Zenobia Summers BSc (*Hons*) of Ecosupport Ltd. on the 28th of November 2019. This incorporated a visual assessment of the site and the surrounding landscape, loosely following the methodology outlined within the Joint Nature Conservation Committees (JNCC) *Phase I habitat survey handbook* (2003). The habitats present were described, paying particular attention to their potential to support protected species.

3.2.2 Assessment of the Building to Support Roosting Bats

During the PEA, an assessment was made of the suitability of the main house to support roosting bats based on the presence of any Potential Roost Features (PRFs). This involved the use of 8 x 42 close focus binoculars and a high-powered torch (where required) for a more detailed inspection of any features. PRF's include, but are not limited to;

- The presence of free-hanging bats within voids/crevices;
- Potential access points;
- Cobweb free patches;
- Feeding remains e.g. moth wings;
- Grease marks from fur rubbing;
- Urine staining;
- Droppings;
- Birds' nests.

Externally, all verges, soffits, ridge tiles, roof tiles, fascias, lead flashing and cracks in walls (where applicable) were examined for potential access points into the building (where possible). Internally, inspections were made of the floors, walls, purlins, ceiling joists, roof timbers, insulation (where relevant) and any other cracks/crevices in the roof void.

The survey conformed to current best practice guidance as described in *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Collins, 2016).

In addition, the outbuilding to the rear was assessed for its suitability to support roosting bats, as per the methodology above.

3.3 Assessment Methodology

3.3.1 Introduction

The methodology for the assessment of the likely ecological effects of the proposed development is based on CIEEM's *Guidelines for Ecological Assessment in the UK* (CIEEM 2018). Although this

assessment does not constitute a formal Ecological/ Environmental Impact Assessment, the CIEEM guidelines provide a useful framework for assessing ecological impacts at any level.

3.3.2 *Valuation*

Features of ecological interest are valued on a geographic scale. Value is assigned on the basis of legal protection, national and local biodiversity policy and cultural and/or social significance.

3.4 Limitations

The buildings on site have been converted at roof level and thus the internal inspection was restricted to apex and eaves voids only. The apex void in the main house was inspected from the roof hatch due to no possible access into the void (water tank blocking access). The survey was considered to represent an accurate assessment of the site at the time of visit.

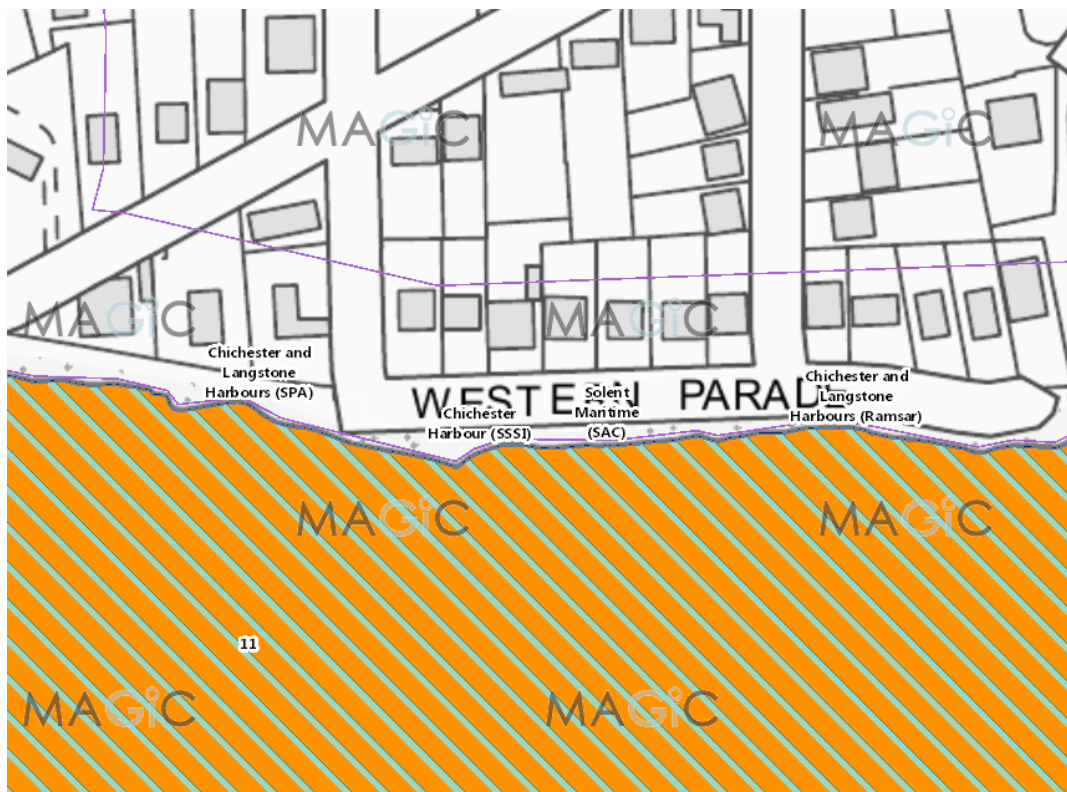
4.0 RESULTS & ECOLOGICAL EVALUATION

4.1 Designated Sites

4.1.1 Statutory

The site lies within the 'SSSI Impact Risk Zones' for Chichester Harbour and several designated sites are located within the vicinity of Point View as detailed below. Please refer to **Figure 2** for the site location in reference to nearby designated sites.

Figure 2. Nearby designated sites (Magic Maps, 2019).



■ Chichester and Langstone Harbours, Ramsar, SPA, SSSI

Chichester and Langstone Harbours, SSSI, Ramsar and Special Protection Area (SPA), is located approximately 22.8m south from the proposed development boundary. Chichester and Langstone Harbours are located on the south coast of England in Hampshire and West Sussex. They are large, sheltered estuarine basins comprising extensive sand- and mud-flats exposed at low tide. The two harbours are joined by a stretch of water that separates Hayling Island from the mainland. Tidal channels drain the basin and penetrate far inland. The mud-flats are rich in invertebrates and also support extensive beds of algae, especially *Enteromorpha* species, and eelgrasses (*Zostera* spp.). The basin contains a wide range of coastal habitats supporting important plant and animal communities.

The site is of particular significance for water birds, especially in migration periods and in winter. Over winter, the area regularly supports 93,142 individual waterfowl (5 year peak mean 1991/2 - 1995/6)

including: Wigeon (*Anas Penelope*), Bar-tailed Godwit (*Limosa lapponica*), Dark Bellied Brent Goose (*Branta bernicla*), Ringed Plover (*Charadrius hiaticula*), Grey Plover (*Pluvialis squatarola*), Dunlin (*Calidris alpina*), Black-tailed Godwit (*Limosa limosa*), Redshank (*Tringa tetanus*), Little Grebe (*Tachybaptus ruficollis*), Little Egret (*Egretta garzetta*), Shelduck (*Tadorna tadorna*), Curlew (*Numenius arquata*), Teal (*Anas crecca*), Pintail (*Anas acuta*), Shoveler (*Anas clypeata*), Red-breasted Merganser (*Mergus serrator*), Oystercatcher (*Haematopus ostralegus*), Lapwing (*Vanellus vanellus*), Knot (*Calidris canutus*), Sanderling (*Calidris alba*), Cormorant (*Phalacrocorax carbo*), Whimbrel (*Numenius phaeopus*).

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive; Little Tern (*Sterna albifrons*), Sandwich Tern (*Sterna sandvicensis*), Little Egret (*Egretta garzetta*), and Bar-tailed Godwit (*Limosa lapponica*).

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species; Ringed Plover (*Charadrius hiaticula*), Black-tailed Godwit (*Limosa limosa*), Dark Bellied Brent Goose (*Branta bernicla*), Dunlin (*Calidris alpina*), Grey Plover (*Pluvialis squatarola*), Redshank (*Tringa tetanus*),

▪ Solent Maritime, SAC

Solent Maritime, Special Area of Conservation (SAC), is also located approximately 22.8m south from the proposed development boundary. The Primary reason for the selection of the Solent Maritime as a SAC is the presence of the Annex I habitats (JNCC, 2015a):

- 1130 Estuaries
- 1320 Spartina swards (*Spartinion maritimae*)
- 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

This along with other qualifying features of Annex I habitats and Annex II species including;

- 1110 Sandbanks which are slightly covered by sea water all the time
- 1140 Mudflats and sandflats not covered by seawater at low tide
- 1150 Coastal lagoons
- 1210 Annual vegetation of drift lines
- 1220 Perennial vegetation of stony banks
- 1310 Salicornia and other annuals colonizing mud and sand
- 2120 "Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")"
- 1016 Desmoulin's whorl snail (*Vertigo moulinsiana*)

The solent encompasses a major estuarine system on the south coast of England, with four coastal plain estuaries (Yar, Medina, King's Quay Shore, Hamble) and four bar-built estuaries (Newtown Harbour, Beaulieu, Langstone Harbour, Chichester Harbour). Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting Eelgrass (*Zostera* spp.) and Green Algae, sand and shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity in the upper reaches of the estuaries to very sheltered almost fully marine muds in Chichester and Langstone Harbours. Unusual features include the presence of very rare sponges in

the Yar estuary and a sandy 'reef' of the polychaete *Sabellaria spinulosa* on the steep eastern side of the entrance to Chichester Harbour. In addition, the site is notified for being the only site for Cord-grass (*Spartina spp.*). The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England. This habitat supports species such as Sea-purslane (*Atriplex portulacoides*), common Sea-lavender (*Limonium vulgare*) and Thrift (*Armeria maritime*).

▪ **Warblington Meadow, SSSI**

Warblington Meadow, SSSI, is located approximately 1.1km west from the proposed development boundary. This reserve is an unimproved grazing marsh adjoining Chichester Harbour and is of special interest for its gradation from freshwater, baserich marsh to old reclaimed saltmarsh, and for its rich associated flora, with a total of 158 species of flowering plants having been recorded up to the time of notification.

▪ **Nitrate Vulnerable Zone (NVZ)**

The site is also located within a NVZ, as per the Environment Agency, 2017.

4.2 Protected / Notable Species

4.2.1 Roosting Bats

A Preliminary Roost Inspection (PRI) was undertaken on 28th November 2019, and the results of this assessment are summarised in **Table 1** below. Please note that the proposed demolition works refer to the main dwelling only, with works to the outbuilding being restricted to the roof and any other indirect impacts.

Table 1. Assessment of suitability of Potential Roosting Features (PRF's) on site for roosting bats (and nesting birds), and subsequent requirement for further ecological surveys are written in accordance with the Bat Conservation Trust 'Bat Surveys for Professional Ecologists' Good Practice Guidelines (3rd Edition) (2016).

Building & Figure	Description of PRF's / Evidence of Presence	Current suitability for roosting bats	Requirement for further survey effort
Main House – Point View is a detached bungalow, with a converted roof void (Figure 3 & 4). A single storey flat roofed extension is present to the west. Figure 3. Southern elevation of Point View. 	<u>External Assessment:</u> ▪ The roof of the main house has interlocking tiles, which are very well sealed on all elevations and there are no visible PRF's for bats. ▪ Dormer windows are present on both the northern and southern elevations of the house, however all features (e.g. lead flashing, hanging tiles) are well sealed and offer no suitable PRF's for bats. ▪ The extension to the west is flat roofed and does not provide suitable roosting habitat for bats. ▪ Wooden soffits are present on the northern elevation of the house. These are generally well sealed, with the exception of one piece of rotting soffit to the northwest. This feature was closely inspected using a high-powered torch and is deemed to be unsuitable for	Negligible suitability for void-dwelling or crevice-seeking bats	<u>No further surveys required</u>

Figure 4. Northern elevation of Point View.**Figure 5 & 6.** Voids present within the main house

roosting bats due to the nature of the feature (i.e. wet and in poor condition) and no bats / evidence of bats found.

- Wooden fascia boards are present on the southern elevation of the house; however, these are blocked by another wooden board and therefore do not offer any PRF's for bats.
- No evidence of nesting birds.

Internal Assessment:

- The roof of the main house has been converted, with only a small apex void and eaves voids present.
- The apex void is approximately 2m in length and 0.5m in height. The void has been lined with bitumastic felt and is insulated at ceiling level with rockwool insulation (**Figure 5**).
- The majority of eaves voids have been converted and are being used as storage (**Figure 6**). All accessible areas were thoroughly inspected using a torch.
- No internal cracks / crevices present for roosting bats.
- No visible access into any of the voids for bats / birds i.e. no daylight
- No evidence of roosting bats / nesting birds found.

Outbuilding – A small outbuilding is present to the rear of the site, and is currently being used as a studio and a garage (**Figure 7**).

Figure 7. Southern elevation of the outbuilding at Point View.



External Assessment:

- Similarly, to the main house, the roof of the outbuilding has well sealed interlocking roof tiles, with no PRF's for bats.
- Wooden soffits are present on the eastern and western elevations of the outbuilding, however there are no PRF's present.
- The gables are well sealed and do not offer any roosting habitat for bats.
- No evidence of nesting birds.

Internal Assessment:

- The roof of the outbuilding has been converted leaving a small apex void (approx. 0.5m in height).
- The void is lined behind the rafters with bitumastic felt and insulated with rockwool insulation.
- The void is moderately cobwebbed and is not considered to be suitable for void dwelling bats.
- No visible access into the void for bats / birds i.e. no daylight
- No evidence of roosting bats / nesting birds found.

Negligible suitability for void-dwelling or crevice-seeking bats

No further surveys required

4.2.2 *Commuting & Foraging Bats*

The site itself is generally considered to be of low suitability for commuting and foraging bats, with opportunities restricted to well-manicured lawn, recently planted trees and ornamental planting. The surrounding landscape however is likely to provide suitable foraging and commuting habitat for bats within the local vicinity due to the presence of other residential gardens (i.e. hedgerows and mature trees) and the coastline immediately to the south of the site.

4.2.3 *Other Species*

The site is generally considered to be of **low ecological value** for protected species due to the dominance of built footprint, ornamental planting and well-manicured lawn. Species such as Hedgehogs (*Erinaceus europaeus*) may occasionally use the site to commute to areas of high ecological value, however these would not be considered to be directly associated with the site itself. The site may provide suitable nesting habitat for common bird species such as House Sparrow (*Passer domesticus*), however no evidence of nesting birds was found during the PEA.

In addition, due to the sites close proximity to designated sites e.g. Chichester Harbour, it is likely that birds of high conservation value which are associated with this SPA may commute over the site during migration and the period of winter, but are considered highly unlikely to be associated with the site itself.

5.0 LIKELY ECOLOGICAL IMPACTS IN ABSENCE OF MITIGATION

5.1 Introduction

The CIEEM guidelines (CIEEM 2018) require that the potential impacts of the proposals should be considered in the absence of mitigation. In order for a significant adverse effect to occur, the feature being affected must be at least of local value. However, in some cases, features of less than local value may be protected by legislation and/or policy and these are also considered within the assessment.

5.2 Site Preparation and Demolition

5.2.1 Impacts to habitats

It is considered highly unlikely that the works will have an adverse impact to habitats of local importance due to the nature of the proposed works (i.e. the new dwelling is only proposed on a slightly bigger footprint than the existing dwelling) and the dominance of manicured gardens and ornamental planting, which is only considered to be of value at the **site** level. In the long term, the site will be enhanced due to proposed native planting across the site, as detailed overleaf in **Section 6.2.2**.

5.2.2 Impacts to wildlife

The site is generally considered to be of **low ecological value** for protected wildlife and therefore it is likely that there will be no adverse direct impact to protected wildlife associated with this proposal. Demolition and construction noise as a result of the proposed works may result in a (low) indirect impact (i.e. disturbance) to birds of high conservation value, which may utilise the surrounding landscape during the winter period.

6.0 FURTHER RECOMMENDATIONS & ECOLOGICAL ENHANCEMENTS

6.1 Proximity to Designated Sites

Nitrate – As the site lies within an NVZ, the nutrient contents of all discharges, including those to the main sewer need to be considered in order to protect the water quality in the surrounding landscape.

Construction Noise – At its closest point to proposals the designated sites lie approximately 22m from proposals. As a result, there is potential for impacts, such as noise disturbance, if processes such as pneumatic drilling, concrete breaking and piling were to take place however no such activities will take place between November – March.

6.2 Design Considerations & Ecological Enhancements

National Policies promote the inclusion of measures to enhance biodiversity within development proposals and enhancement of biodiversity should be an objective of all projects. The following design considerations and ecological enhancements have been recommended to support biodiversity in the long-term and offset any negative impacts to species that may occur locally;

6.2.1 Native Planting

The client is eager to provide native planting at Point View, including the planting of Silver Birch (*Betula pendula*) and Common Beech (*Fagus sylvatica*) within the northern garden. As a general enhancement any proposed new planting should aim for a 70:30 ratio in favour of native species over non-natives and ornamentals. Ideally fruit bearing trees, providing food sources for birds and small mammals, during the autumn and winter, and nest sites during the spring and summer, should be utilised. Species that should be considered include;

- Hawthorn (*Crataegus monogyna*),
- Alder Buckthorn (*Frangula alnus*),
- Blackthorn (*Prunus spinosa*),
- Wild Cherry (*Prunus avium*),
- Crab Apple (*Malus sylvestris*),
- Elder (*Sambucus nigra*),
- Rowan (*Sorbus aucuparia*).

Shrubs to be considered within the landscape planting include;

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

6.2.2 Sensitive Lighting for Foraging and Commuting Bats (in the wider landscape)

Although the site itself provides very low opportunities for commuting and foraging bats, any external lighting within the proposed new dwelling should be installed in consideration of local bat populations. A new document (*Guidance Note 08/18 Bats and Artificial Lighting in the UK*) has recently been produced via a collaboration between the Institute of Lighting Professionals (ILP) and the Bat Conservation Trust (BCT), which outlines the latest recommendations to minimise the impacts of increased artificial lighting on bats. The key recommendations within this document have been outlined below and will be implemented provided there are no conflicts with any legal limits of illumination (in which case a suitable compromise should be reached).

'Luminaires come in a myriad of different styles, applications and specifications which a lighting professional can help to select. The following should be considered when choosing luminaires:

- *All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used. LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.*
- *A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.*
- *Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).*
- *Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.*
- *The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered. However, this often comes at a cost of unacceptable glare, poor illumination efficiency, a high upward light component and poor facial recognition, and their use should only be as directed by the lighting professional.*
- *Column heights should be carefully considered to minimise light spill.*
- *Only luminaires with an upward light ratio of 0% and with good optical control should be used – See ILP Guidance for the Reduction of Obtrusive Light.*
- *Luminaires should always be mounted on the horizontal, i.e. no upward tilt.*
- *Any external security lighting should be set on motion-sensors and short (1min) timers.*
- *As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.*

6.2.3 Nesting Birds

It is recommended that a selection of bird boxes be erected on site to improve the biodiversity value of the site (at least three). There should be a mixture of open and circle fronted will attract an array of species. Also, those constructed of woodcrete are favourable, as they will last longer as opposed to wooden boxes. In addition, a variety of entrance holes sizes will be installed to suit a variety of species i.e.:

- **32mm entrance hole** will attract Great Tit (*Parus major*), Redstart (*Phoenicurus phoenicurus*), Nuthatch (*Sitta europaea*) and House Sparrow (*Passer domesticus*) as well as bats.

- **26mm entrance hole** suits Blue (*Cyanistes caeruleus*), Marsh (*Poecile palustris*) and Coal (*Periparus ater*) and possibly Wren (*Troglodytes troglodytes*).

7.0 CONCLUSION

It is considered highly unlikely any notable and/or protected species will be negatively impacted by proposals. It is considered that the site itself is of limited ecological value however it is within close proximity to Chichester and Langstone Harbours. Finally, additional ecological enhancements have been recommended to result in a net gain for biodiversity.

Please note, although it is considered highly unlikely, if signs of any protected species are identified during works, works must halt immediately and advice sought from a suitably experienced Ecologist to ensure works comply in full with relevant legislation and policy.

8.0 REFERENCES

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