



Preliminary Ecological Appraisal and Building inspection

**36a Wittering Road,
Hayling Island, Hampshire**

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Contents

1.0 INTRODUCTION	4
BACKGROUND	4
SITE CONTEXT AND STATUS	4
2.0 METHODOLOGY	11
DESKTOP STUDY	11
PRELIMINARY ECOLOGICAL APPRAISAL	11
BADGER SURVEY	11
TREE ASSESSMENT FOR BATS	11
BUILDING ASSESSMENT FOR BATS	13
HABITAT SUITABILITY FOR REPTILES	14
OTHER PROTECTED SPECIES	15
LIMITATIONS	15
3.0 RESULTS	16
DESKTOP STUDY	16
PHASE 1 HABITAT SURVEY	18
PROTECTED SPECIES	19
BATS	19
4.0 DISCUSSION	21
DESIGNATED SITES	21
HABITATS	24
PROTECTED SPECIES	24
SITE ENHANCEMENTS	31
5.0 IMPACT ASSESSMENT	32
6.0 CONCLUSIONS	35
7.0 REFERENCES	36
APPENDIX 1: PHASE 1 HABITAT MAP	37
APPENDIX 2: PHOTOS	38

LIABILITIES:

Whilst every effort has been made to guarantee the accuracy of this report, it should be noted that living animals and plants are capable of migration/establishing and whilst such species may not have been located during the survey duration, their presence may be found on a site at a later date.

This report provides a snap shot of the species that were present at the time of the survey only and does not consider seasonal variation. Furthermore, where access is limited or the site supports habitats which are densely vegetated only dominant species may be recorded.

The recommendations contained within this document are based on a reasonable timeframe between the completion of the survey and the commencement of any works. If there is any delay between the commencement of works that may conflict with timeframes laid out within this document, or have the potential to allow the ingress of protected species, a suitably qualified ecologist should be consulted.

It is the duty of care of the landowner/developer to act responsibly and comply with current environmental legislation if protected species are suspected or found prior to or during works.

1.0 Introduction

Background

- 1.1 The Ecology Partnership was commissioned by Yeates Design LLP to undertake a preliminary ecological appraisal (PEA) and building inspection of land at 36a Wittering Road, Hayling Island, Hampshire.
- 1.2 This report presents the results of The Ecology Partnership's surveys in and around the site, which aims specifically to assess the site's potential to support protected species and protected habitats that may be affected by the proposed development. Potential mitigation measures and recommendations for the site are included within this report.
- 1.3 Section 2 of this report sets out the methodologies of the Ecology Partnership's surveys. In section 3, the results of the surveys are presented. Discussions and implications for development are found in section 4, including general site enhancements. Conclusions drawn from the report are presented in section 5.

Site Context and Status

- 1.4 The site is situated on the eastern coast of Hayling Island, on the southern coast east of Portsmouth (SZ 74752 98908). The site is situated on the coast, on the edge of the Chichester and Langstone Harbour SPA and Ramsar, Chichester Harbour SSSI and Solent Maritime SAC. Residential housing dominates land to the south, with the marina to the north and west, and the designated sites to the east.
- 1.5 The aerial photograph below (Figure 1) shows the site and its immediate surroundings. The red line depicts the approximate site boundary and survey area.



Figure 1: Approximate location of the red line boundary

Description of Proposed Development

- 1.6 The proposals involve the demolition of the house and the construction of a new dwelling on a similar footprint within the redline boundary.

Planning Policies

- 1.7 National and local planning policies may have an effect on the proposed development. The following paragraphs identify relevant planning policies and discuss these in the context of the site.
- 1.8 Under the Natural Environment and Rural Communities (NERC) Act (2006), *“Every public authority must, in exercising its functions, have regard, so far as is consistent with the proper*

exercise of those functions, to the purpose of conserving biodiversity". In order to comply with this 'Biodiversity Duty', planning decisions must ensure that they adequately consider the potential ecological impacts of a proposed development.

- 1.9 In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principle importance for conserving biodiversity. These were known as BAP habitats and species. The UK BAP lists of priority species and habitats remain an important and valuable reference certainly at county levels. However, the UK Post 2010 Biodiversity Framework (published 2012) has succeeded BAP. It was produced by JNCC and Defra, on behalf of the Four Countries' Biodiversity Group (4CBG), through which the environment departments of all four governments in the UK work together to achieve the 'Aichi Biodiversity Targets' and the aims of the EU biodiversity strategy.
- 1.10 National policy guidance is provided by National Planning Policy Framework (NPPF), which sets out the Government's planning policies for England and how they should be applied. Section 15 of the document is entitled 'Conserving and Enhancing the Natural Environment'. This section highlights the following:

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.

- 1.11 The site falls under the jurisdiction of Havant Borough Council. The main policies drawn from the Core Strategy (adopted March 2011) which are relevant to the site, are indicated below:

DM8 Conservation, Protection and Enhancement of Existing Natural Features

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

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

DM9 Development in the Coastal Zone

Planning Permission will only be granted for development in the coastal zone which addresses all of the relevant criteria as set out below as shown on the Proposals Map:

- 1. Has no harmful effects on nature conservation within the Chichester and Langstone Harbour SSSIs and SPA, Solent Maritime SAC and Ramsar site, or any SINCs and Local Nature Reserves.*
- 2. Maintains and enhances the appearance and distinctiveness of existing settlements and landmarks along the coast.*

- 3. Contributes positively to the landscape and has regard to best practice on the design of new buildings in coastal locations.*
- 4. Upgrades existing footpaths and ensures that public access is retained and provided to connect existing paths along the waterfront where appropriate.*
- 5. Would result in improvements to or redistribution of moorings, marine berths or launch on demand facilities (dry berths) in the harbours.*
- 6. Would not be detrimental to infrastructure for, and quality of, water-based recreation, or be detrimental to the safety of navigation.*
- 7. Provides recreational opportunities that do not adversely affect the character and appearance of the coast.*

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

Planning permission will be granted for development that:

- 1. Ensures the key landscape and built form principles set out in the Havant Borough Townscape, Landscape and Seascape Character Assessment are protected and where possible enhanced by partnership working with developers, groups and the wider community.*
- 2. Protects and where possible enhances the borough's statutory and non-statutory designated landscape, habitats and features of biological, hydrological or geological interest. Protection and enhancement will be achieved by appropriate adaptation and mitigation measures including wardening, education and information and the creation of new habitats, water bodies/courses planting of new trees and woodland.*
- 3. Has particular regard to the following hierarchy of nature conservation designations within the borough (as identified on the Proposals Map):*
 - (i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar [International].*
 - (ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves [National].*
 - (iii) Sites of Importance for Nature Conservation (SINC), Local Nature Reserves (LNR), other Ancient Woodland not identified in (ii) above [Local].*
- 4. Protects and where appropriate enhances the borough's statutory and nonstatutory heritage designations by appropriately managing development in or adjacent to conservation areas, listed*

buildings, scheduled ancient monuments, historic parks and gardens, archaeological sites, buildings of local historic or architectural interest.

5. Supports an ongoing programme of survey of habitats and species and designation of Sites of Importance for Nature Conservation.

6. Incorporates partnership working with conservation organisations to improve public understanding of biodiversity and to manage public access to designated sites, particularly on the coast, to reduce harm to nature conservation interests.

7. Incorporates partnership working with landowners and developers to ensure land management practices restore, enhance and where appropriate create new valued landscapes, habitats and their soil structure, particularly the ancient woodland remnants of the Forest of Bere and coastal salt marsh.

8. Protects wildlife habitats and wildlife corridors to prevent the fragmentation of existing habitats and to allow species, for example Brent Geese, to respond to the impacts of climate change by making provision for habitat adaptation e.g. coastal managed realignment and species migration.

9. Maintains undeveloped gaps between the settlements of Emsworth/Havant; Havant/Waterlooville; Havant/Portsmouth; Emsworth/Westbourne and Leigh Park/Rowlands Castle as shown on the Proposals Map.

10. Protects the best and most versatile agricultural land that has the greatest potential for local food security.

11. Responds to the emerging evidence from the Solent Disturbance and Mitigation Project, the published recommendations, and future related research.

Policy CS13 Green Infrastructure

Development will be permitted that:

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

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

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

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

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

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

Policy DM23 Sites for Brent Geese and Waders

Planning permission will be granted for developments that avoid important sites for Brent Geese and / or waders of the statutory designated areas, identified on the policies maps.

Where this cannot be avoided, development proposals on or adjacent to an important Brent Goose and/or wader site outside the statutory designated areas will need to demonstrate levels of impact, alone and in combination with other proposals subject to the tests of the Habitats Regulations. Where a negative impact upon a site cannot be avoided or satisfactorily mitigated, and the tests of the Habitats Regulations are met as necessary, replacement feeding/roosting habitat, on a no net loss basis, will be sought.

Where a negative impact on an important site cannot be avoided or mitigated and replacement feeding/roosting habitat is not or cannot be provided on a no net loss basis, the proposals will be refused.

Planning permission will be granted for development on or adjacent to uncertain sites for Brent Geese and / or waders outside of the statutory designated areas, where appropriate surveys are undertaken and it is determined that the site has no importance.

- 1.12 The site was surveyed to assess its ecological value and to ensure compliance with national and local plan policies. The report has been produced with reference to current guidelines for preliminary ecological appraisal (CIEEM 2013) and in accordance with BS 42020:2013 Biodiversity – Code of Practice for Planning and Development.

2.0 Methodology

Desktop Study

- 2.1 A desktop study search was completed using an internet-based mapping service (www.magic.gov.uk) for statutory designated sites and an internet-based aerial mapping service (maps.google.co.uk) was used to understand the habitats present in and around the survey area and habitat linkages and features (ponds, woodlands etc.) within the wider landscape.

Preliminary Ecological Appraisal

- 2.2 An extended preliminary ecological appraisal was undertaken on 23rd August 2018 by ecologists Emma Bagguley BSc (Hons) MSc MCIEEM and Jack Hargreaves BSc (Hons) GradCIEEM. The surveyors identified the habitats present following the standard 'Phase 1 habitat survey' auditing method developed by the Joint Nature Conservancy Council (JNCC). The site was surveyed on foot and the existing habitats and land uses were recorded on an appropriately scaled map (JNCC 2010). In addition, the dominant plant species in each habitat were recorded, as was any evidence of protected species.

Badger Survey

- 2.3 A badger survey was undertaken at the site to assess if badgers were using the area and if any setts were located on the site and 30m away from the site that might constrain development. The evaluation of badger activity was based on methodology developed for the National Survey of Badgers (Creswell *et al.* 1990) and includes searching for badger field signs such as setts, badger pathways, tracks (pawprints), dung piles with latrines, badger hairs and feeding signs such as snuffle holes.

Tree Assessment for Bats

- 2.4 The trees on site were assessed for their potential to support roosting bats. Bats can use trees to rest, give birth, raise young and/or hibernate. The trees were assessed visually for

evidence of bats as well as for features that increase the likelihood of roosting bats, such as the following:

- Woodpecker holes, natural cracks and rot holes in trunks and branches;
- Frost cracks;
- Trunk and branch splits;
- Hollow sections of trunk and branches;
- Loose bark;
- Cavities beneath old root buttresses and coppice stools;
- Dense epicormic growth;
- Dense ivy cover.

2.5 Veteran trees typically exhibit many of these features and should usually be regarded as sites with clear potential, but any tree possessing one or more such feature, may host bats. Any tree species can be suitable but oak and beech often seem to be the preferred options. However, bats rarely restrict themselves to one tree. They change their roost sites frequently, sometimes every two to three days, looking for small differences in temperature and humidity.

2.6 Roosts of bats in trees may be identified from the following field signs:

- Black stains beneath cracks, splits and other features where bat droppings have fallen;
- Dark marks at entrance points where bats have rubbed against the wood and left natural body oils;
- Feeding remains beneath roosts, such as insect wings;
- Chattering of bats;
- Bat droppings under access points;
- Scratch marks around a feature (cavity or split) caused by bat claws;
- Urine stains below the entrance or end of split;
- Large roosts or regularly used sites may produce an odour;
- Flies around the entrance, attracted by the smell of guano.

2.7 Trees scheduled for arboricultural work should also be assessed, and may be categorised to relate the value of their features to recommended actions (Table 1). This approach

allows trees to be graded according to their potential to support bat roosts. Trees may be assessed as having the potential to support bats (from an individual to a larger roost) even if no bats have been found.

Table 1: Protocol for visual inspection of trees to assess their value to bats - taken from Table 4.1 within the 'Bat Surveys for Professional Ecologists: Good Practice Guidelines, 3rd edition' (Bat Conservation Trust 2016)

Suitability	Roosting habitat description
Negligible	Negligible habitat features on-site likely to be used by roosting bats.
Low	A tree of sufficient size and age to contain potential roosting features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A 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.
High	A 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.

Building Assessment for Bats

2.8 Bat building assessments were undertaken on the same day as the preliminary ecological appraisal survey. The surveyors undertook an internal and external examination of the buildings including all accessible roof voids. Buildings which are considered to have a higher potential to support roosting bats would include the following:

- Agricultural buildings (e.g. farmhouses, barns and out buildings) of traditional brick or stone construction and/or with exposed beams;
- Buildings with weather boarding and/or hanging tiles that are within 200m of woodland and/or water;
- Pre 1960s detached buildings and structures within 200m of woodland and/or water;
- Pre 1914 buildings within 400m of woodland and/or water;
- Pre 1914 buildings with gable ends or slate roofs regardless of location;
- Buildings which are located within or immediately adjacent to woodland and/or immediately adjacent to water;
- Dutch barns or livestock buildings with a single skin roof and board and gap or Yorkshire boarding if, following a preliminary roost assessment the site appear to be particularly suited to bats.

- 2.9 The surveyor assessed the buildings visually and searched for evidence such as:
- Staining beneath or around a hole caused by natural oils in bat fur.
 - Bat droppings beneath a hole, roost or resting area.
 - Bat droppings and/or insect remains beneath a feeding area.
 - Audible squeaking from within a hole.
 - Insects (especially flies) around a hole.
 - Dead bats.
- 2.10 The surveyors undertook an internal and external examination of the building for signs of barn owl activity. The surveyors visually inspected the building for potential barn owl nesting sites and searched for evidence of use by barn owls such as:
- Presence of adult feathers and downy juvenile feathers.
 - Regurgitated undigested pellets below nest site locations. These are usually darker, larger and more compact than other owl pellets and contain most of the prey's skeleton.
 - White splashing, which arises from squirted faeces.

Habitat Suitability for Reptiles

- 2.11 Habitat surveys were carried out to assess the potential of the site to hold populations of reptile species. This involved looking for the presence of factors that would increase the suitability of the site for reptiles such as:
- Scrub and grassland (long sward) mosaic across the site;
 - Features that can be potential hibernation sites for common reptiles such as log piles;
 - Grass tussocks within the grassland that can act as shelter and burrowing sites;
 - Water bodies or damp places on site (grass snakes);
 - Compost heaps or decaying vegetation (slow worms);
 - Features that can act as refugia on the ground such as disused roofing felt.

Other Protected Species

2.12 The site was also inspected for indications of the presence of other protected species, as follows:

- Relevant habitat for dormice such as dense deciduous woodland, coppice and thick shrubbery
- Ponds and associated habitat suitable to support great crested newts
- The presence of ditches for water voles
- The presence of fresh water stream/rivers for otters
- Suitable nesting places for birds
- Other potential protected species

Limitations

2.13 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no single investigation could ensure the complete characterisation and prediction of the natural environment. The site was visited over the period of one site visit, as such seasonal variations cannot be observed and potentially only a selection of all species that potentially occur within the site have been recorded. Therefore, the survey provides a general assessment of potential nature conservation value of the site and does not include a definitive plant species list.

2.14 The protected species assessment provides a preliminary view of the likelihood of protected species occurring on site, based on the suitability of the habitat and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group. The assessment is only valid for the time when the survey was carried out. Additional surveys may be recommended if, on the basis of this assessment, it is considered reasonably likely that protected species may be present.

3.0 Results

Desktop Study

- 3.1 The site does not fall within any nationally or internationally designated sites. Statutory designated sites Chichester and Langstone Harbour SPA and Ramsar, Solent Maritime SAC and Chichester Harbour SSSI all lie on the eastern boundary of the site. See figure 2 below for the location of the site in relation to the designated sites. Pagham Harbour SPA, Ramsar and SSSI is located over 10.5km to the east of the site.

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Figure 2: The redline boundary in relation to the Chichester and Langstone Harbour SPA, Ramsar, SSSI and Solent Maritime SAC

- 3.2 As part of the designated sites, the site lies adjacent to priority habitat 'Mudflats'. Intertidal substrates are also depicted in Figure 3 – sand, mud and gravel. Coastal Saltmarsh is also a priority habitat and is located 216m southeast. See figure 3 for the location of the red line boundary in relation to priority habitats within the local landscape.

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Figure 3: Priority habitats within the local landscape. Brown indicates mudflats and green shows coastal saltmarsh. Intertidal habitats sand, mud and gravel are also shown.

- 3.3 The adjacent SPA 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: 100 pairs representing up to 4.2% of the breeding population in Great Britain; and Sandwich Tern: 158 pairs representing up to 1.1% of the breeding population in Great Britain (1998), during the breeding season. Over winter; Bar-tailed Godwit (*Limosa lapponica*), 1,692 individuals representing up to 3.2% of the wintering population in Great Britain; and Little Egret (*Egretta garzetta*), 100 individuals representing up to 20.0% of the wintering population in Great Britain.
- 3.4 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 over winter. The

area regularly supports 93,142 individual waterfowl (5 year peak mean 1991/2 - 1995/6). Other over-wintering waterfowl species of importance include: Black-tailed Godwit (*Limosa limosa islandica*), Dunlin (*Calidris alpina alpina*), Ringed Plover (*Charadrius hiaticula*), Grey Plover (*Pluvialis squatarola*), Dark-bellied Brent Goose (*Branta bernicla bernicla*), Wigeon (*Anas penelope*), Redshank (*Tringa totanus*), Little Grebe (*Tachybaptus ruficollis*), 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*).

3.5 It is not considered that these species would use the habitats within the red line boundary as these are dominated by buildings and hardstanding, however the site's proximity to the priority habitats that the birds use must be taken into consideration.

3.6 The closest Natural England bat licence application is over 3.6km north.

Phase 1 Habitat Survey

3.7 The site was dominated by the main building on site, surrounded by hardstanding, gravel and some amenity grassland. There are a number of mature pine trees on the south-eastern boundary, only one of which is considered to be within the redline boundary. There are a few scattered ornamental shrubs within the garden.

Amenity Grassland

3.8 Small areas of amenity grassland were situated on either side of the main house. The majority of this grassland (Perennial ryegrass, *Lolium perenne*) was dry and had died back to recent weather conditions. Yarrow was dominant in this area, with some spotted medick (*Medicago arabica*), ragwort (*Jacobaea vulgaris*), daisy (*Bellis perennis*), dandelion (*Taraxacum officinale*), ground ivy (*Glechoma hederacea*) and fennel (*Foeniculum vulgare*).

Ornamental garden species

- 3.9 Around the edges of the site are scattered ornamental bushes. Fuchsia (*Fuchsia sp.*), fennel, viburnum (*Viburnum sp.*), European fan palm (*Chamaerops humilis*) and a cordyline palm (*Cordyline sp.*) amongst others. These species are considered to offer negligible ecological value to the site. Dense Virginia creeper (*Parthenocissus quinquefolia*) grows along the western wall of the site, creating some potential nesting habitat for common passerine species.

Trees

- 3.10 There are approximately five mature pine trees along the south-eastern boundary. Only one, in the most easterly corner is within the redline boundary. This tree is thought to be a Monterey Pine (*Pinus radiata*) according to a prior arboricultural survey conducted on site for Yeates Design LLP. The trees along the rest of the boundary are within the curtilage of adjacent 36 Wittering Road and have been identified as *Cupressus macrocarpa*. All of these trees are to be retained and tree root protection areas have been established and are shown in drawing 'Tree Protection Measures' from June 2018 by Yeates Design LLP.

Protected Species

Bats

- 3.12 The main house supported flat roofs with no internal roof voids present. The external soffits are plastic boarding with bitumen felt roofs. There is some lead flashing around the edges of the roofs.
- 3.13 Largely these features present a well sealed feature, with no lifted lead flashing and the bitumen felt is in reasonable condition. On the eastern aspect a section of the soffit had fallen away. This has not created any internal spaces or crevices which bats could exploit, but simply an open feature below the plastic boarding. This was not considered to provide any suitable features for bats to exploit. A small hole adjacent to the drain pipe on the eastern aspect was identified. This was not considered to be suitable for bats due to the

plastic surrounds. Furthermore, dense cobweb covering and lack of any external evidence suggests no activity.

- 3.14 No evidence of bats using the external features were recorded with no droppings found beneath the gaps, no straining, scratch marks or any evidence of feeding.

Tree Assessment for Bats

- 3.11 The pine tree in the eastern corner adjacent to the SPA is not considered suitable for supporting a bat roost. No cracks in the main trunk or branches could be seen from ground level. There are no other trees within the redline boundary however and three pine trees are present along the same edge of the site. These trees were also considered to offer negligible potential to roosting bats. These trees are to be retained under the current proposals.
- 3.12 The vegetation on site is sparse. It is considered that the on-site habitats are largely sub optimal for foraging bats. The SPA adjacent is considered to offer little suitable habitat as well.

Great Crested Newts

- 3.13 There are no ponds within the redline boundary; OS maps and aerial imagery revealed no freshwater waterbodies within 500m of the site's boundary.
- 3.14 The habitat on-site is considered unsuitable and therefore having negligible potential for GCNs in their terrestrial phase, the hardstanding, buildings and amenity grassland all provide little in terms of foraging or cover opportunities.

Reptiles

- 3.15 The majority of the site was comprised of hardstanding and amenity grassland, offering little in terms of foraging opportunities for UK reptiles, which have a preference for mosaics of structurally diverse vegetation. The habitat on site is not considered to be suitable for reptiles.

Other species

- 3.16 The trees and shrubs on site were considered to have potential to support common passerine nesting birds. The habitats on site are not considered suitable for supporting wetland birds such as terns or waders however suitable habitats are present on adjacent land.
- 3.17 No evidence of badgers using the site were recorded. No setts, latrines or snuffle holes were present within the redline boundary. The habitats were largely considered to be sub optimal for such species.
- 3.18 No habitat considered suitable for dormice, otters or was identified on-site.

4.0 Discussion**Designated sites**

- 4.1 The site does not fall within any national or international statutory designations.
- 4.2 The site does, however, lie adjacent to Chichester Harbour SPA and Ramsar site and the Solent Maritime SAC. These habitats are of international importance and as such any impacts on these designated sites must be considered within the application and must be considered in line with Policy DM9 Development in the Coastal Zone in the Core Strategy.
- 4.3 The EU Habitats Directive requires that any project which may have a significant effect or impact (either alone or in combination with other plans or projects) on the integrity of one or more European site(s), and which is not necessary for the management of the site, must be subject to a process of Habitat Regulations Appraisal (HRA).
- 4.4 European Sites, in this context, include Special Areas of Conservation (SACs) and Sites of Community Importance (SCIs) designated under the Habitats Directive (92/43/EEC) and Special Protection Areas (SPAs) designated under Council Directive (2009/147/EC) on the

conservation of wild birds (the 'Birds Directive'). In addition, Ramsar sites (internationally important wetlands designated under the Ramsar Convention 1971) are to be subject to the same process.

- 4.5 In the UK, the Conservation of Habitats and Species Regulations 2010 (as amended) (the 'Habitats Regulations') transpose the requirements of the EU Habitats Directive into domestic UK law. The Regulations aim to protect sites in the UK that have rare or important habitats and species in order to safeguard biodiversity.
- 4.6 Impacts can be divided in to direct and indirect impacts. Direct impacts are usually associated with development adjacent to or on land which has been designated. Indirect effects, which may not result in the loss or fragmentation of habitats, are also significant in terms of protected habitats integrity. Indirect impacts are often associated with the increase in population levels as a result of new development.
- 4.7 The direct impacts on the SPA, SSSI and Ramsar site which are considered significant include causing damage to the coherence of the site or to the Natura 2000 series (for example, presenting a barrier between isolated fragments, or reducing the ability of the site to act as a source of new colonisers);
- Causing reduction in the area of habitat or of the site;
 - Causing direct change to the physical quality of the environment (including the hydrology).
- 4.8 Due to the location of the site on the edge of the SPA, there is no habitat loss, or habitat fragmentation, and there is no isolation of communities or populations from the proposed development. However, other direct impacts include noise from construction work, dust and pollutions from construction and impacts on water. The location of the development is considered to have potential to impact on hydrological issues, lighting issues and pollution events, during the construction phase only. Due to the negligible distances involved and the habitats between the sites, best practise will need to be deployed diligently during the demolition and construction phases to limit the ecological impacts on the SPA habitats.

- 4.9 Indirect issues to consider include recreational pressure on the designated site and how the increase in the population associated with a development affects the surroundings with a greater number of people (and dogs) using designated sites. However, in this case, the development is for the replacement of a single dwelling and sees no increase in the number of dwellings. i.e. is a like for like replacement.
- 4.10 The interim 'Solent Recreational Mitigation Strategy- An interim framework to mitigate the impact on the Solent Special Protection Areas of increased visitor pressure arising from house building – December 2014 Solent Recreation Mitigation Partnership' has been reviewed. This publication has been produced by the Solent Recreation Mitigation Partnership which comprises the fifteen Solent local authorities, Natural England, the Royal Society for the Protection of Birds, Hampshire & Isle of Wight Wildlife Trust, and Chichester Harbour Conservancy. The local authorities are: Chichester District Council, East Hampshire District Council, Eastleigh Borough Council, Fareham Borough Council, Gosport Borough Council, Hampshire County Council, Havant Borough Council, Isle of Wight Council, New Forest District Council, New Forest National Park Authority, Portsmouth City Council, Southampton City Council, South Downs National Park Authority, Test Valley Borough Council, Winchester City Council.
- 4.11 Havant council seeks financial contributions towards the Solent Recreation Mitigation Partnership. Natural England has advised £181 per dwelling will be required to mitigate against the effects of recreational disturbance on the Solent SPA. With effect from the 1st April 2018 the definitive strategy was implemented and charges may increase. Policy CS21 of the Local Plan (Core Strategy) and Policy DM24 of the Local Plan (Allocations) provide the policy basis for the collection of this contribution, which will be applied to all new development of one or more dwellings. The Council has agreed two ways of securing the contribution:
- Upfront payment prior to a decision being made
 - Section 106 legal obligation used where additional contributions payable/obligations to be monitored
- 4.12 The authorities will only require a contribution for every net additional dwelling unless the developer can demonstrate to Natural England that it can provide an alternative to

fully mitigate the impact of the development. This project is very small scale and does not see any additional dwellings constructed on site however, with the construction comprising the replacement of the existing dwelling only.

- 4.13 Considering the nature of the site, the small scale proposals, and that it lies on previously developed land, it is considered that the redevelopment of the site will not impact upon the nature conservation value of the protected site or the immediate area and the redevelopment will not impact upon the ecological functionality of the local landscape.

Habitats

- 4.14 The amenity grassland and hardstanding that comprise the majority of the site is considered of negligible ecological value, with only scattered ornamental vegetation on the edges of the site. The most ecologically valuable feature within the site is the mature trees on the south-eastern boundary. Only one of which is within the redline boundary, and all of which are to be retained and protected with Heras fencing during the development.
- 4.15 The mature trees on the southern boundary and within the adjacent residential curtilage are to be retained and have Root Protection Areas enforced by use of 2m high Heras fencing.
- 4.16 The use of the habitats within the red boundary have been assessed for their potential to support a number of protected species. These are discussed individually below.

Protected Species

Bats

- 4.17 The residential house does not contain any internal roof voids or internal features that could support potential bat roosts. Externally, there are two small gaps around the first-floor soffits. Overall these features were not considered to offer potential for roosting bats due to the structure materials and lack of suitable space behind the gaps. It is considered that no further bat surveys are recommended and that the redevelopment of the site will not

impact upon any bat roosts. It is always recommended that if there is a lapse of time between the survey and the application that an update survey would be recommended.

- 4.18 The trees on site were largely unsuitable for bats, lacking in potential roost features.
- 4.19 The habitats on site provided little in the way of opportunities for foraging and commuting bats. Much of the central area of the site was devoid of vegetation, with scrub and trees restricted largely to the site boundaries, the vast majority of which is to be retained. As such it is considered that the site is of negligible interest for foraging bats. Indeed, redevelopment of the site could make a positive impact on local bat populations through the planting of trees and hedgerows along the edges of the site.
- 4.20 It is understood construction will be largely restricted to the areas of hardstanding and amenity grassland, considered generally unsuitable for foraging bats.
- 4.21 The Bat Conservation Trust survey guidelines (Collins 2016) state in table 4.1 that, *“guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, should be applied using professional judgement”*. It is important that proportionality is employed when recommending further survey work for a bat species on a proposed development site. As stated within section 8.2.7 of the guidelines (Collins 2016), the following points need to be taken into account with regard to planning activity surveys:
- Likelihood of bats being present;
 - Likely species concerned;
 - Number of individuals;
 - Type of habitat affected;
 - Predicted impacts of the proposed development on bats;
 - Type and scale of proposed development.
- 4.22 The exact plans for the proposed development involve the demolition of the main building on site and the construction of a single replacement dwelling. Therefore, given the scale of the development, the lack of habitats present on site it is considered that with an appropriate mitigation strategy in place, the favourable conservation status of bat species

within the local area will be maintained post-development. Certainly, development that considers bats within the master planning would reduce impacts to bat species to a level which would not be considered significant. As such it is recommended that a lighting scheme should be sensitive to the surrounding environments, and new planting along the boundaries should be provided.

4.23 Any proposed lighting scheme as part of the development will have to consider bats in the surrounding area as well as the site. All bat species are nocturnal, resting in dark conditions in the day and emerging at night to feed. Bats are known to be affected by light levels, which can affect both their roosting and foraging behaviour. This needs to be considered with a sympathetic lighting scheme for the development. Recommendations include:

- Installing lighting only if there is a significant need;
- Using low-pressure sodium lamps or high-pressure sodium instead of mercury or metal halide lamps where glass glazing is preferred due to its UV filtration characteristics;
- Directing light to where it is needed and avoiding light spillage;
- Using baffled lighting where light is directed towards the ground;
- Avoid putting lighting near treelines or hedgerows and angling light away from these linear features which are used by commuting and foraging bats;
- Planting a barrier or using man-made features required within the scheme to form a barrier.

4.24 To enhance the local bat population and provide roosting opportunities, it is recommended that boxes should be hung on mature trees or buildings around the site. Recommended boxes include:

- Schwegler 2F Bat Box – These boxes are attractive to small bats such as pipistrelles and long-eared bats and can be hung on trees (Figure 4).
- Schwegler 1FD Bat Box - This box has been designed specifically for smaller bats and provides opportunities as a maternity roost (Figure 4).



Figure 4: Schwegler 2F (left) and 1FD (right) bat boxes

Birds

- 4.25 The adjacent designated site is of particular significance for waterbirds, especially in migration periods and in winter. 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.
- 4.26 Whilst it is considered none of the above bird species will utilise the habitats within the redline boundary, a number of impacts need to be considered with regards to the bird populations off-site.
- 4.27 The impacts on the SPA and local bird populations are considered to minimal during the operation phase of the development. The development involves the replacement of the existing dwelling, with a new building therefore there is to be no increase in the number of dwellings. The mudflats are not publicly accessible from the site or nearby therefore there will be no direct increase in recreational impacts on the SPA habitats from this development.
- 4.28 Breeding Sandwich Tern and Little Tern are qualifying features of the SPA. The mudflats form an intertidal habitat, they are therefore not suitable for supporting nests. These species, and other waterfowl are therefore not likely to be using the mudflats directly

alongside the proposed development boundary for breeding in the summer months. The nesting sites are likely to be on higher ground away from the tide line. A.C.Johnson (2017) provides data on the numbers of birds present on Black Point and Sandy Point LNR, 150-200m east and south of the proposed development site on Wittering Road. In 2017, summer gatherings from July-September of Little Tern at the Black Point high tide roost peaked at 105. For Sandwich tern, numbers reached 130-140 in this time period. The high tide roost point at Black Point is considered to be a post-breeding roost and not a likely nesting site (however this is not confirmed). Black Point is approximately 150m east of the proposed development.

- 4.29 Black Point currently hosts a sailing club, and the end of the spit of land by the proposed development hosts a marina with several boats on. This activity creates a constant level of disturbance (considered likely to be greater in the summer months) that the birds on the mudflats and the high tide roost have become habituated to.
- 4.30 New construction noise is considered to be the greatest impact on local bird species from the proposed development. Typical construction noises have been measured and are detailed below in Table 2. The impact of these noise levels and other disturbance activities were then observed on waterfowl species in the Humber Estuary (Cutts et al, 2009) and are shown in Table 3. It is considered that irregular noise from construction could reach up to 50-70Db and this would likely have a 'moderate' impact on the birds using the mudflats directly adjacent to the site. Therefore, impacting upon feeding behaviour at low tide in this area.
- 4.31 Noise attenuates over distance however and this noise level is reduced down to around 30Db over the 150m stretch to Black Point where tern species roost (and potentially nest). This is considered to produce a 'low' disturbance impact on waterfowl species. Therefore if the activity is carried out over the spring/summer breeding months, the potential disturbance to birds at Black Point is considered to be low, and temporary.

Table 2: Typical noise levels recorded during construction activities taken from *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance* (Cutts *et al.* 2009)

Typical L_{Amax} levels during hammer piling	68-70 dB(A)
Typical L_{Aeq} levels during hammer piling	55-56 dB(A)
Typical L_{Amax} levels vibratory piling power pack running (with no other site activity)	51-52 dB(A)
Typical L_{Amax} levels with high site activity (cranes, dumper trucks, no hammer piling)	55-60 dB(A)
Stream venting from BP site (L_A)	80-85 dB(A)

Table 3: Impact on avifauna observed after various disturbance activities taken from *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance* (Cutts *et al.* 2009)

Personnel and plant on mudflat:	High
Third Party on mudflat:	High
Personnel and plant on seaward toe and face:	High to Moderate
Intermittent plant and personnel on crest:	High to Moderate
Third Party on bank:	High to Moderate
Irregular piling noise (above 70 dB):	High to Moderate
Long term plant and personnel on crest:	Moderate
Regular piling noise (below 70dB):	Moderate
Irregular noise (50-70 dB):	Moderate
Regular noise (50-70dB):	Moderate to Low
Occasional movement of the crane jib and load above sight-line:	Moderate to Low
Noise below 50 dB:	Low
Long-term plant only on crest:	Low
Activity behind flood bank (inland):	Low

- 4.32 Due to the distances involved between the development and the nesting sites, there is considered to be little potential impact on the breeding activity of these species from the proposals. The construction of one new dwelling is not considered to be a large development and is not likely to carry on over several seasons, therefore what little impact may result from this development, will only impact a single season's activity.
- 4.33 The mudflats will provide optimal feeding habitat for a range of over-wintering wader species, many of which are qualifying features for the SPA such as the Bar-tiled godwit and Little egret. The intertidal habitat provides essential food sources over the winter months. The 'moderate' impacts of the construction noise during these months will be felt more strongly during the winter. This is due to the greater energy expenditure of the birds

once disturbed, the lower availability of food and slower recovery rates due to the cold temperatures. It is therefore not recommended that the construction be carried out over winter.

- 4.34 Considering the distances involved from any potential nesting sites of important bird species, and the small scale of the development, it is considered the impact from the proposals will have a minimal level of disturbance on the SPA if carried out in the summer months March – October.

Badgers

- 4.35 No direct evidence of badgers such as setts or latrines was identified on site. It is considered unlikely that badgers use the on-site habitats to forage within or commute across.

Great Crested Newts

- 4.36 Considering the lack of suitable water bodies in the vicinity of the site and largely unsuitable nature of the on-site habitats, the site is not considered to be constrained by GCNs and no further surveys are recommended.

Reptiles

- 4.37 The habitats on site are not considered to be suitable for common reptile species. The grassland is too short to provide suitable habitat structure and the site is considered to be fairly isolated from any other suitable habitats by garden walls and the SPA boundary. No further surveys or species-specific mitigation is recommended on this site.

Other species

- 4.38 No habitat suitable for otters, water voles or dormice was identified on site and no further surveys are required for these species.
- 4.39 It is recommended that trees and hedgerows be retained where possible or replaced. Any scrub or tree removal should be implemented outside the breeding bird season (March-September) or immediately after a nesting bird check by a suitably qualified ecologist. If active nests are identified, works in the vicinity of the nest must cease until the birds have

fledged the nest. Buildings should be surveyed prior to demolition to ensure no birds are roosting internally or on the roof at the time.

- 4.40 Best Practise will be deployed during the construction phase to minimise the impact of the works on the adjacent mudflats. The works should be carried out in the winter months to avoid the breeding season for species of European importance. Dust and noise pollution will be minimised as far as possible to reduce the impact on over-wintering birds. Construction work should only take place between dawn and dusk with no late evening work to reduce possible disturbance.

Site Enhancements

- 4.41 A number of enhancements can be made to the final development to help reduce potential ecological impacts and aid in compliance with local planning policy. It is important to utilise native species of local provenance in landscaping schemes to enhance the ecological value of a development, however due to the sale of the site, large scale improvements are not considered possible.
- 4.42 Shrub species can be planted along boundaries post development. These can provide a food source for invertebrates which in turn attract further species such as birds and bats. Recommended native species include dogwood (*Cornus sanguinea*), guelder rose (*Virbinum opulus*), wayfaring tree (*Virbinum lantana*), sweet briar (*Rosa rubigniosa*), burnet rose (*Rosa pimpinellifolia*), wild privet (*Ligustrum vulgare*), buckthorn (*Rhamnus cathartica*) and butcher's broom (*Ruscus aculeatus*).
- 4.43 Newly formed areas of amenity grassland could be supplemented by integrating a variety of native plant species. Patches of bare soil can be sown with wildflower seed mixes to increase the biodiversity of the site and also offer aspects of aesthetic appeal.
- 4.44 It is recommended bird boxes are installed on site to provide additional nesting opportunities for birds. Recommended boxes include Schwegler 1B and 2M nest boxes. Both provide added protection against cats. Four of these should be placed on buildings/boundary walls or mature trees post-development.

4.45 Schwegler bat boxes have been recommended in the discussion of this report, along with a sensitive lighting scheme to increase the value of the site for bats.

3.1 The most significant ecological enhancement for the site would be the incorporation of green or brown roofs into the scheme. Green roofs provide opportunities for biodiversity in areas where space is limited and by providing different niches through the creation of habitats at differing height levels. If the buildings were to support green roofs, this would provide a 'green stepping stone' between the SPA and other habitats within the local area. The type of green roof installed is dependent on the load that the roof can support. By including green roofs within the design of the scheme, the load-bearing ability of the roofs can be adjusted accordingly prior to building.

4.46 Sedum mats are recommended to be planted to create an instant brown roof. Species which could be used include:

- *Sedum album* – forms a thick mat and supports white cluster flowers;
- *Sedum spurium* – forms a low mat with fleshy purple leaves;
- *Sedum reflexum* – forms a dense mat of blue foliage with yellow flowers;
- *Sedum acre* – low creeping succulent;
- *Sedum anglicum* – small succulent in different shades of pink;
- *Sedum kamtschaticum* – tough sedum and drought resistant with dark green leaves;
- *Sedum hispanicum* – low sedum with silver blue leaves.

5.0 Impact Assessment

5.1 This section of the report forms an EcIA (Ecological Impact Assessment) and is designed to quantify and evaluate the potential impacts of the development on habitats and species present on site, or within the local area.

Methodology

5.2 The approach to this assessment accords with guidance presented within the CIEEM Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM 2016). The guidelines recommend the following approach to EcIA:

- Identification of the ecological features on site, both habitats and species, from baseline surveys;
- Identification of the works on site, both during construction and operation that are likely to have impacts on ecological features (habitats and species);
- Identification of the zone of influence;
- Evaluation of the ecological receptors likely to be affected;
- Identification of impacts, for example positive or negative, on receptors and assess their significance;
- Incorporation of mitigation measures to reduce potential impacts;
- Review assessment in light of mitigation of negative impacts;
- Assessment of cumulative impacts;
- Assessment of residual effects and the potential need for compensation for negative effects which remain significant after mitigation.

5.3 Receptors are defined as a feature affected by an impact and may have negligible value for nature conservation or it may have value at site, local, county, national, or international level. Impacts on ecology assessed by (a) determining the level of important/sensitivity of the receptor, for example national, county, or local; (b) determining the type, magnitude and timescale of the impact; and then (c) using this information on the receptor and impact to determine the significance of the impact: described as major, moderate, or minor significant, or of negligible significance.

5.4 In essence, an EcIA assesses the activities associated with a proposed scheme that are likely to generate changes, within identified zone of influences, on identified ecological features and receptors. The proposals are subsequently reviewed, and iteration undertaken to include enhancements and mitigation to reduce negative impacts.

Assessment

- 5.5 The habitats on site offer limited opportunities for wildlife due to the dominance of species poor grassland and the large area of buildings and hardstanding. The habitats are widespread and common throughout the local area and the UK as a whole. The redevelopment of the site will not isolate or fragment nearby habitats and will not impact upon landscape connectivity. Enhancements recommended would increase the ecological value of the site post-development.
- 5.6 However, due to the proximity of the site to the SPA, other impacts must be considered such as noise and potential pollution impacts on off-site habitats. Best Practise will be deployed and timings of year for the work have been recommended to minimise the impact of the construction. The development is considered to only impact the nearby designations during the construction phase and will be temporary only. The development of a replacement dwelling is not considered to lead to significant impacts on the SPA.
- 5.7 Due to a lack of suitable habitats on site, the site has limited potential to support protected species within the redline boundary. Mature trees with the potential to support breeding birds are to be retained. It is considered that there will be no significant impacts to protected species on site as a result of the development.
- 5.8 However, again due to the proximity of the site to the SPA, impacts on protected species off site must be considered. Disturbance impacts are considered to be present during the construction works only. Breeding birds are not considered to be present on the adjacent mudflats or within 100m of the site. Disturbance impacts are therefore thought to be 'low' on breeding birds in the summer months. Impacts may be 'moderate' on feeding overwintering birds if works are carried out over winter. It is recommended the majority of the works are carried out in the summer months to minimise the noise disturbance effects on birds on the SPA.
- 5.9 Recreational pressure is not considered to increase with the redevelopment of the site as this comprises the construction of a single replacement dwelling only.

- 5.10 With Best Practise deployed in terms of dust and water pollution, the zone of influence is considered to be largely restricted to the immediate surroundings of the development with exception to noise. Given the small scale of the proposals and their nature, it is considered that there will be no significant impacts on surrounding protected areas or habitats. Therefore, it is considered that overall the ecological impacts of the development will be low.

6.0 Conclusions

- 6.1 The site lies adjacent to the Chichester and Langstone Harbour SPA and Ramsar, Solent Maritime SAC and Chichester Harbour SSSI.
- 6.2 Potential direct impacts on the SPA are concentrated during the construction phase of the development with an increase in noise, dust and water pollution possible. Best Practise guidance is to be deployed with the water and dust impacts. The construction noise impact is considered to have a 'low' impact on nesting birds if carried out in the summer, but may see a greater effect if carried on into the winter months.
- 6.3 Financial contributions are not considered to be required as part of the s106 agreement as part of the recreational impact mitigation measures. As the development includes the demolition and construction of a single dwelling with no net increase. The LPA will instruct on the details of this requirement.
- 6.4 The residential building on site was considered to have negligible potential to support roosting bats. No internal voids are present and a low number of low potential external features were identified. It is considered that removal of soffit boards under ecological supervision is sufficient mitigation for the demolition of this building. At this stage, no further surveys are recommended for bats roosting in trees or the building.
- 6.5 The site does not support habitats which are favourable for a range of species, as such no further surveys are recommended for reptiles, GCNs, badgers, dormice or water voles. The site is not considered to be constrained by these species and no further surveys are therefore recommended.

- 6.6 Recommendations for enhancements have been made within this report, aimed at improving the ecological value of the site and providing a net gain in biodiversity post-development.

7.0 References

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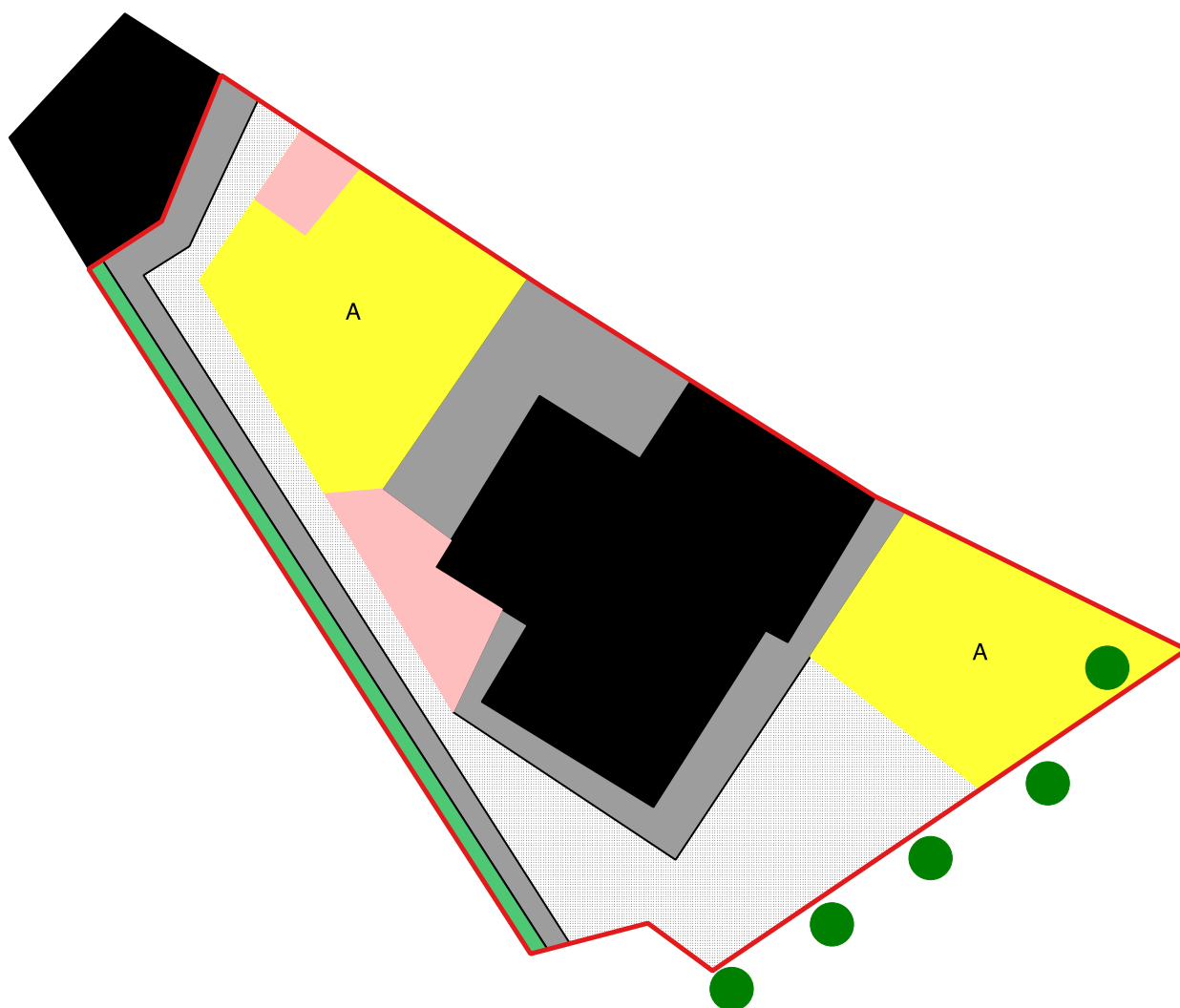
Internet resources:

Google Maps: www.google.co.uk/maps

Magic Interactive Map: www.magic.gov.uk

Chichester District Council: <https://www.chichester.gov.uk/>

Appendix 1: Phase 1 Habitat Map



Legend

Habitats

-  'Green' wall
-  A Amenity grassland
-  Building
-  Gravel
-  Hardstanding
-  Ornamental
-  Trees
-  Boundary

Site: 36a Wittering Road, Hayling
Island
Client: Yeates Design LLP
Surveyor: E.Bagguley
Date: 23rd August 2018

the
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Appendix 2: Photos

Photograph 1:

External view of the house –
southern aspect

**Photograph 2:**

External view of the house –
western aspect

**Photograph 3:**

Flat roof



Photograph 4:

Broken soffit on the eastern side. Hole does not lead anywhere. No crevices or suitable roosting space – too exposed.

**Photograph 5:**

Small gap in the soffit on the eastern side. Plastic materials, gaps about 1cm wide. No external evidence of bat use.

**Photograph 6:**

Garage building outside the redline boundary.



Photograph 7:

Densely vegetated wall along the edge of the site

**Photograph 8:**

Scattered ornamental bushes on site.

**Photograph 9:**

The house on the edge of the SPA



Photograph 10:
SPA habitat to the east



Photograph 11:
SPA habitat directly in front of
the house and to the west by the
harbour.



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