

**DOLPHIN QUAY, QUEEN STREET,  
EMSWORTH, HAMPSHIRE**

**ECOLOGICAL ASSESSMENT**

**Final Document**

April 2014

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Phase 1 and 2 Ecological Assessments • NVC • EclA • Management Plans • Protected Species Licensing  
Habitats • Badger • Bats • Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

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## **APPENDICES**

### **Appendix 1 Protected Species Legislation**

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## EXECUTIVE SUMMARY

- An extended Phase 1 ecological assessment was undertaken on 5<sup>th</sup> September 2013 at Dolphin Quay, Queen Street, Emsworth, Hampshire PO10 7BU. The proposals entail the demolition of the existing buildings, re-enforcement of the sea wall and the construction of new houses and apartments.
- The extended Phase 1 ecological assessment involved a Phase 1 field survey. The Phase 1 field survey was aimed at assessing the potential for the site to support badger, bats, dormouse, reptiles, great crested newt, terrestrial invertebrates and breeding birds. The Phase 1 field survey also involved an assessment of on-site vegetation for its value in relation to habitat communities present.
- Subsequent to the findings of the Phase 1 survey, Phase 2 bat surveys were carried out at the site to establish the presence/likely absence of roosting bats within those buildings assessed as having low potential to support roosting bats.
- The site comprises a former boatyard, with large boat house building, moorings and sea walls, former office building and former antiques market. The vast majority of the site comprises hardstanding and buildings.
- No bats were recorded roosting within the on-site buildings with only very limited levels of foraging and commuting activity associated with offsite habitat recorded during the Phase 2 surveys undertaken.
- Recommendations have been made to maximise ecological gains regarding native species planting.
- Any vegetation clearance and building demolition should be undertaken outside of the bird nesting season which extends from March to August inclusive. If this is not possible, pre-clearance bird checks should be undertaken by an ecologist to avoid potential impacts on nesting birds.
- The site is generally of negligible ecological value given the limited habitats present, with no other potential for protected species recorded.
- If works have not commenced at the site by September 2015, an updating Phase 1 ecological assessment is recommended, as the ecological situation may have changed.

## **1.0 INTRODUCTION**

### **1.1 Background**

Ecological Survey & Assessment Limited (ECOSA) have been contracted by PDP Architecture to undertake an extended Phase 1 ecological assessment at Dolphin Quay, Queen Street, Emsworth, Hampshire PO10 7BU. The site is centred on National Grid Reference SU 7520 0574.

Subsequent to the findings of the Phase 1 survey ECOSA were contracted to undertake Phase 2 bat surveys at the site to establish the presence or likely absence of roosting bats within the buildings on site.

### **1.2 Aims and Scope of Report**

This report is based on extended Phase 1 ecological assessment and Phase 2 bat surveys.

The extended Phase 1 assessment is aimed at assessing the suitability of the site and its immediate surrounds to support notable habitats and protected species. This information allows an initial assessment of the biodiversity value of the site to be made.

The Phase 2 bat survey was aimed at assessing the presence or likely absence of roosting bats supported by those buildings assessed as having potential to support bats within the site and, if present, to provide a detailed assessment of the number, species, status and location of bat roosts supported by the buildings.

### **1.3 Site Setting and Description**

The Dolphin Quay site is situated in the South Coast Plain & Hampshire Lowlands Natural Area, described by Natural England as follows<sup>1</sup>:

*"The landscape of the South Coast Plain and Hampshire Lowlands is split between the generally open, often featureless landscape of the coastal plain and the more varied landscape in the west. The Natural Area contains a number of nature conservation features. Although relatively small in extent, the south-facing slopes of Portsdown Hill support some high quality chalk grassland, and the chalk rivers of the Itchen and Test flow through the Natural Area, supporting fine examples of threatened habitat and several key species. The floodplains of the Rivers Test and Itchen contain some botanically rich neutral grassland and elsewhere in the Natural*

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<sup>1</sup> Natural Areas are defined by Her Majesty's Stationery Office as 'biogeographic zones which reflect the geological foundation, the natural systems and processes and the wildlife in different parts of England, and provide a framework for setting objectives for nature conservation' (Biodiversity: The UK Steering Group Report, HMSO, 1995).

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*Area fen and fen-meadows occur, especially where chalk springs arise at the foot of the downs."*

The site is situated in an urban setting within the town of Emsworth, Hampshire on the waterfront of the town. The site is bounded to the south and west by a marine channel, to the east by a public house and to the north by Queen Street.

The wider area is characterised by the town of Emsworth, with Emsworth Channel to the south, areas of open countryside including agricultural fields and associated hedgerows interspersed with towns to the north, east and west.

The site itself consists of a former boatyard, with a large boat house building, moorings and sea walls, a former office building and former antiques market. The vast majority of the site comprises hardstanding and buildings.

#### **1.4 Site Proposals**

The proposals for the site are for the demolition of the existing buildings, re-enforcement of the sea wall and the construction of new houses and apartments. At the time of preparing this report, timescale for the re-development were unknown. For the purpose of this report, it has been assumed that construction will be taking place during 2014.

## **2.0 METHODS**

### **2.1 Introduction**

This section details the methods used during the ecological assessment undertaken at Dolphin Quay site, Queen Street, Emsworth, Hampshire.

### **2.2 Desk-Based Assessment Methods**

The Multi-Agency Geographic Information for the Countryside (MAGIC)<sup>2</sup> database was accessed on 10<sup>th</sup> October 2013 in order to establish the presence of statutory designated sites located within the vicinity of the site. This included a search for all internationally designated sites such as Special Protection Areas (SPAs); Special Areas of Conservation (SACs) and Ramsar's within 7km of the site and a search for nationally designated sites including Sites of Special Scientific Interest (SSSIs); Local Nature Reserves (LNRs) and National Nature Reserves (NNRs) within 1km of the site.

### **2.3 Phase 1 Field Assessment**

The Phase 1 ecological field survey was carried out on the 5<sup>th</sup> September 2013. The survey involved a walkover of the site to identify the habitat types present and to record evidence of protected species, with particular reference to badger *Meles meles*, bats, dormouse *Muscardinus avellanarius*, breeding birds, reptiles, great crested newt *Triturus cristatus* and terrestrial invertebrates. Details of the species-specific survey methods are given below.

#### **2.3.1 Vegetation**

An assessment was made of all areas of vegetation within the site using the standardised Phase 1 survey methodology<sup>3</sup>. This involved a walkover survey to identify broad vegetation types, which were then classified against Phase 1 habitat types. A list of characteristic plant species for each vegetation type was also compiled.

#### **2.3.2 Badger**

The survey involved a detailed investigation of the site to identify evidence of badger residence, foraging or territorial activity. Particular emphasis was placed on locating badger setts, paths, and signs of territorial activity such as latrine sites both on site and within 30m of the site where access was possible.

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<sup>2</sup> <http://defra.magic.gov.uk>

<sup>3</sup> Handbook for Phase 1 habitat survey: A technique for environmental audit – Field manual (2003), *Joint Nature Conservation Committee (JNCC)*

### **2.3.3 Bats**

An assessment was made of the suitability of buildings, and trees on the site and immediately on the site boundary, to support roosting bats based on the presence of features such as holes, cracks, splits, loose bark and ivy cladding. An assessment was made of the suitability of the site and the surrounding landscape to support foraging and/or commuting bat species. The survey conformed to current Bat Conservation Trust guidelines<sup>4</sup>.

### **2.3.4 Dormouse**

The assessment for the potential of the site to support dormouse was based on an assessment of habitat features that may indicate that dormice are present on the study area. This includes the presence of food sources such as common hazel *Corylus avellana* and honeysuckle *Lonicera periclymenum*. Additionally, the species requires a continuum of food supply so that habitat structure, diversity and connectivity to adjacent areas of woodland/scrub are important features for determining the potential presence of dormice.

### **2.3.5 Breeding Birds**

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

### **2.3.6 Reptiles**

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

### **2.3.7 Great Crested Newt**

The assessment of the site to support great crested newts included establishing the presence of suitable aquatic habitats such as ponds within or adjacent to the site and the presence of suitable terrestrial habitat. Ponds that are densely shaded, highly eutrophic or that contain fish are likely to be less suitable for this species.

In addition, online mapping resources were used to identify the presence of ponds or other waterbodies within a 500 metre (m) radius of the site. The 500m is a standardised search radius to assist in the assessment of the potential of a site and

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<sup>4</sup> Bat Surveys Good Practice Guidelines 2<sup>nd</sup> Edition (2012), *Bat Conservation Trust (BCT)*

its surrounding habitat to support this species, based on current Natural England guidance<sup>5</sup>.

### **2.3.8 Terrestrial Invertebrates**

An assessment was made of the site for its potential value to support diverse communities of invertebrates or any Biodiversity Action Plan (BAP) or scarce species. The assessment was made based on the presence of habitat features which may support important invertebrate communities. These features include, for example, an abundance of dead wood, the presence of diverse plant communities, the presence of varied woodland structure and sunny woodland edges with a diverse flora, presence of ponds and water courses and the presence of free draining soil exposures. During the Phase 1 survey there was no attempt made to identify species present and where a site supports features that may be of importance to invertebrates then further Phase 2 surveys may be required to assess the importance of the site.

## **2.4 Initial Protected Species Assessment**

Details of the assessment criteria used to determine the ecological value of on-site attributes during the Phase 1 survey is outlined below. During a Phase 1 survey the assessment criteria is based on the potential for the site to support the species considered, this is usually based on the on-site habitat features and their suitability for the species considered. However, in many cases Phase 2 surveys will be required to assess the status of species and hence the importance of a population at the site, therefore the assessment of value should be considered a provisional assessment.

### **2.4.1 Bats - Building Assessments**

An assessment was made of the Dolphin Quay buildings which have been graded for their potential to support bats based upon the following criteria<sup>6</sup>:

- **Confirmed Roost** - Evidence of bat presence confirmed during survey. Evidence may include presence of bats themselves (live or dead), presence of droppings, feeding remains, urine stains etc. Where possible, a provisional assessment of roost status is made although this will require further Phase 2 surveys to confirm status.
- **High Potential** - High potential buildings are those that have features highly suitable for use by roosting bats, including gaps around soffits, hanging tiles, extensive roof spaces etc. High potential buildings are often, but not always,

<sup>5</sup> Great Crested Newt Mitigation Guidelines, Natural England, August 2001.

<sup>6</sup> The criteria are an attempt to qualify the potential for a given building or tree to support roosting bats and are to a degree subjective. Bats may make use of a single feature on an otherwise unsuitable building or tree and therefore an assessment of bat potential cannot solely be based on the quantity of potential roost features present.

buildings of more historic construction. Further Phase 2 surveys will be required to confirm the presence/absence of bats.

- **Medium Potential** - Medium potential buildings have a moderate number of features that may be utilised by bats for roosting, these may include loose fascia, roof spaces etc. Further Phase 2 surveys are likely to be required to confirm the presence/absence of bats.
- **Low Potential** - Low potential buildings are those that provide limited bat roosting potential although some features that may be utilised by bats may be present. Further Phase 2 surveys are likely to be required to confirm the presence/absence of bats.
- **Negligible Potential** - Negligible potential buildings are extremely unlikely to support roosting bats due to the absence of suitable features. Further Phase 2 surveys are unlikely to be required for buildings with negligible potential.

#### **2.4.2 Bats – Tree Assessments**

An assessment was made of the trees on site and immediately adjacent to the site which have been graded for their potential to support bats based upon the following criteria<sup>7</sup>:

- **Confirmed Roost** – In some instances, bat presence can be confirmed from trees e.g. where droppings or staining is visible or where roosting bats have been observed entering/emerging from a tree or where roosting bats can be heard. Such trees will require further Phase 2 surveys to assess roost status.
- **High Potential** - High potential trees have features such as loose bark, splits and deep/extensive holes suitable for roosting bats. High potential trees are generally large and/or mature specimens. Further Phase 2 surveys will be required to assess the presence/absence of bats.
- **Medium Potential** - Medium potential trees have some interest for roosting bats such as broken snags, some flaking bark, a covering of ivy or shallow holes. Further Phase 2 surveys will be required to assess the presence/absence of bats.
- **Low Potential** - Low potential trees have some, although generally limited potential to support roosting bats. Further Phase 2 surveys may be required to assess the presence/absence of bats.

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<sup>7</sup> The criteria are an attempt to qualify the potential for a given building or tree to support roosting bats and are to a degree subjective. Bats may make use of a single feature on an otherwise unsuitable building or tree and therefore an assessment of bat potential cannot solely be based on the quantity of potential roost features present.

- **Negligible Potential** - Negligible potential trees are those that provide few or no features with bat roosting potential. Generally these trees are immature specimens. Further Phase 2 surveys are unlikely to be required to assess the presence/absence of bats.

#### **2.4.3 *Badger, Dormouse, Breeding Birds, Reptiles, Great Crested Newt and Terrestrial Invertebrates***

The potential for the sites to support protected species is based on the results of the field survey assessment. The potential for on-site habitat to support badger, dormouse, breeding birds, reptiles, great crested newt, terrestrial invertebrates and breeding birds is based upon the following criteria:

- **Species Present** - In some instances, the presence of a protected species can be confirmed by the presence of recorded evidence, for example badger hairs or latrines and hazel nut gnawed in the characteristic style by dormice. In these instances further Phase 2 surveys will be required in order to establish the statuses of the respective species.
- **High Potential** - Species confirmed as present during the field survey. The on-site habitat is of high quality for a given species/species group. The site is located within or adjacent to a national or regional stronghold. Good quality surrounding habitat and good connectivity. Further Phase 2 surveys will be required to assess the presence/absence of the species.
- **Medium Potential** - The on-site habitat is of moderate quality, providing most or all of the known key requirements of a given species/species group. Factors limiting the potential of occurrence may include small habitat area, habitat severance and disturbance. Further Phase 2 surveys will be required to assess the presence/absence of the species.
- **Low Potential** - On-site habitat is of poor to moderate quality for a given species/species group. Although presence cannot be discounted on the basis of national distribution, nature of surrounding habitats, habitat fragmentation, recent on-site disturbance etc. Further Phase 2 surveys may be required to assess the presence/absence of the species.
- **Negligible Potential** - Although presence cannot be absolutely discounted, the site includes very limited or poor quality habitat for a particular species/species group. The surrounding habitat is considered unlikely to support wider populations of a species/species group. The site may also be outside or peripheral to known the national range for a species. Further Phase 2 surveys are unlikely to be required to assess the presence/absence of the species.

## 2.5 Phase 2 Bat Survey

The Phase 2 bat surveys were undertaken at the site during September 2013. **Table 1** provides details of the survey visits. The visits were undertaken by two experienced ECOSA surveyors, who were positioned at previously identified vantage points around the Former Office and Antique Market buildings. As the Boathouse was deemed unsuitable for roosting bats, no Phase 2 surveys were undertaken on this building.

During the Phase 2 survey each surveyor recorded the time, species, location and direction of flight for each bat encountered, with particular attention paid to establishing bat access/egress locations. The surveys were carried out in line with current BCT Guidance.

## 2.6 Phase 1 and 2 Survey Timing and Weather Conditions

The weather conditions for the extended Phase 1 and Phase 2 bat surveys are provided in **Table 1** below.

**Table 1:** Phase 1 and Phase 2 Bat Survey Timings and Weather Conditions

| Survey Date                     | Survey Type                       | Duration      | Weather Conditions                       | Sunset Time |
|---------------------------------|-----------------------------------|---------------|------------------------------------------|-------------|
| 5 <sup>th</sup> September 2013  | Extended Phase 1 Survey           | -             | 22°C, 0% cloud cover, still and dry      | -           |
| 12 <sup>th</sup> September 2013 | Phase 2 Bat Dusk Emergence Survey | 19:09 – 20:40 | 17°C, 80% cloud cover, dry               | 19:25       |
| 25 <sup>th</sup> September 2013 | Phase 2 Bat Dusk Emergence Survey | 18:40 – 20:10 | 16°C, 90% cloud cover, occasional shower | 18:56       |

## 2.7 Extended Phase 1 and Phase 2 Bat Survey Personnel

The extended Phase 1 survey was carried out by Richard Chilcott of ECOSA on 5<sup>th</sup> September 2013. The Phase 2 bat surveys were led by Richard Chilcott of ECOSA, assisted by suitably qualified and experienced ECOSA surveyors.

## 2.8 Extended Phase 1 and Phase 2 Bat Survey Equipment

During the Phase 1 survey, the surveyor was equipped with 10x32 binoculars, ladders, a digital camera and a 1 million candle power torch.

During the Phase 2 bat surveys each surveyor was equipped with a Pettersson D240x time expansion bat detector. The Pettersson detectors were connected to Edirol R-09 recorders for the full duration of the surveys. Recordings made with the Pettersson detectors were later analysed using Sonobat<sup>®</sup> (v2.9.7) to confirm the identity of any species encountered.

## **2.9 Extended Phase 1 and Phase 2 Bat Survey Limitations**

Not all potential bat roosting features are accessible to the surveyor, e.g. gaps within soffit boxes, behind fascias and hanging tiles, beneath roof materials and therefore assessments are based upon the potential for these features to provide suitable roosting opportunities.

Some bat species, e.g. long-eared bats, generally emerge from their roosts in total darkness and do not produce strong echolocations, and therefore these bats can be difficult to observe and record during Phase 2 bat surveys, leading to under-recording.

## 3.0 RESULTS

### 3.1 Introduction

This section details the results of the ecological assessment undertaken at Dolphin Quay, Queen Street, Emsworth, Hampshire during September 2013.

### 3.2 Desktop Study

#### 3.2.1 Statutory and Non-statutory Designated Sites

The MAGIC website search revealed that there are six statutory designated sites of nature conservation situated within a 1km radius of the site. Details of these designations are provided in **Table 2**.

**Table 2:** Designated sites located within a 1km radius of the Dolphin Quay site

| Site Designation                           | Site Name / NGR                                     | Min. Distance and Direction from Site (Approximately) | Reason for Designation                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------|-----------------------------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site of Special Scientific Interest (SSSI) | Chichester Harbour<br>NGR: SU 760 000               | 200m south                                            | Chichester Harbour is a large estuarine basin, which is of particular significance for wintering wildfowl and waders and also breeding birds. There is a wide range of habitats which support important plant communities. The harbour exhibits a wide range of intertidal and associated terrestrial habitats. The extensive intertidal mudflats are the feeding grounds for internationally important numbers of wildfowl and waders |
| Special Protected Area (SPA)               | Chichester and Langstone Harbour<br>NGR: SU 760 000 | 200m south                                            | The site is designated for its important wintering and breeding bird populations as discussed above.                                                                                                                                                                                                                                                                                                                                   |
| Ramsar Site                                | Chichester and Langstone Harbour<br>NGR: SU 760 000 | 200m south                                            | The site is designated as a wetland of international importance.                                                                                                                                                                                                                                                                                                                                                                       |
| Special Area of Conservation (SAC)         | Solent Maritime<br>NGR: SU 756 003                  | 200m south                                            | The Solent encompasses a major estuarine system with four coastal plain estuaries and four bar-built estuaries. The Solent and its inlets are unique in Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area.                                                                                                                  |
| Local Nature Reserve (LNR)                 | Brook Meadow<br>NGR: SU 751 060                     | 120m north                                            | Designated for its amenity and wildlife value. An important 5 acre area of grassland surrounded by woodlands and flanked by two small streams. The site supports a range of wildlife including birds, insects, wild                                                                                                                                                                                                                    |

| Site Designation           | Site Name / NGR               | Min. Distance and Direction from Site (Approximately) | Reason for Designation                                                                                                                                   |
|----------------------------|-------------------------------|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            |                               |                                                       | flowers and water vole.                                                                                                                                  |
| Local Nature Reserve (LNR) | Eames Farm<br>NGR: SU 760 042 | 680m south                                            | Designated for its amenity and wildlife value. An important coastal grazing marsh of national and international importance for its plants and bird life. |

In addition to the above, a 7km search area was employed for SPAs/Ramsar and SACs. Kingley Vale Special Area of Conservation 7 km north east of the site (NGR: SU 824 110). The designation was granted owing to the presence of semi-natural calcareous grasslands and *Taxus baccata* chalk woodland habitats at the site.

### 3.3 Vegetation

The vegetation within the site is described here in general terms using Phase 1 habitat survey terminology and referring to dominant, characteristic and other noteworthy species in each vegetation type within the survey area. The habitat types on site consist of:

- Individual trees;
- Recolonising vegetation; and
- Hardstanding and buildings

#### Individual Trees

A single immature sycamore *Acer pseudoplatanus* tree is present on the eastern boundary of the site.

#### Recolonising Vegetation

Some small areas of recolonising vegetation are present within the site. Species recorded within this habitat include herb Robert *Geranium robertianum*, creeping thistle *Cirsium arvense*, dandelion *Taraxacum officinale* and lyme grass *Leymus arenarius*.

#### Hardstanding and buildings

The majority of the site comprises hardstanding and buildings (see **Figure 1**).



**Figure 1:** View of the site looking north

### Summary

The site comprises buildings and hardstanding with a single immature sycamore tree and some limited areas of recolonising vegetation. The habitats present are of negligible ecological value comprising species of vegetation which are common and widespread.

## **3.4 Badger**

No evidence of badger was recorded within the site during the survey undertaken. In addition, there is no suitable foraging habitat within the site or immediately adjacent to the site. Therefore, the site is considered to be of **negligible potential** for badger.

## **3.5 Bats**

### **3.5.1 Bats - Building Assessment**

The results of the Phase 1 bat survey for the on-site buildings are provided in **Table 3**.

There are three buildings on the site; The Former Office building, Antiques Market building and Boat House. The Antiques Market and Former Office buildings were assessed as having low potential to support roosting bats given the small number of loose tiles which were recorded. No evidence of roosting bats was recorded during the surveys undertaken.

### **3.5.2 Bats – Tree Assessment**

A single immature sycamore tree is present on the eastern side of the site. This tree contains no suitable bat roosting features such as dense coverings of ivy, splits or cracks. Therefore, it is concluded there is **negligible potential** for tree roosting bats.

### **3.5.3 Foraging and Commuting Habitat**

The site contains only a limited amount of patchy vegetation, the only tree being an immature sycamore on the eastern side of the site. Overall the site is considered to provide sub-optimal habitat for foraging and commuting bats. Therefore, it is concluded that the site offers **negligible potential** for foraging and commuting bats.

**Table 3:** Building Assessment – Summary of features with bat roost potential and evidence of bat roost activity

| Surveyed Feature       | Photo                                                                                                                                                      | Building Description                                                                                                                                                                                                                                                                                                                              | Description of Potential Bat Roost Features                                                                                                                                                                                                                             | Evidence of Bat Roost Activity and Location                                       | Assess. of Bat Roost Potential |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------|
| Former Office Building |  <p><b>Figure 2</b> View of southern aspect of former Office building</p> | <p>A Former Office Building is situated adjacent to Queen Street consisting of a two storey, Former Office building, of brick construction with a pitched clay tiled roof (<b>Figure 2</b>).</p> <p>Internally, no roof void is present as the building is built into the roof void. A number of skylights are also present within the roof.</p>  | <p>A small number of opportunities for crevice dwelling species such as pipistrelle <i>Pipistrellus</i> species were recorded externally. These opportunities were largely associated with loose roofing tiles on the southern and northern aspect of the building.</p> | <p>During the Phase 1 investigation no evidence of bat activity was recorded.</p> | Low                            |
| Boat House             |  <p><b>Figure 3</b> View of Boat House</p>                               | <p>A Boat House building is situated to the south of the office building (<b>Figure 3</b>). The building is of brick, concrete and corrugated asbestos construction with a wooden panel area on the southern aspect.</p> <p>Internally, the building is light and airy with no roof void present with skylights are also present in the roof.</p> | <p>No suitable roosting opportunities were recorded within the boat house and the building is not of a construction favoured by bats.</p>                                                                                                                               | <p>During the Phase 1 investigation no evidence of bat activity was recorded.</p> | Negligible                     |

| Surveyed Feature | Photo                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Building Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Description of Potential Bat Roost Features                                                                                                                                                                                                                                                                                                                         | Evidence of Bat Roost Activity and Location                                                                                                          | Assess. of Bat Roost Potential |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Antiques Market  |  <p><b>Figure 4</b> View of northern elevation of Antiques Market building</p>  <p><b>Figure 5</b> View of southern section of Antiques Market building</p>  <p><b>Figure 6</b> View of void within Antiques Market building</p> | <p>The Antiques Market building contains two sections. The northern section is situated on Queen Street and is a single storey brick building with a pitched clayed tiled roof (<b>Figure 4</b>). To the south of this section, the building is a large plastic panel shed with a pitched felted roof (<b>Figure 5</b>).</p> <p>Internally, a small void is present on the northern elevation which is bitumen felted with a timber frame construction (<b>Figure 6</b>). No void is present in the larger section of the building, although some wooden boarding is present on the roof.</p> | <p>No obvious access/egress points were recorded into the void and generally it is well-sealed. No suitable roosting opportunities were recorded in the shed on the southern section. However a small number of suitable roosting opportunities were recorded on the roof of the northern section of the building, largely associated with loose roofing tiles.</p> | <p>During the Phase 1 investigation no evidence of bat activity was recorded. The void on the northern aspect contains a high density of cobwebs</p> | <p>Low</p>                     |

### 3.5.4 Phase 2 Bat Survey Results

**Table 4** details the species, number and location of bats recorded during the Phase 2 bat survey in 2013. During the Phase 2 surveys in 2013 three species of bat were recorded, common pipistrelle, *Pipistrellus pipistrellus* soprano pipistrelle *Pipistrellus pygmaeus*, and noctule *Nyctalus noctula*.

**Table 4:** Phase 2 bat survey results

| Survey Date                     | Recorded Bat Roosts                                | General Bat Activity at the Site                                                                                                                                                                                                                                         |            |           |
|---------------------------------|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|
|                                 |                                                    | Species                                                                                                                                                                                                                                                                  | First Pass | Last Pass |
| 12 <sup>th</sup> September 2013 | No bats were recorded emerging from the buildings. | Soprano pipistrelle                                                                                                                                                                                                                                                      | 20:05      | 20:16     |
|                                 |                                                    | <i>Summary:</i><br>Very low levels of bat activity were recorded during this survey with only three registrations of soprano pipistrelle made during this survey, two of which were seen and not heard whilst one was recorded passing the western boundary of the site. |            |           |
| 25 <sup>th</sup> September 2013 | No bats were recorded emerging from the buildings. | Species                                                                                                                                                                                                                                                                  | First Pass | Last Pass |
|                                 |                                                    | Common pipistrelle                                                                                                                                                                                                                                                       | 19:26      | 19:26     |
|                                 |                                                    | Soprano pipistrelle                                                                                                                                                                                                                                                      | 19:40      | 19:49     |
|                                 |                                                    | Noctule                                                                                                                                                                                                                                                                  | 19:43      | 19:43     |
|                                 |                                                    | <i>Summary:</i><br>Generally low levels of bat activity were recorded during this survey with single registrations of common pipistrelle and noctule and two registrations of soprano pipistrelle.                                                                       |            |           |

#### Summary Bat Assessment

No bats were recorded emerging from the Former Office building or Antiques Market building during the Phase 2 surveys. The foraging and commuting activity recorded within the site was generally very low during the surveys undertaken with the vast majority of the registrations made attributed to offsite habitat. Given this, it is considered that the site is of **negligible importance** for bats.

### 3.6 Dormouse

Given the limited nature of the habitats within the site there is no suitable vegetation present to support this species. Therefore, it is concluded there is **negligible potential** for dormouse.

### 3.7 Breeding Bird

The site supports a single immature tree with limited suitability to support nesting birds. The boat house and to a lesser extent the antiques market building on-site also offer limited opportunities for nesting. No evidence of nesting birds was recorded

during the survey undertaken and no bird activity was recorded within or adjacent to the site. It is considered the site offers **low potential** for breeding birds.

### 3.8 Reptiles

Given the limited nature of the habitats within the site there is no suitable vegetation present to support this species nor is any suitable vegetation adjacent to the site. Therefore, it is concluded the site offers **negligible potential** to support reptiles.

### 3.9 Great Crested Newt

A review of OS mapping and aerial photography identified a single pond within 500m of the site. This pond is situated within woodland approximately 280m to the north of the site. Whilst presence of great crested newt within this pond cannot be ruled out, its removed nature from the site and separation from the site by the A259 trunk road suggests that it is highly unlikely that any great crested newt that may be breeding in this pond could disperse to the site. In addition, no suitable terrestrial habitat is present within the site. Therefore, it is concluded that the site has **negligible potential** to support great crested newt.

### 3.10 Terrestrial Invertebrates

The site contains limited vegetation to support invertebrate species with the majority of the site comprising buildings and hardstanding. Therefore, it is concluded that the site has **negligible potential** to support terrestrial invertebrates.

### 3.11 Overall Site Assessment

The majority of the site comprises hardstanding and buildings. Vegetation on the site is limited to an immature sycamore tree and patches of re-colonising vegetation comprising common and widespread species. The buildings and sycamore tree offer limited suitability for nesting birds. From the results of the Phase 2 bat survey, it is concluded roosting bats are likely absent from the Former Office building or Antiques Market.

The site contains no suitable habitat for any rare or notable species and is considered to be of negligible ecological value overall.

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## **4.0 EVALUATION, IMPACTS AND RECOMMENDATIONS**

### **4.1 Introduction**

This section presents the conclusions of the ecological assessment. It provides an initial assessment of the likely ecological constraints to the proposed development and recommendations for any further survey work considered necessary. An outline of protected species legislation relevant to the findings of this report is provided in **Appendix 1**.

### **4.2 Designated Sites**

#### **4.2.1 Summary**

The site is situated approximately 200m north of Chichester Harbour SSSI, Chichester and Langstone Harbour SPA/Ramsar and Solent Maritime SAC. Two local nature reserves are also situated within 1km of the site.

#### **4.2.2 Potential Impacts of Proposed Development**

Given the proximity of the site to the SPA/SAC/Ramsar site there is some limited potential for impacts on these sites should suitable pollution preventative measure not be implemented.

In addition, the Solent Disturbance and Mitigation Project (SDMP) has identified a 5.6km buffer from the boundary of the SPA/SAC/Ramsar where increase in population numbers could result in potential harm to the SPA/SAC/Ramsar through recreational pressure.

#### **4.2.3 Recommendations**

It is recommended that the appropriate Environment Agency pollution Prevention Guidelines are followed during the construction phase of the scheme to ensure no pollution of the adjacent coastline. Works involving sea wall re-enforcement should be discussed with the Environment Agency, and any other relevant interested parties, to ensure best practice guidance is followed on site and that the design takes into account any specific mitigation measures necessary to the safeguarding of the surrounding waters.

It is also recommended that discussions are held with the local authority in relation to the possible need for suitable contributions to the local planning authority to provide suitable mitigation as suggested by the SDMP Phase 3 report<sup>8</sup>.

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<sup>8</sup> Liley, D. & Tyldesley, D. (2013). Solent Disturbance and Mitigation Project: Phase III. Towards an Avoidance and Mitigation Strategy. Unpublished report. Footprint Ecology/David Tyldesley & Associates

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## **4.3 Vegetation**

### **4.3.1 Summary**

The site is considered to be of negligible ecological value comprising only limited habitats of common and widespread species.

### **4.3.2 Potential Impacts of Proposed Development**

Given the limited vegetation within the site it is considered that impacts of the proposals would be negligible. The inclusion of new landscaping within the site would provide an enhancement to biodiversity.

### **4.3.3 Recommendations**

Given the limited vegetation present no mitigation measures are considered necessary. However, as an enhancement any landscaping scheme could incorporate native species and those of known value to wildlife.

## **4.4 Badger**

### **4.4.1 Summary**

There is no habitat within or immediately abutting the site which has potential to support badger.

### **4.4.2 Potential Impacts of Proposed Development**

Given the absence of suitable habitat for this species, impacts on badger are considered to be negligible.

### **4.4.3 Recommendations**

Given the absence of suitable habitat for this species on and adjacent to the site, no recommendations are considered necessary.

## **4.5 Bats**

### **4.5.1 Summary**

No roosting bats were recorded within the Former Office building or Antiques Market building during the Phase 2 surveys undertaken, therefore roosting bats are considered likely absent from the site. The low levels of bat registrations made during the Phase 2 surveys suggests the site provides limited foraging and commuting habitat for bats.

#### **4.5.2 Potential Impacts of Proposed Development**

Given the findings of the Phase 2 surveys, it is considered that the impacts of the proposals on this species group would be negligible.

#### **4.5.3 Recommendations**

No further recommendations in regards to bats are considered necessary. However, the inclusion of new native species planting, such as those detailed at 4.3.3 would provide an enhancement in foraging habitat.

### **4.6 Dormouse**

#### **4.6.1 Summary**

There is no habitat within the site which has potential to support dormouse.

#### **4.6.2 Potential Impacts of Proposed Development**

The site offers no opportunities for dormouse, therefore, the impacts of the development works on dormouse are considered to be negligible.

#### **4.6.3 Recommendations**

Given the absence of suitable dormouse habitat within and adjacent to the site, no further recommendations are necessary.

### **4.7 Breeding Birds**

#### **4.7.1 Summary**

The single tree and the boat house and antiques market buildings within the site offer some potential to support nesting birds.

#### **4.7.2 Potential Impacts of Proposed Development**

If vegetation clearance (including the removal of the sycamore tree) and building demolition is carried out during the breeding bird season which extends from March to August, inclusive, the development works, could potentially result in the disturbance and destruction of active nests. Under the Wildlife and Countryside Act 1981 all birds, their nests and eggs are protected by law. Refer to **Appendix 1** for further details.

#### **4.7.3 Recommendations**

It is recommended that tree removal and building demolition is undertaken outside of the main bird nesting season which extends from March to August, inclusive. Should such works be necessary within this time period, then the site

should be inspected by a suitably qualified ecologist immediately prior to works commencing.

It is recommended that suitable species planting, such as detailed at Paragraph 4.3.3, be incorporated into the development in order to provide new nesting and foraging resources.

As an enhancement measure bird boxes could be erected on new dwellings in order to provide an increase in nesting habitat at the site. Advice should be sought from an ecologist when erecting bird boxes.

## **4.8 Reptiles**

### **4.8.1 Summary**

There is no habitat within the site which has potential to support reptiles and no suitable habitat is present adjacent to the site.

### **4.8.2 Potential Impacts of Proposed Development**

The site offers no opportunities for reptiles, therefore, the impacts of the development works on reptiles are considered to be negligible.

### **4.8.3 Recommendations**

Given the absence of suitable reptile habitat within and adjacent to the site, no further recommendations are necessary.

## **4.9 Great Crested Newt**

### **4.9.1 Summary**

There is no habitat within the site which has potential to support great crested newt and no suitable habitat is present within the proximity of the site. The only waterbody identified within 500m of the site is located some 280m away and is separated from the site by a busy trunk road.

### **4.9.2 Potential Impacts of Proposed Development**

The site offers no opportunities for great crested newt, therefore, the impacts of the development works on great crested newt are considered to be negligible.

### **4.9.3 Recommendations**

Given the absence of suitable great crested newt habitat within and adjacent to the site, no further recommendations are necessary.

## **4.10 Terrestrial Invertebrates**

### **4.10.1 Summary**

The site does not provide suitable habitat for any notable/scarce species of terrestrial invertebrate.

### **4.10.2 Potential Impacts of Proposed Development**

Given the limited vegetation present the impacts of the proposals on terrestrial invertebrates are considered negligible.

### **4.10.3 Recommendations**

The inclusion of new native planting within any landscape proposals would provide an enhancement for terrestrial invertebrates (see Paragraph 4.3.3).

## **4.11 Updating Survey**

If works have not commenced by September 2015 or proposals change considerably, it is recommended that an updating extended Phase 1 ecological assessment and updating Phase 2 bat surveys are undertaken. This is because many of the species considered during the current survey are highly mobile and the ecology of the site is likely to change over this period.

## **APPENDIX 1 Protected Species Legislation**

### **European Protected Animals<sup>9</sup> - Bats**

In England, all bat species and their habitat are fully protected under the Wildlife and Countryside Act 1981 through inclusion in Schedule 5. In addition, these species are protected under the Conservation of Habitats and Species Regulations 2010. Taken together, these legislative instruments make it illegal to carry out the following activities:

- Deliberately or recklessly capture or kill any wild animal of a European protected species;
- Deliberately or recklessly disturb any such animal;
- Deliberately or recklessly take or destroy eggs of any such wild animal;
- Damage or destroy a breeding site or resting place of such a wild animal; and
- Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead wild animal of a European protected species, or any part of, or anything derived from such a wild animal.

Any activity that would result in a contravention of the above legislation would require a licence to avoid committing an offence. Natural England has powers to grant a licence for the following purposes:

- Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment; or
- Preventing the spread of disease; or
- Preventing serious damage to livestock, foodstuffs for livestock, crops, vegetables, fruit, growing timber or any other form of property or to fisheries.

The Conservation of Habitats and Species Regulations contain three "derogation tests" which must be applied by Natural England when deciding whether to grant a licence to a person carrying out an activity which would harm an European protected species. For development activities this licence is obtained after Planning Permission has been obtained. The three tests are that:

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<sup>9</sup> Summarised from [www.defra.gov.uk](http://www.defra.gov.uk)

- The activity to be licensed must be for imperative reasons of overriding public interest or for public health and safety;
- There must be no satisfactory alternative; and
- Favourable conservation status of the species must be maintained.

A recent court judgment<sup>10</sup> makes it clear that, notwithstanding the licensing regime, the Local Planning Authority must also address its mind to these three tests when deciding whether to grant planning permission for a development which could harm a European protected species. A Local Planning Authority failing to do so would be in breach of Regulation 3(4) of the Conservation (Natural Habitats, &c.) Regulations 1994 (revised in 2010 to become the Conservation of Habitats and Species Regulations) which requires all public bodies to have regard to the requirements of the Habitats Directive in the exercise of their functions.

In order to determine whether an activity requires a licence, Natural England advises that the guidance of a consultant ecologist is sought. However, Natural England offer the following advice as a guide:

- A licence is needed if the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably likely to result in an offence under regulation 39; or
- If the consultant ecologist, on the basis of survey information and specialist knowledge of the species concerned, considers that on balance the proposed activity is reasonably unlikely to result in an offence under regulation 39 then no licence is required. However, in these circumstances Natural England would urge that reasonable precautions be taken to minimise the effect on European protected species should they be found during the course of the activity. If they are found then work should cease and an application be made to the Wildlife Licensing Unit at Natural England, Bristol.

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<sup>10</sup> Judgment handed down by His Honour Judge Waksman QC sitting as a judge of the High Court at the start of June 2009 in the case of *R (on the application of Simon Woolley) v Cheshire East Borough Council*. The judgment clarified for the first time the legal duty of a Local Planning Authority when determining a planning application for a development which may have an impact on European Protected Species ("EPS"), such as bats, great crested newts, dormice or otters.

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## **Wild Birds<sup>11</sup>**

The Wildlife & Countryside Act 1981 (as amended) is domestic legislation for Great Britain that repeals existing wildlife legislation such as:

- Protection of Birds Acts 1954 to 1967; and
- Conservation of Wild Creatures and Wild Plants Act 1975.

The Act covers the provisions made in these previous acts and provides additional provision for species and countryside protection. The Act is the primary legislation in Great Britain for the protection of flora, fauna and the countryside. The Act includes the UK's domestic implementation of the species protection of the European Directive on the Conservation of Wild Birds (79/409).

Under the Wildlife and Countryside Act 1981 all birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions to intentionally:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird (dead or alive) or any part of a wild bird which has been taken in contravention of the Act or the Protection of Birds Act 1954.
- Have in one's possession or control any egg or part of an egg which has been taken in contravention to the Act. This includes items taken or killed before the passing of the Act.
- Have in one's possession or control any live bird of prey of any species in the world (with the exception of vultures and condors) unless it is registered and ringed in accordance with the Secretary of State's regulations.
- Have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered (and in some cases ringed) in accordance with the Secretary of State's regulations.

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<sup>11</sup> [www.naturenet.net](http://www.naturenet.net)

- Disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

### **Status of Wild Birds**

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status of the birds that are regularly found in the UK. A total of 247 regularly breeding or wintering species were assessed and each placed onto one of three lists - Red, Amber or Green. Forty species are Red-listed, 121 are Amber-listed and 86 are Green-listed. Seven quantitative criteria were used to assess the population status of each species and place it onto the Red, Amber or Green List. These criteria are listed below. The review excluded species that are not native to the UK and those that occur irregularly as vagrants or scarce migrants.

**Global Conservation Status** - Species assessed as Globally Threatened using IUCN11 criteria were placed on the Red List.

**Recent Decline** - Species whose breeding or non-breeding population declined, or range contracted, rapidly (by more than 50%) or moderately (by between 25 and 49%) over the last 25 years were placed on the Red and Amber Lists respectively.

**Historical Decline** - Species whose populations declined severely between 1800 and 1995 were placed on the Red List, except for those that have recovered substantially (more than doubled) in the last 25 years, which were Amber Listed. In earlier assessments, all species showing a serious historical decline were Red Listed, but in this assessment the success of recent conservation action has been recognised by moving recovering species to the Amber List.

**European Conservation Status** - Species whose population status is unfavourable in Europe (but which are not Globally Threatened) were placed on the Amber List.

**Rare Breeders** - Species with a mean population size of 1-300 pairs breeding annually over the last five years were placed on the Amber List. If a full census was carried out in a single year, the result of this was used instead of a five-year mean.

**Localised Species** - Species for which 50% or more of the breeding or non-breeding population occurs at 10 or few sites were placed on the Amber List. This criterion was used because a species whose population is confined to a few sites faces a greater threat from chance events than one whose population is widespread. The sites considered were either Important Bird Areas (identified by BirdLife International) or Special Protection Areas (designated under the European Union's Directive on the Conservation of Wild Birds).

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**International Importance** - Species with 20% or more of their European population breeding in the UK were placed on the Amber List, as were non-breeding wildfowl with 20% or more of their northwest European population occurring in the UK and non-breeding waders with 20% or more of their East Atlantic Flyway population occurring in the UK. This criterion is different from the others as it is a measure of the UK's responsibility for each species rather than the extent to which species are threatened.

- Red List species are those that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.
- Amber List species are those with an unfavourable conservation status in Europe, those whose population or range has declined moderately in recent years; those whose population has declined historically but made a substantial recent recovery; rare breeders; and those with internationally important or localised populations.
- Species that fulfil none of the criteria are Green-listed.