

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

UPDATING ECOLOGICAL ASSESSMENT

Final Document

August 2016

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

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Table of Contents

EXECUTIVE SUMMARY	1
1.0 INTRODUCTION	3
1.1 Background.....	3
1.2 Aims and Scope of Report.....	3
1.3 Site Setting and Description	4
1.4 Site Proposals.....	4
2.0 METHODS.....	5
2.1 Introduction	5
2.2 Desk-Based Assessment Methods	5
2.3 Phase 1 Field Assessment	5
2.3.1 Vegetation.....	5
2.3.2 Badger	5
2.3.3 Bats.....	5
2.3.4 Dormouse	6
2.3.5 Breeding Birds	6
2.3.6 Reptiles.....	6
2.3.7 Great Crested Newt.....	6
2.3.8 Terrestrial Invertebrates.....	7
2.4 Initial Protected Species Assessment	7
2.5 Criteria used to Assess Ecological Value	7
2.6 Phase 2 Bat Survey	10
2.7 Phase 1 and 2 Survey Timing and Weather Conditions	10
2.8 Extended Phase 1 and Phase 2 Bat Survey Personnel.....	10
2.9 Extended Phase 1 and Phase 2 Bat Survey Equipment.....	11
2.10 Extended Phase 1 and Phase 2 Bat Survey Limitations	11
3.0 RESULTS.....	12
3.1 Introduction	12
3.2 Desktop Study	12
3.2.1 Statutory and Non-statutory Designated Sites	12
3.3 Vegetation.....	13
3.4 Badger	14
3.5 Bats.....	15
3.5.1 Bats - Building Assessment.....	15
3.5.2 Bats – Tree Assessment.....	15
3.5.3 Foraging and Commuting Habitat.....	15
3.5.4 Phase 2 Bat Survey Results.....	18
3.6 Dormouse	18
3.7 Breeding Bird	18
3.8 Reptiles.....	19
3.9 Great Crested Newt.....	19
3.10 Terrestrial Invertebrates	19
3.11 Overall Site Assessment	19
4.0 EVALUATION, IMPACTS AND RECOMMENDATIONS	20
4.1 Introduction	20

4.2	Designated Sites	20
4.2.1	Summary	20
4.2.2	Potential Impacts of Proposed Development	20
4.2.3	Recommendations.....	20
4.3	Vegetation.....	21
4.3.1	Summary	21
4.3.2	Potential Impacts of Proposed Development	21
4.3.3	Recommendations.....	21
4.4	Badger	21
4.4.1	Summary	21
4.4.2	Potential Impacts of Proposed Development	21
4.4.3	Recommendations.....	21
4.5	Bats.....	21
4.5.1	Summary	21
4.5.2	Potential Impacts of Proposed Development	22
4.5.3	Recommendations.....	22
4.6	Dormouse	22
4.6.1	Summary	22
4.6.2	Potential Impacts of Proposed Development	22
4.6.3	Recommendations.....	22
4.7	Breeding Birds	22
4.7.1	Summary	22
4.7.2	Potential Impacts of Proposed Development	22
4.7.3	Recommendations.....	23
4.8	Reptiles.....	23
4.8.1	Summary	23
4.8.2	Potential Impacts of Proposed Development	23
4.8.3	Recommendations.....	23
4.9	Great Crested Newt.....	23
4.9.1	Summary	23
4.9.2	Potential Impacts of Proposed Development	23
4.9.3	Recommendations.....	24
4.10	Terrestrial Invertebrates	24
4.10.1	Summary	24
4.10.2	Potential Impacts of Proposed Development	24
4.10.3	Recommendations.....	24
4.11	Updating Survey	24

APPENDICES

Map 1 Site Location

Appendix 1 Protected Species Legislation

DISCLAIMER

This is a technical report which does not represent legal advice. You may wish to seek legal advice if this is required.

This report may or may not be suitable to support a planning application. Should this report contain recommendations for further survey work or assessment, the results of this would be required in order to support a planning application.

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EXECUTIVE SUMMARY

- An extended Phase 1 ecological assessment was undertaken on 5th September 2013 at Dolphin Quay, Queen Street, Emsworth, Hampshire PO10 7BU. 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.
- Given the period of time which has elapsed since this original survey, an updating assessment of the site was undertaken on the 11th August 2016, to support the current planning application. 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.
- 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 in 2013. The status of the on-site buildings has not changed since 2013 and no evidence of roosting bats was recorded during the updating Phase 1 survey. Given the limited change in the status of the on-site buildings and the low levels of foraging and commuting activity associated with the site during 2013, it is considered unlikely that bats will have colonised the site since the 2013 surveys and they are therefore considered likely to be absent from the site.
- Recommendations have been made to maximise ecological gains regarding native species planting.
- The tree and buildings on site have suitability for nesting birds. 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 August 2018, 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 updating ecological assessment at Dolphin Quay, Queen Street, Emsworth, Hampshire PO10 7BU. The site is centred on National Grid Reference SU 7520 0574.

ECOSA carried out the initial ecological assessment¹ during 2013. The majority of the site comprises hardstanding and buildings. Vegetation on the site was found to be limited to an immature sycamore tree and patches of re-colonising vegetation comprising common and widespread species. The buildings and sycamore tree offered limited suitability for nesting birds. The site contained no suitable habitat for any rare or notable species and was considered to be of negligible ecological value overall.

The on-site buildings also offered low suitability for roosting bats and therefore Phase 2 bat surveys were recommended. However, from the results of the 2013 Phase 2 bat survey, it was concluded roosting bats were likely absent from the Former Office building and Antiques Market. Very limited levels of foraging and commuting activity associated with off-site habitat were recorded during the Phase 2 survey.

Given the period of time which has elapsed since this original survey, an updating assessment of the site is required to support the current planning application. This report presents the updated findings of the extended Phase 1 ecological assessment carried out by ECOSA in August 2016, and the results of the ecological assessment carried out in 2013.

1.2 Aims and Scope of Report

This report is based on an extended Phase 1 habitat survey and desktop study aimed at assessing the suitability of the site to support notable habitats and protected species. This information allows an initial assessment of the biodiversity value of the site to be made, potential constraints to the proposed development to be identified and mitigation, compensation and enhancement measures to be developed.

Where potential for notable or protected species is identified, further survey/study/consultation may be required to determine presence/likely absence and assess the conservation status of populations or assemblages present. The results of such work would be needed to fully assess the potential ecological impacts of the scheme.

¹ ECOSA Ltd (2014), Dolphin Quay, Queen Street, Emsworth, Hampshire – Ecological Assessment, Final Document dated 11th April 2014.

1.3 Site Setting and Description

The Dolphin Quay site is situated in the South Coast Plain National Character Area, described by Natural England as follows²:

"The South Coast Plain National Character Area (NCA) is a flat, coastal landscape with an intricately indented shoreline lying between the dip slope of the South Downs and South Hampshire Lowlands and the waters of the English Channel, Solent and part of Southampton Water. The coastline includes several major inlets which have particularly distinctive local landscapes and intertidal habitats of international environmental importance for wildfowl and waders. Chichester Harbour Area of Outstanding Natural Beauty lies within the NCA and the foothills of the South Downs, along the northern boundary, fall within the South Downs National Park. Some three per cent of the area is designated as a Site of Special Scientific Interest, and there are four Special Protection Areas, two Special Areas of Conservation and four Ramsar sites: Chichester and Langstone Harbour, Pagham Harbour, The Solent and Southampton Water and Portsmouth Harbour."

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

This report is in support of a planning application for the proposed demolition of the existing buildings, re-enforcement of the sea wall and the construction of six new houses. Planning is due to be submitted in 2016; construction is expected to commence once planning has been granted.

² National Character Areas (NCA) are defined by Natural England as 'areas defined at the national level, which describe the geographical, ecological and historical variations in landscape character that make one area different from another. Their boundaries follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.' (<https://www.gov.uk/government/publications/national-character-area-profiles-data-for-local-decision-making> - Natural England, first published 30th September 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)³ database was accessed on 12th August 2016 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 updating Phase 1 ecological field survey was carried out on the 11th August 2016. 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 methodology⁴. 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.

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

³ <http://defra.magic.gov.uk>

⁴ Handbook for Phase 1 habitat survey: A technique for environmental audit – Field manual (2003), *Joint Nature Conservation Committee (JNCC)*

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 guidelines⁵.

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 its surrounding habitat to support this species, based on current Natural England guidance⁶.

⁵ Collins, J. (Ed.) (2016) *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (Third Edition). The Bat Conservation Trust, London

⁶ Great Crested Newt Mitigation Guidelines, Natural England, August 2001.

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

As part of the extended Phase 1 ecological assessment, the assessment criteria is based on the potential for the site to support the species considered, this is usually based on habitat features, their suitability for the species and the results of any desk study data obtained as part of the appraisal. 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 should be considered a provisional assessment. **Table 1** defines the criteria used to assess the potential of the site to support protected species.

2.5 Criteria used to Assess Ecological Value

The ecological values provided within this report are based around both professional judgement and current published relevant guidance, including information sources such as *A Nature Conservation Review*⁷ and *Guidelines for Ecological Impact Assessment in the United Kingdom*⁸.

⁷ Ratcliffe, D. (1977) *A Nature Conservation Review*. Cambridge University Press

⁸ IEEM (2006) *Guidelines for Ecological Impact Assessment in the UK*

Table 1: Criteria used to assess ecological potential

	Bats^[1]		Other Protected Species^[2]
	Description of Roosting Habitats	Commuting and Foraging Habitats	
Species Present	Evidence of bat presence confirmed during survey, which may include presence of live or dead bats, droppings, feeding remains or urine stains etc. Where possible, a provisional assessment of roost status is made.	In some instances, bat presence can be confirmed from trees e.g. where staining or droppings are visible; where roosting bats have been observed entering/emerging from a tree; or where roosting bats can be heard.	The presence of a protected species can sometimes be confirmed by evidence recorded, for example guard hairs or latrines for badger or hazel nuts gnawed in the characteristic style for dormice.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the status of the species present.		
High Potential	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.	On-site habitat is of high quality for a species or species group. The site is within or near a geographic stronghold. Good quality surrounding habitat and good connectivity.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.		
Medium Potential	A structure of tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status.	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.	On-site habitat is of moderate quality, providing most of the species/species group requirements. Limiting factors may include small habitat area or disturbance.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.		

^[1] 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.

^[2] Otter, badger, dormouse, water vole, birds, reptiles, great crested newt, invertebrates, other notable species.

	Bats ^[1]		Other Protected Species ^[2]
	Description of Roosting Habitats	Commuting and Foraging Habitats	
Low Potential	A structure with one or more potential roost sites that could be used by individual bats opportunistically/structure that does not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerows or un-vegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by other habitat). Suitable, but isolated, habitat that could be used by small numbers of foraging bats such as a lone tree or a patch or scrub.	On-site habitat is of poor to moderate quality for the species or group. Presence cannot be discounted on the basis of distribution, isolation, surrounding habitats, etc.
	If species are likely to be affected by the proposals, further Phase 2 surveys will be required to establish the presence/likely absence of the species.		
	Negligible Potential	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Further Phase 2 surveys are unlikely to be required as species is unlikely to be present.			

2.6 Phase 2 Bat Survey

The Phase 2 bat surveys were undertaken at the site during September 2013. **Table 2** 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.

2.7 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 2** below.

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

Survey Date	Survey Type	Duration	Weather Conditions	Sunset Time
11 th August 2016	Updating Extended Phase 1 Survey	-	19°C, 75% cloud cover, a light breeze and dry	-
5 th September 2013	Extended Phase 1 Survey	-	22°C, 0% cloud cover, still and dry	-
12 th September 2013	Phase 2 Bat Dusk Emergence Survey	19:09 – 20:40	17°C, 80% cloud cover, dry	19:25
25 th September 2013	Phase 2 Bat Dusk Emergence Survey	18:40 – 20:10	16°C, 90% cloud cover, occasional shower	18:56

2.8 Extended Phase 1 and Phase 2 Bat Survey Personnel

The updating extended Phase 1 survey was carried out by Georgina Timmis of ECOSA on 11th August 2016. The extended Phase 1 survey was carried out by Richard Chilcott of ECOSA on 5th September 2013. The 2013 Phase 2 bat surveys were led by Richard Chilcott of ECOSA, assisted by suitably qualified and experienced ECOSA surveyors.

2.9 Extended Phase 1 and Phase 2 Bat Survey Equipment

During the Phase 1 surveys, the surveyor was equipped with a ladder, 10x40 binoculars, a high powered torch and a digital camera.

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® (v2.9.7) to confirm the identity of any species encountered.

2.10 Extended Phase 1 and Phase 2 Bat Survey Limitations

There were no limitations associated with the updating Phase 1 survey carried out in 2016.

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 bats⁹, 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.

⁹ There are two species of long-eared bat, the brown long-eared bat *Plecotus auritus* and the grey long-eared bat *Plecotus austriacus*. These species can only be separated by examination of physical characteristics and Phylogenetic Analysis Identification of bat droppings. Unless confirmation of identification has been made by visual identification the two species shall be referred to in this report as long-eared bat. The brown long-eared bat is the commonest of the two species typically being found roosting within large roof voids although small voids and trees are also utilised. The grey long-eared bat is rare and confined to southern England and like the brown long-eared typically roosts in roof voids.

3.0 RESULTS

3.1 Introduction

This section details the results of the updating ecological assessment undertaken at Dolphin Quay, Queen Street, Emsworth, Hampshire during September 2013 and August 2016.

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 3**.

Table 3: 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 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 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 NGR: SU 760 000	200m south	The site is designated as a wetland of international importance.
Special Area of Conservation (SAC)	Solent Maritime 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.

Site Designation	Site Name / NGR	Min. Distance and Direction from Site (Approximately)	Reason for Designation
Local Nature Reserve (LNR)	Brook Meadow 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 flowers and water vole.
Local Nature Reserve (LNR)	Eames Farm 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 7km 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 dead sycamore *Acer pseudoplatanus* tree is present on the eastern boundary of the site. Sycamore, birch *Betula* species, and willow *Salix* species saplings were also recorded during the survey.

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*.

Additional vegetation recorded during the updating survey include bramble *Rubus fruticosus* aggregate, goosefoot *Chenopodium* species, rosebay willowherb *Chamerion*

angustifolium, sea couch grass *Agropyron pungens*, sow thistle *Sonchus* species, black medic *Medicago lupulina*, wild celery *Apium graveolens*, common thistle *Cirsium vulgare* and hedge mustard *Sisymbrium officinale* (see **Figure 1**).



Figure 1: View of the site looking south

Hardstanding and buildings

The majority of the site comprises hardstanding and buildings (see **Figure 2**).



Figure 2: View of the site looking north

Summary

In 2016 the conditions on-site are largely unchanged since the initial Phase 1 survey carried out during 2013¹. The site comprises buildings and hardstanding with a single dead 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 condition of the buildings on site remain unchanged since the initial Phase 1 survey carried out during 2013¹. The results of the updating Phase 1 bat survey for the on-site buildings are provided in **Table 4**.

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 dead 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 the single 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 4: 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	 Figure 2 View of southern aspect of former Office building	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 (Figure 2). 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.	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. No additional potential roosting features were identified during the updating Phase 1 survey.	During the initial and updating Phase 1 investigations no evidence of bat activity was recorded.	Low
Boat House	 Figure 3 View of Boat House	A Boat House building is situated to the south of the office building (Figure 3). The building is of brick, concrete and corrugated asbestos construction with a wooden panel area on the southern aspect. Internally, the building is light and airy with no roof void present. Skylights are also present in the roof.	No suitable roosting opportunities were recorded within the boat house and the building is not of a construction favoured by bats.	During the initial and updating Phase 1 investigations no evidence of bat activity was recorded.	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	 Figure 4 View of northern elevation of Antiques Market building  Figure 5 View of southern section of Antiques Market building  Figure 6 View of void within Antiques Market building	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 (Figure 4). To the south of this section, the building is a large plastic panel shed with a pitched felted roof (Figure 5). Internally, a small void is present on the northern elevation which is bitumen felted with a timber frame construction (Figure 6). No void is present in the larger section of the building, although some wooden boarding is present on the roof.	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. No additional potential roosting features were identified during the updating Phase 1 survey.	During the initial and updating Phase 1 investigation no evidence of bat activity was recorded. The void on the northern aspect contains a high density of cobwebs	Low

3.5.4 2013 Phase 2 Bat Survey Results

Table 5 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 5: Phase 2 bat survey results

Survey Date	Recorded Bat Roosts	General Bat Activity at the Site		
		Species	First Pass	Last Pass
12 th September 2013	No bats were recorded emerging from the buildings.	Soprano pipistrelle	20:05	20:16
		<i>Summary:</i> 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 th 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> 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 dead 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. Wood pigeon *Columba palumbus*, carrion crow *Corvus corone*, house sparrow *Passer domesticus* and black-headed gull *Chroicocephalus ridibundus* were

recorded during the survey. 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

Site conditions remain largely unchanged. 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. The results of the 2013 Phase 2 bat surveys concluded that bats are likely absent from the Former Office building and Antiques Market. The condition of the buildings has not changed since the 2013 surveys and continue to offer low potential to support roosting bats. The surveys recorded very low levels of bat foraging and commuting activity across the site, likely due to the lack of suitable foraging habitat, which has not changed significantly since 2013. It is therefore considered unlikely that bats would have colonised the site since the previous surveys were undertaken, and they are likely to remain absent from these buildings.

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

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 report¹⁰.

¹⁰ 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

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 2013 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. Given that the condition of the buildings or extent of suitable foraging and commuting habitat has not changed since the 2013 surveys, and that no evidence of roosting bats was recorded during the updating Phase 1 survey, it is considered that

bats are unlikely to have colonised the site and are still likely to be absent from the Former Office building and Antiques Market.

4.5.2 Potential Impacts of Proposed Development

Given the findings of the 2013 Phase 2 surveys and the updating Phase 1 survey of 2016, it is considered that the impacts of the proposals on this species group are 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 and 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 August 2018 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.

MAP 1 Site Location



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

UPDATING ECOLOGICAL ASSESSMENT

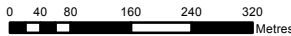
Map 1 - Site Location

Client:	PDP Architecture LLP
Date:	August 2016
Status:	Final

KEY

 Site Boundary

Scale at A4: 1:10,000



ECOSA

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APPENDIX 1 Protected Species Legislation

Bats

All UK bat species are listed in Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence to:

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

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

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

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

Breeding Birds

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

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

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

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