



Portsmouth Golf Club, Hampshire

Extended Phase 1 Habitat Assessment

Project No: E328

Client: Parkwood Consultancy Services

December 2011

Portsmouth Golf Club, Hampshire Extended Phase 1 Habitat Assessment

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Summary

ENiMS Ltd have been commissioned to carry out a Phase 1 Habitat Assessment of a site at Portsmouth Golf Course, Hampshire. Plans are currently being developed for the landscaping of a defined area within the golf course, to provide an enhanced playing surface with better drainage characteristics. The centre of the site lies at national grid reference SU 68273 06666.

A desktop study and site survey were undertaken during November 2011. Notable and protected species records from the last 10 years were obtained from the Hampshire Biodiversity Information Centre (HBIC), and all statutory and non-statutory land designations within 2km of the site were also identified using the Multi-Agency Geographic Information for the Countryside website. A site visit was then made, during which habitat types within the proposed works area were recorded and assessed for their potential to support protected species. Habitats surrounding the proposed site were also inspected.

Ancient woodland features within the golf course, though outside the proposed works boundary, could potentially be impacted upon by works through root compaction. It is recommended that the design account for a root protection area of 15m linear radius from mature trees in designated ancient woodland, and 5m from understory shrubs and semi-mature or smaller tree species.

Following a consideration of the habitat features within and adjacent to site, it was concluded that potential exists for impacts upon nesting birds, specifically damage or destruction of nests and eggs, which would constitute an offence under national legislation. In order to circumvent these impacts, the removal of all trees with potential to support nesting birds must be completed either outside of the bird nesting season, or following a nesting bird check by an appropriately qualified ecologist if during the nesting bird season of March to September. If during clearance a nesting bird is discovered, no works may occur within 5m of the nest until the young have fledged.

Although grounds-keeping staff reported no reptile sightings, on-site habitats have the potential to support widespread reptile species. It is recommended that specified habitats be surveyed for the presence or likely absence of widespread reptile species. Between 6 and 10 surveys will be required, although the final number of surveys will be dependent upon the months across which they are executed.

Residual impacts are identified to Portsmouth City Golf Course Copse SINC, which it is recommended be compensated for by the adoption of ecological enhancement measures, which are detailed herein.

1 Introduction

1.1 Site Location & Surroundings

Portsmouth Golf Course is located just north of the city of Portsmouth, Hampshire, south of the outlying town of Waterloo. The course's centre lies at national grid reference SU 68273 06666. The surrounding landscape is urban residential in nature, with a scattering of agricultural fields immediately around the course. There is very little connectivity to semi-natural habitats and rural landscape due to the locally dense road network. Please refer to Appendix B for aerial imagery.

1.2 Site Description

The character of the site is a direct reflection of its function as a golf course. The majority of the course comprises fairways of close-mown grass, interspaced by linear strips of woodland and patches of rough, semi-improved grassland.

The course measures approximately 1.6km east to west and 400m north to south, and is centrally bisected by Crookhorn Lane.

1.3 Project Overview

Plans are currently being developed for the re-landscaping of five defined areas within the golf course, to provide an improved playing surface with better drainage characteristics. This will likely involve the import of inert material to raise levels, however no buildings or further course facilities (such as artificial lighting) are currently proposed.

1.4 Legislation and Policy Context

1.4.1 Statutory Designated Sites

Particular national and international legislative instruments enable the designation of sites of conservation interest. These 'statutory designated sites' are then afforded varying degrees of protection under environmental legislation and government policy. The land designations considered by this study are set out in Table 1, with details of their associated legislation.

Table 1 Statutory land designations considered here.

Designation	Protection
Areas of Outstanding Natural Beauty	National Parks and Access to the Countryside Act 1949; Countryside and Rights of Way Act 2000; local planning policy.
Local Nature Reserves (LNRs)	National Parks and Access to the Countryside Act 1949; local planning policy.

Designation	Protection
National Nature Reserves (NNRs)	National Parks and Access to the Countryside Act 1949; Wildlife and Countryside Act 1981; Countryside and Rights of Way Act 2000; local planning policy.
Ramsar sites	Ramsar Convention; Wildlife and Countryside Act 1981; Countryside and Rights of Way Act 2000; Conservation of Habitats and Species Regulations 2010.
Sites of Special Scientific Interest (SSSIs)	Wildlife and Countryside Act 1981; Countryside and Rights of Way act 2000.
Special Areas of Conservation (SACs)	EU Habitats Directive; Wildlife and Countryside Act 1981; Countryside and Rights of Way Act 2000; Conservation of Habitats and Species Regulations 2010.
Special Protection Areas (SPAs)	EU Birds Directive; Wildlife and Countryside Act 1981; Countryside and Rights of Way Act 2000; Conservation of Habitats and Species Regulations 2010.

1.4.2 Non-Statutory Designated Sites

Ancient Woodland is a non-statutory designation, which is generally applied to woodlands known to predate 1600. Before this time woodlands were rarely artificially planted, hence these woodlands are likely to be naturally established. Subtypes include Ancient Semi Natural Woodlands and Ancient Replanted Woodlands. Although tree cover in the latter has predominately been replaced, original features such as characteristic wildlife are retained.

Ancient woodlands are protected under national planning policy. Planning Policy Statement 9 (PPS9) requires that developments must not result in the loss or deterioration of Ancient Woodlands, which are a valuable biodiversity resource.

1.4.3 European Protected Species (EPS)

European protected species are protected in the UK by Regulation 40 of the Conservation of Habitats and Species Regulations 2010 (as amended), with EPS listed under Schedule 2. This is the national implementation of the European Union's 'Habitats Directive' (Council Directive 92/43/EEC (a) on the Conservation of Natural Habitats and of Wild Flora and Fauna). Protection is also afforded to any EPS under Section 9 of the Wildlife and Countryside Act 1981 (as amended), owing to their inclusion in Schedule 5.

These legislative instruments make it unlawful to intentionally, deliberately or recklessly capture, kill, injure or disturb in a place of shelter, any EPS. The damage or destruction of a breeding or resting place, whether intentional or reckless, also constitutes an offence.

The following EPS are native to and reside in the United Kingdom:

- Sand lizard (*Lacerta agilis*)
- Smooth snake (*Cornella austriaca*)
- Great crested newts (*Triturus cristatus*)
- Dormice (*Muscardinus avellanarius*)
- Otters (*Lutra lutra*)
- Bats (all native species)

1.4.4 Widespread Species

- **Widespread reptiles**

Through inclusion in Schedule 5 of The Wildlife and Countryside Act 1981, it is an offence under Section 9 to intentionally kill, injure or sell, offer for sale, possess or transport for the purpose of sale, any living or dead widespread species of UK reptile, or any product derived from one.

In addition, all native reptiles are identified as Priority Species within the national Biodiversity Action Plan, and are therefore adopted as Species of Principle Importance in England under Section 41 of the Natural Environment and Rural Communities Act 2006. Such species are defined by Planning Policy Statement 9 as 'material considerations' when considering development proposals.

- **Water Voles**

The water vole *Arvicola terrestris* is fully protected under the Wildlife and Countryside Act 1981 (as amended). Protection is afforded against killing and injury of water voles, as well as the damage, destruction or obstruction of burrows, or disturbance of burrows while in use.

- **Nesting Birds**

Under The Wildlife and Countryside Act 1981 it is an offence to 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.

There are 49 bird species listed as Species of Principle Importance in England under Section 41 of the Natural Environment and Rural Communities Act 2006 (equivalent to the 48 Biodiversity Action Plan Species plus the hen harrier *Circus cyaneus*). These species are therefore material planning considerations.

- **Schedule I listed Birds**

Under the Wildlife and Countryside Act 1981 there are special penalties for offences regarding birds listed in this Schedule. Additionally it is an offence to disturb Schedule I listed bird or dependant young at nest.

- **Badgers**

Badgers are protected by the Protection of Badgers Act 1992. Under this legislation, badgers and their setts are protected against all deliberate damage, destruction and disturbance. Badgers are widespread and abundant; their legal protection is primarily aimed at preventing blood sports, however there are still implications for developers.

2 Methodology

2.1 Personnel

The desktop study and site survey was completed by Mark Rose BSc MSc. Mark holds a BSc in Zoology and MSc Biodiversity Conservation from the University of Southampton. He has 3 years' experience in the survey and impact mitigation of protected species and their habitats. Mark holds a Natural England disturbance licence for great crested newts, and is an accredited agent under licences for the smooth snake, sand lizard and dormouse.

2.2 Desktop Study

A desktop study was carried out to determine if any legally protected species had previously been recorded within close proximity of the site.

Notable and protected species records from the last 10 years were obtained from the Hampshire Biodiversity Information Centre (HBIC). Particular attention was given to protected and notable terrestrial species within 2km and protected birds and bats within 5km. Aerial photos were reviewed to identify any habitats surrounding the site or wildlife corridors connecting the site to other habitats.

Any statutory and non-statutory land designations within 2km of the site were also identified using the Multi-Agency Geographic Information for the Countryside website (www.magic.gov.uk) (Appendix C).

2.3 Site Survey

The site survey was conducted in the morning of the 29/11/2011. Meteorological data are given in Table 2.

Table 2 Weather conditions during site survey.

Cloud Cover	95%
Temperature	10°C
Wind	Strong winds
Precipitation	Nil

2.3.1 Habitats

An extended Phase I Habitat Survey of the site was undertaken following the Joint Nature Conservation Committee's habitat classification system. All accessible areas of the site were surveyed and the dominant flora, standard trees, presence of water bodies and other features of interest were recorded.

Habitats were surveyed for their potential to support the following protected and non-protected species. A standardised, species-specific methodology was adopted, as outlined below.

2.3.2 Mammals

An investigation was carried out using field observations to check for evidence of mammals using the site.

- **Bats**
Particular attention was taken in the survey to identify bat utilisation of the site. Mature trees and buildings were examined for their potential for supporting roosts. Surrounding habitat was also assessed for its value as navigational routes and foraging areas for bats.
- **Badgers**
The site was surveyed for the presence of badger setts, latrines, badger runs and snuffle holes.
- **Common mammals**
Any evidence of common mammals using the site was recorded.
- **Dormice**
The site was surveyed for habitats with the potential to support dormice and any evidence including nests and nuts was recorded.
- **Water voles**
The site was surveyed for any water bodies with the potential to support water voles.
- **Otters**
The site was surveyed for any water bodies with the potential to support otters.

2.3.3 Amphibians

Any water bodies found on site were assessed to determine whether they were suitable for Great Crested Newt using a Habitat Suitability Index (HSI) developed by Oldham *et al.* (2000).

2.3.4 Reptiles

Habitats were assessed for their potential to support reptiles. Locations of potential hibernacula (e.g. old debris, rubble, earth mounds, etc.) and foraging areas (deadwood, leaf litter, invertebrate rich areas) were recorded.

2.3.5 Birds

All trees were carefully investigated for the presence of nests. Any birds of interest observed during the site visit were recorded.

3 Results and Assessment

3.1 On-Site Habitat

Please refer to Appendix A for the Phase 1 Habitat Plans produced for this report, and Appendix D for supporting photographs.

3.1.1 Areas 1 and 2

The course is composed of amenity grassland, dominated by ryegrass *Lolium perenne*, greater plantain *Plantago major*, white clover *Trifolium repens* and daisy *Bellis perennis*. However, an area of less intensively managed grassland has been allowed to mature at the north of Area 1, with greater ecological value. Area 2 contains a pond (Pond 1), which was reported by grounds staff to be dry for the majority of the year (Target Note 04, Appendix A).

3.1.2 Area 3

Area 3 is the site of the proposed new driving range. It is currently composed of predominately amenity grassland, dominated by ryegrass *Lolium perenne*, greater plantain *Plantago major*, white clover *Trifolium repens* and daisy *Bellis perennis*. Amenity grassland fairways are interspaced by rough areas of semi-improved grassland. A linear strip of broadleaved woodland dominated by white willow *Salix alba* and birch *Betula pendula*, with ash *Fraxinus excelsior* and hazel *Corylus avellana* are also present towards the south of the area. North of this is a patch of dense scrub, dominated by bramble *Rubus fruticosus*, blackthorn *Prunus spinosa* and hawthorn *Crataegus monogyna*.

3.1.3 Areas 4 and 5

Area 4 consists solely of amenity grassland, dominated by ryegrass *Lolium perenne*, greater plantain *Plantago major*, white clover *Trifolium repens* and daisy *Bellis perennis*. However, Area 5 contains a patch of tall ruderal habitat with nettles *Urtica dioica* and bramble *Rubus fruticosus*. The site boundary also encompasses broadleaved woodland, dominated by ash *Fraxinus excelsior*, hazel *Corylus avellana* and blackthorn *Prunus spinosa*, with frequent oak *Quercus robur* and birch *Betula pendula*, and a ground cover of bramble *Rubus fruticosus*.

3.2 Off-Site Habitat

Habitats located outside the proposed works area are largely comparable with those found within the boundary. Notable features include two ponds (Target notes 5 and 9, Appendix A) and designated ancient woodland features interspacing works boundaries in Areas 1 and 2 (refer to Section 3.4, Non-Statutory Designated Sites).

3.3 Statutory Designated Sites

Coastal saltmarsh and mudflat habitats, located 1.7km south east of the site, comprise a number of statutory wildlife site designations. These are the Farlington Marshes Local Nature Reserve, the Chichester and Langstone Harbours Ramsar Site and Special Protection Area, the Solent Maritime Special Area of Conservation and the Langstone Harbour Site of Special Scientific Interest.

These extensive mudflats and *Spartina* cord grass dominated tidal saltmarshes are of international importance, supporting high densities of intertidal invertebrates and large populations of migrant and overwintering waders and waterfowl.

These features are isolated from Portsmouth Golf Course, and their special interests are therefore not anticipated to be adversely impacted by the proposed re-landscaping works.

No impact is anticipated.

3.4 Non-Statutory Designated Sites

A number of designated semi-natural Ancient Woodland features were identified within the search area. These sites, which include both semi-natural and replanted woodlands, are predominately isolated from the site of the proposed landscaping and will not be impacted by the proposed landscaping works. However, three small remnant patches of woodland within Portsmouth Golf Course border Areas 1 and 2 of the proposed works boundary. This site, Purbrook Park Wood, is also a designated Site of Importance for Nature Conservation (please see below).

Natural England standing advice on ancient woodland mitigation identifies the following potential impacts from development works occurring adjacent to ancient woodland features:

- Effects from root protection areas of individual trees.
- Reduction in area of other semi-natural habitats adjoining ancient woodland.
- Increased likelihood of exposure to pollutants from the surrounding area.
- Changes to the local hydrology.
- Increased public use near veteran trees such that safety works leading to possible damage to the tree may be needed.
- Change to the landscape context for ancient woods and veteran trees.

Of these, only impacts to the root zones of trees are considered applicable in this case. The roots of some trees, veterans in particular, will extend far beyond the canopy 'drip line'. The root systems are vulnerable to damage from development activities such as trenching and soil compaction.

Low negative impact anticipated.

Sites considered to be of particular importance for nature conservation in Hampshire are designated as Sites of Importance for Nature Conservation (SINCs). Numerous such sites exist within the 2km search radius surrounding the site of the proposed landscaping works, the vast majority of which are a sufficient distance from works areas to be scoped out of the impact assessment. Those remaining are considered here in three categories; those existing immediately adjacent to works areas, those not immediately adjacent to works areas but within the golf course site, and those which will be directly affected by landscaping works under the proposals.

Portsmouth Golf Course East SINC is located within the golf course footprint, but well outside the proposed works areas, and is considered unlikely to be affected. This feature was designated for SINC criteria 1A, the presence of agriculturally unimproved grassland; 2B, the presence of semi-improved grassland which retains a significant element of unimproved grassland; and 2D, grassland which has become impoverished through inappropriate management, but which retains sufficient elements of relic unimproved grassland to enable recovery.

A single designated SINC will be directly affected under the proposals. Portsmouth City Golf Course Copse extends to within the footprint of Area 5 (Target Note 11). This feature was designated for SINC criteria 1B, woodland where there is a significant element of ancient semi-natural woodland surviving; 2D, grasslands which have become impoverished through inappropriate management but which retain sufficient elements of relic unimproved grassland to enable recovery; and 6A, sites which support one or more notable species. The notable species for which this site was designated is the fly orchid *Ophrys insectifera*. As approximately a quarter of this 2ha site will be re-landscaped under the proposals, impacts to its habitat features are inevitable.

Low negative impact anticipated.

3.5 Protected Species

3.5.1 European protected reptiles

No evidence of site usage by European protected reptile species was identified during the Phase 1 Assessment. No local records of these species were identified.

The sand lizard and smooth snake have very defined habitat requirements, which are not satisfied by any of the habitats found on site. The former are heathland specialists, though occasionally found in mature grassland, and the latter exclusively occupy heathland and sand dunes. Consequently, there is no potential for these species to be present and thus impacted by works.

No impact is anticipated.

3.5.2 Widespread reptiles

Records exist of two widespread reptile species within the search area. These are the slow worm *Anguis fragilis* and common lizard *Zootoca vivipara*.

The Phase 1 survey was conducted during the reptile hibernation season, and therefore no incidental observations were made of these species. Grounds-keeping staff members were interviewed, with historical incidental observations of these species reported on-site.

However, particular habitats located within and adjacent to the proposed works boundary have potential to support widespread reptile species, in particular slow worm *Anguis fragilis* and grass snake *Natrix natrix*. The habitats are the semi-improved grassland area at the north of Area 1 (Target Note 1), the scrub and adjoining semi-improved grassland in Area 3 (Target Note 6) and the tall ruderal vegetation in Area 5 (Target Note 10). If reptiles are present and works were to proceed without mitigation, potential would exist for the killing or injury of these species.

Impact assessment pending outcome of further surveys.

3.5.3 Great crested newts

No records exist within 2km of the site of the great crested newt *Triturus cristatus*. However, three ponds were discovered within newt dispersal range of the proposed works areas, with one pond in fact within a work area (Pond 1, Area 2). Although great crested newts spend much of their lives in terrestrial habitats, they are reliant on the presence of suitable ponds for breeding.

The three ponds at Portsmouth Golf Course were assessed for their suitability to support great crested newt breeding activity. This was achieved through interviews with grounds keeping staff, and the implementation of the great crested newt Habitat Suitability Index (HSI) as proposed by Oldham *et al.* (2000). The HSI scores can be found in Appendix E.

Ponds 1 and 3 were reported to be empty for much of the year, often drying as early as April or May. This was corroborated by the fact that the ponds were both very shallow at the time of the survey, despite surveys being performed in late November following a period of rain. The main egg-laying season for great crested newts is mid-April to mid-June, however the young require the pond for development and metamorphosis until August, therefore it is unlikely that either of these ponds could support a viable population.

In contrast, Pond 2 exhibited no evidence of seasonal drying. However, it was reported and confirmed to contain a significant fish population, and as a consequence contained highly turbid water. Fish are known to prey on great crested newt larvae, usually precluding population persistence. Furthermore, turbid water inhibits great crested newt display and mating behaviours.

Although terrestrial habitats (such as scrub and broadleaved woodland) are suitable to support great crested newts, there are no ponds within the generally accepted dispersal range of 500m which are suitable for the species to breed in. Given this, and the observed poor connectivity to the wider landscape and lack of historical great crested newt records, it is considered that great crested newts are highly unlikely to occur at Portsmouth Golf Course.

No impact is anticipated.

3.5.4 Bats

Records exist of two bat species within the desktop search area, the noctule *Nyctalus noctula* and brown long-eared *Plecotus auritus*.

An inspection was made of mature trees within and adjacent to site, in order to assess their suitability for roosting bats. No evidence of any roosting activity was discovered. A single oak tree was noted to have a defect with the potential to support a roosting crevice-dwelling species, such as a pipistrelle.

The area within the proposed works boundary is likely to be used by foraging bats during the active season, however as no net loss of habitat will occur, and no increase in artificial lighting is proposed, no impact to foraging bats is envisaged.

No impact is anticipated.

3.5.5 Dormice

No evidence of dormice, such as nests or feeding remains, was discovered during the site visit. However, species composition of some woodland habitats, notably in Area 5 where some woodland areas are to be cleared, are suitable to support this species.

A number of records exist of the hazel dormouse *Muscardinus avellanarius* within the search area, dated 2007-2009. Unfortunately, these records were only supplied to the records centre at grid square accuracy (SU5907), rather than precise grid reference locations. Following review of aerial imagery, it is considered likely that these records originate from the north east of the grid square, in habitats unconnected to the proposed works areas. Please refer to Appendix F.

Given the small size and lack of connectivity between on-site woodland areas and off-site habitats with potential to support this species, it is considered highly unlikely that dormice will be present at the site, and therefore impacted by the proposed works.

No impact is anticipated.

3.5.6 Badgers

Although records of the badger *Meles meles* were identified within 2km, no evidence of badger activity was discovered within or in habitats surrounding the site.

Badgers are widespread and abundant, and will persist in a variety of habitats. It is certainly possible that badgers will occasionally move through the site of the proposed works, however as no setts or other evidence were found of on-site activity were found, it can be said with confidence that badgers are likely to be unaffected by the proposals.

No impact is anticipated.

3.5.7 Water voles

Records were identified of the water vole *Arvicola amphibius* within the 2km search radius, however these were all in the far south of the search area in habitats isolated from the site. No evidence of this species was recorded during the site inspection. There are no water course features with the potential to support this species which could be impacted by the proposed works.

No impact is anticipated.

3.5.8 Otters

No records were identified of the otter *Lutra lutra* within the 2km search radius, and no evidence of this species was recorded during the site inspection. There are no water course features with the potential to support this species which could be impacted by the proposed works.

No impact is anticipated.

3.5.9 Nesting birds

Broadleaved woodland and scrub habitats within the site boundary present nesting opportunities for birds. Evidence of previous nesting activity was also recorded during the site inspection.

Features with the potential to support nesting birds during the appropriate season would need to be removed under the proposed landscaping works, and potential therefore exists for the destruction of eggs and nests.

Potential for high negative impact (without mitigation).

3.5.10 Schedule 1 listed birds

No evidence of site use by Schedule 1 listed bird species was discovered during the site survey.

The Schedule 1 listed species most commonly found on development sites are the barn owl *Tyto alba* and kingfisher *Alcedo atthis*. The former typically roost in old agricultural built structures, and the latter are heavily associated with water courses. Other Schedule 1 listed species also have defined habitat requirements, such as veteran trees, brownfield sites, or tidal salt marshes. These habitats are not present within the site boundary, or within a vicinity where landscaping works would likely result in disturbance to nesting birds.

It is considered highly unlikely that Schedule 1 listed bird species will occur within the site boundary.

No impact is anticipated.

4 Recommendations and Mitigation

4.1 Summary of Potential Impacts

Impacts to remnant patches of designated ancient woodland within Area 1 of the Golf Course have been identified through root compaction by landscaping works to adjacent land. Impacts are also anticipated to Portsmouth City Golf Course Copse SINC, approximately one quarter of which will be re-landscaped under the proposals.

Potential exists for negative impacts to nesting birds, specifically the damage or destruction of nests and eggs, if clearance of particular habitat features (broadleaved trees and scrub) occurs during the nesting season of March to September (inclusive).

4.2 Mitigation Requirements

4.2.1 Designated Ancient Woodland

In order to avoid impacts to designated ancient woodland, it is necessary to adjust the design of the works footprint to allow for an adequate buffer zone, or “root protection area”. This zone will be dynamic, changing according to the woodland composition adjacent to works areas. Target Notes 3a and 3b are dominated by mature oak, which will require a significantly larger root protection area than 3c, which is dominated by planted birch and sycamore.

It is recommended that the design account for a root protection area of 15m linear radius from mature trees in designated ancient woodland, and 5m from understory shrubs and semi-mature or smaller tree species.

4.2.2 Nesting birds

The removal of all habitat features with potential to support nesting birds must be completed either outside of the bird nesting season, or following a nesting bird check by an appropriately qualified ecologist if during the nesting season of March to September.

If during clearance a nesting bird is discovered, no works may occur within 5m of the nest until the young have fledged.

No impact is anticipated with mitigation.

4.3 Further Survey Requirements

4.3.1 Widespread reptile species

It is recommended that the semi-improved grassland area at the north of Area 1 (Target Note 1), the scrub and adjoining semi-improved grassland in Area 3 (Target Note 6) and the tall ruderal vegetation in Area 5 (Target Note 10) be surveyed for the presence or likely absence of widespread reptile species. Between 6 and 10 surveys will be required, although the final number of surveys will be dependent upon the months across which they are executed.

4.4 Residual Impacts

An area of the designated SINC Portsmouth City Golf Course Copse, cited as supporting the notable fly orchid species, will be cleared under the current proposals. Unless the design of the scheme can be adjusted to exclude and protect semi-natural habitats within this SINC, adverse impacts to this species and its habitats will result. It is recommended that these impacts be compensated for through adoption of the ecological enhancement measures suggested below.

4.5 Summary of Time Constraints

The removal of features with the potential to support nesting birds should be completed during the months of October to February where possible. Removal of such features during the nesting season of March to September will require a nesting bird check within 24 hours prior to removal.

Widespread reptile surveys may only be conducted during the months of March to September, when the reptiles are active.

4.6 Ecological Enhancements

There is potential to carry out a number of ecological enhancements during this project, as compensatory measures to mitigate any residual impacts that cannot be avoided. Potential enhancements include:

- Provision of additional roosting features for bats by placing bat boxes on trees.
- Provision of additional nesting features for birds by placing nest boxes on trees.
- Use of native species in planting schemes to improve the wildlife potential of the site.
- Incorporation of a net increase in “rough” areas of semi- or unimproved grassland as part of the re-landscaping design. This will provide potential habitat for reptile species.
- Removal of fish from Pond 2 to increase their suitability for amphibian breeding activity.

5 References

MAGIC Interactive Map (www.magic.gov.uk)

Hampshire Biodiversity Information Centre (HBIC)

Joint Nature Conservation Committee (JNCC – www.jncc.gov.uk)

Natural England (www.naturalengland.org.uk)

Appendix A: Phase 1 Habitat Plan



ENiMS Ganders House Ganders Business Park Kingsley Hampshire GU35 9LU 0845 6440196 	Completed by: M Rose Checked by: Approved by:	Project: Portsmouth Golf Club Drawing Title: Phase 1 Habitat Plan Drawing Number: E328/PH/001 Scale: Unknown Date: 29th November 2011 Crown Copyright 2011. All rights reserved. License Number 100049934
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Target Notes

TN01: Small area of semi-improved grassland, with low potential for reptile species (Survey Area 1).

TN02: Mature oak showing storm damage, assessed and found to have negligible potential for roosting bats.

TN03: Designated semi-natural ancient woodland.

TN04: Pond 1, reported by grounds staff to frequently dry out. Please refer to Appendix E for great crest crested newt habitat suitability index calculations and results (Survey Area 2).

TN05: Pond 3, found to be almost dry at the time of the survey. Please refer to Appendix E for great crest crested newt habitat suitability index calculations and results (Survey Area 3).

TN06: Dense scrub dominated by hawthorn and blackthorn with bramble. Moderate potential for widespread reptile species (Survey Area 3).

TN07: Planted birch and poplar, with mown grass ground cover (Survey Area 3).

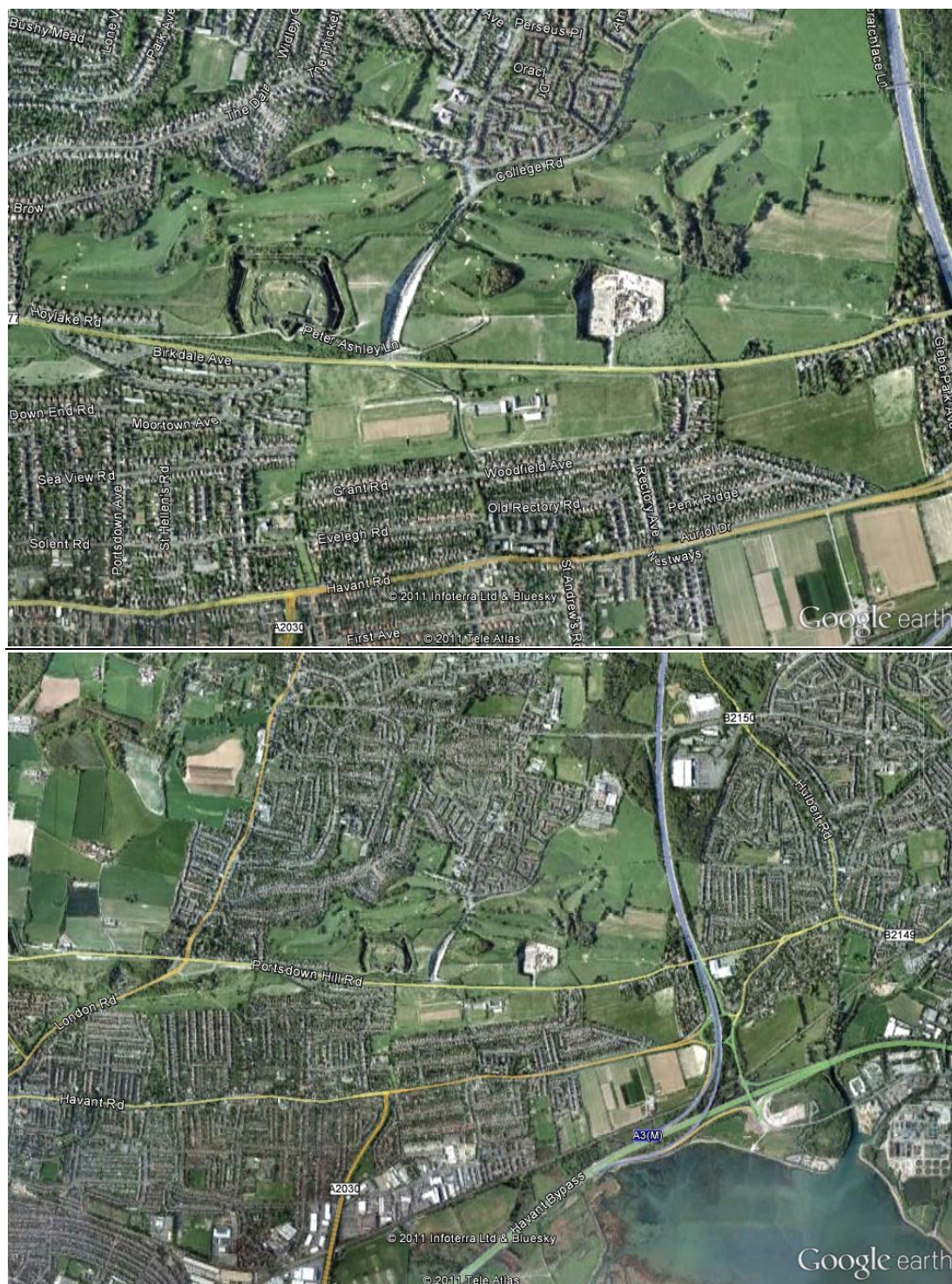
TN08: Proposed access route for vehicles across off-site amenity grassland.

TN09: Pond 2, reported by grounds staff to contain a large population of fish. Please refer to Appendix E for great crest crested newt habitat suitability index calculations and results.

TN10: Tall ruderal habitat, with steep northern exposure. Low potential for widespread reptile species (Survey Area 5).

TN11: Deciduous woodland dominated by ash, hazel and blackthorn, with oak and birch and frequent bramble ground cover. This habitat is a designated SINC (Survey Area 5).

Appendix B: Aerial Photograph of the Site



Appendix C: Magic Map Search Results

Site Check Report

Report generated on December 12 2011.

You clicked on the point:

Grid Ref: **SU682067**

Full Grid Ref: **468200 , 106700**

The following features have been found within 2,000 metres of your search point:

Counties, Metropolitan Districts and Unitary Authorities (GB)

Name	Geographic Level
PORTSMOUTH (CITY OF)	UNITARY AUTHORITY
HAMPSHIRE	COUNTY

NUTS1 - Government Office Regions (GB)

Name	Reference	Hotlink
SOUTH EAST	UKJ	http://www.ons.gov.uk/ons/guide-method/geography/beginner-s-guide/european/south-east/index.html

Ancient Woodland (England)

Grid Reference	Wood Name	Theme ID	Theme Name
su690075		1414916	ANCIENT REPLANTED WOODLAND
su691074		1414911	ANCIENT & SEMI-NATURAL WOODLAND
su663075		1414922	ANCIENT & SEMI-NATURAL WOODLAND
su684082		1414942	ANCIENT & SEMI-NATURAL WOODLAND
su688075		1414915	ANCIENT & SEMI-NATURAL WOODLAND
su694072		1414902	ANCIENT & SEMI-NATURAL WOODLAND
su690079		1414932	ANCIENT REPLANTED WOODLAND
su694071		1414893	ANCIENT REPLANTED WOODLAND
su690079		1414935	ANCIENT & SEMI-NATURAL WOODLAND
su695072		1414903	ANCIENT & SEMI-NATURAL WOODLAND
su695082		1414938	ANCIENT REPLANTED WOODLAND
su678067	PURBROCK PARK WOOD	1112174	ANCIENT & SEMI-NATURAL WOODLAND
su678068	PURBROCK PARK WOOD	1112174	ANCIENT & SEMI-NATURAL WOODLAND
su678067	PURBROCK PARK WOOD	1112174	ANCIENT & SEMI-NATURAL WOODLAND
su671081		1414940	ANCIENT & SEMI-NATURAL WOODLAND

Ramsar Sites (England)

Reference	Name
UK11013	CHICHESTER AND LANGSTONE HARBOURS

Special Protection Areas (England)

Reference	Name
UK9011011	CHICHESTER AND LANGSTONE HARBOURS

Special Areas of Conservation (England)

Reference	Name
UK0030059	SOLENT MARITIME

Sites of Special Scientific Interest (England)

Reference	Name	Citation
1000659	PORTSDOWN	1003165
1000643	LANGSTONE HARBOUR	1001182

Areas of Outstanding Natural Beauty (England)

There are no features within your search area.

To save the report, select "Save As" from the File menu. Give the report a name of your choice and save it in "Web Page, HTML only" format.
You can then open your report using your web browser software.

Appendix D: Site Photographs



Plate 1. Pond 1; Mostly dry, despite observations in late November following rain. This suggests that the feature this may not be appropriate to support breeding amphibians in the spring.



Plate 2. Pond 1, (Target Note 3c, designated ancient woodland visible in the background).



Plate 3. Dry ditch of low ecological value, on the northern edge of Target Note 3b (designated ancient woodland).



Plate 4. Storm damaged mature oak assessed for bat potential in designated ancient woodland (Target Note 3a).



Plate 5. View north west over Area 3.



Plate 6. View south east over Area 3.



Plate 7. Isolated semi-natural grassland in foreground (Area 3) with woodland strip containing Pond 3 in background.



Plate 8. Area 4 comprises almost exclusively amenity grassland.



Plate 9. Pond 2, reported by staff to have large fish population. This and the water turbidity makes great crested newt utilisation unlikely.



Plate 10. Dry ditch in area three, with low ecological value.



Plate 11. View south over Area 4 from Area 5, with tall ruderal vegetation in foreground and Pond 2 in background.



Plate 12. Tall ruderal habitat in Area 5, with potential to be utilised by widespread reptile species, particularly grass snake and slow worm.

Appendix E: Great Crested Newt Habitat Suitability Index

Pond 1 - Great Crested Newt Habitat Suitability Index			
			SI value
SI1.	Map location	A/B/C	A 1.00
SI2.	Surface area	rectangle/ellipse/irregular	rectangle
	length (m)		
	width (m)		
	OR estimate (m ²) if irregular		
	area (m ²) =	25	0.05
SI3.	Dessication rate	never/rarely/sometimes/frequently	frequently 0.10
SI4.	Water quality	good/moderate/poor/bad	good 1.00
SI5.	Shade	% of margin shaded 1m from bank	0 1.00
SI6.	Waterfowl	absent/minor/major	absent 1.00
SI7.	Fish population	absent/possible/minor/major	absent 1.00
SI8.	Pond density	number of ponds within 1km	3 1.00
SI9.	Terrestrial habitat	good/moderate/poor/isolated	moderate 0.67
SI10.	Macrophyte cover	%	25 0.56
HSI score =			0.51
Pond suitability =			below average

Pond 2 - Great Crested Newt Habitat Suitability Index			
			SI value
SI1.	Map location	A/B/C	A 1.00
SI2.	Surface area	rectangle/ellipse/irregular	rectangle
	length (m)	15	
	width (m)	15	
	OR estimate (m ²) if irregular		
	area (m ²) =	225	0.45
SI3.	Dessication rate	never/rarely/sometimes/frequently	never 0.90
SI4.	Water quality	good/moderate/poor/bad	poor 0.33
SI5.	Shade	% of margin shaded 1m from bank	50 1.00
SI6.	Waterfowl	absent/minor/major	absent 1.00
SI7.	Fish population	absent/possible/minor/major	major 0.01
SI8.	Pond density	number of ponds within 1km	3 1.00
SI9.	Terrestrial habitat	good/moderate/poor/isolated	good 1.00
SI10.	Macrophyte cover	%	50 0.81
HSI score =			0.51
Pond suitability =			below average

Pond 3 - Great Crested Newt Habitat Suitability Index				SI value
SI1.	Map location	A/B/C	A	1.00
SI2.	Surface area	rectangle/ellipse/irregular	ellipse	
		length (m)		
		width (m)		
		OR estimate (m ²) if irregular		
		area (m ²) =	25	0.05
SI3.	Dessication rate	never/rarely/sometimes/frequently	frequently	0.10
SI4.	Water quality	good/moderate/poor/bad	good	1.00
SI5.	Shade	% of margin shaded 1m from bank	100	0.20
SI6.	Waterfowl	absent/minor/major	absent	1.00
SI7.	Fish population	absent/possible/minor/major	absent	1.00
SI8.	Pond density	number of ponds within 1km	3	1.00
SI9.	Terrestrial habitat	good/moderate/poor/isolated	good	1.00
SI10.	Macrophyte cover	%	100	0.80
HSI score =				0.51
Pond suitability =				below average

Appendix F: Existing dormouse records location

Dormouse records have been recovered within grid square SU6907. The approximate area of this square is shown in the aerial image below, with Portsmouth Golf Course located in the south west corner of the image.

It is considered that the records of dormice are likely to have come from the north east corner of the grid square, as woodland habitat here is connected to the wider rural landscape via field boundary hedgerows and woodland patches. These habitats are, however, isolated from the site of the proposed landscaping works, thus no impacts to this species are anticipated.





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