

Kingscroft Farm & adjacent former allotments, Ranelagh Road, Havant, Hampshire, PO9 1NR

Habitat Regulations Assessment Report

August 2012

Hampshire Ecological Services Ltd
Consultant Ecologists & Chartered Environmentalists

91 Ethelburt Avenue, Southampton, Hants SO16 3DF

E: enquiries@hantsecology.co.uk

W: www.hantsecology.co.uk

T: 0771 456 8361

F: 0871 266 8127



Registered in England Company No. 7316076.

Registered office: 4 Sussex Business Village, Lake Lane, Barnham, W. Sussex PO22 0AL.

**Habitat Regulations Assessment Report for Kingscroft Farm,
Ranelagh Road, Havant, Hampshire, PO9 1NR
for
Orchard Homes**

Reference: Ranelagh Road, Havant					
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		KIRSTY PEARMAN Assistant Ecologist		JOHN POLAND Principal Ecologist	

This report represents sound industry practice; reports and recommends correctly, truthfully and objectively; is appropriate given the local site conditions; scope of works proposed and resources allocated to us by the client; and avoids invalid, biased, and exaggerated statements.

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1. EXECUTIVE SUMMARY

1. Hampshire Ecological Services Ltd was commissioned by Savills (Property Consultants) on behalf of Orchard Homes to produce a Habitat Regulation Assessment of a proposed residential development on a site at Kingscroft Farm and adjacent former allotments, Ranelagh Road, Havant, Hampshire. Planning Permission is being applied for residential development at the Site for 79 dwellings, including related infrastructure such as access roads and landscaping.
2. A Habitat Regulations is a decision making process in which the 'Competent Authority', Havant Borough Council, needs to demonstrate that the housing development of Land South of Ranelagh Road would not have an adverse effect on the integrity of a European site (also referred to as a *Natura 2000* site).
3. This report has been prepared to address the raised concerns by Havant Borough Council and Natural England regarding the potential impacts on Chichester and Langstone Harbours and Solent Maritime from increased recreational pressure as a result of the development at Land South of Ranelagh Road, Havant *in combination* with other potential developments at other allocated sites. Chichester and Langstone Harbours are designated as Ramsar sites, Special Protection Areas (SPA) and a Site of Special Scientific Interest (SSSI). Chichester Harbour is also designated as an Area of Outstanding Natural Beauty (AONB). Solent Maritime is a Special Area of Conservation (SAC).
4. The harbours were designated due to their features of internationally important numbers of wintering waterbirds, migratory birds and breeding seabirds listed on Annex 1. The sites also contain a wide range of key coastal intertidal and terrestrial habitats supporting important plant and animal communities.
5. Surveys have found that:
 - A potential 44 of the 163 potential new residents a week, around 9 of which are likely to be dog walkers will be anticipated recreational walkers at least once per week;
 - A potential 1 of the 163 potential new residents a week will be anticipated to participate in recreational sailing at least once per week; and
 - A potential 16 of the 79 potential new dwellings, potential 33 of the 163 potential new residents a year will visit for total recreational features a year (including bird watching, cycling, water sports and angling).A potential **46 of the total 163** potential new residents might seek to pursue recreational activity at least once per week on any suitable Ramsars/ SPAs/ SSSI and SAC within the zone of influence of the proposals.

6. It was identified that 52% of people visiting the sites travelled for less than 30 minutes, indicating that most visitors will live within 30 minutes drive of Langstone and Chichester Harbour.
7. The potential impacts to coastal habitats found on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC as a result of increased recreational pressure include:
 - Certain recreational activities in sensitive areas at sensitive times such as shellfishing (in terms of loss of material from the food chain) and dog walking (in terms of disturbance of waterfowl);
 - Direct disturbance to qualifying bird species from bird watchers;
 - Direct disturbance to qualifying bird species from recreational activity (e.g. walkers, cycling, water sports (i.e. canoeing, windsurfing, dinghy sailing and yachts/motorboats and moored boats);
 - Selective removal of species (e.g. bait digging, shellfish collectors, wildfowl, recreational fishing);
 - Trampling of sensitive plant species;
 - Eutrophication arising from dogs fouling; and
 - The potential to encroach on coastal land or result in physical loss of land for extra visitor facilities.
8. It has been found that 13% of human activity caused disturbance to birds. 79% were caused by activities on the shore (23% by walkers, 32% by those with dogs, 16% by other people, and the remaining 8% by shots, bait-diggers, cyclists, joggers and vehicles). It has been predicted that shorebird survival is potentially reduced if daily human disturbance rates exceed 30 per ha (for waders). There are currently already a couple of sites in Chichester Harbour which exceed this. Several other sites, including those in Langstone Harbour, are currently just below this. There is concern that increases in visitor numbers from new housing developments may tip these sites over the threshold.
9. The Management Plans of the designated sites states that there is potential for conflicts to arise between recreational access and conservation features. Management measures are built into the current plans to accommodate an increase in visitors expected from housing development in the area.
10. As part of the proposed development at Land South of Ranelagh Road, an area of accessible open space is to be provided adjacent to the Site at Meyrick Road. There are also a number of alternative existing publicly accessible green open spaces near the housing development at Ranelagh Road, such as Havant Park and Bidbury Mead Recreation Ground, which are in short walking distance that recreational users generated by the proposals are likely to use.

11. Where increased recreational use is predicted to cause significant adverse impacts to the important designated sites, avoidance and mitigation should be considered by the local authority i.e. Havant Borough Council.
12. The development at Land South of Ranelagh Road in combination with other possible developments in the area are likely to add only a small amount to the existing pressure on Langstone Harbour, Chichester Harbour and Solent Maritime. Impact avoidance and mitigation measures being delivered by these proposed developments will ensure that accessible natural green space is to be provided and management measures in the designated sites is implemented (if required). This will not only reduce the impact of new residents, but also existing residents within the Havant Area.
13. In view of the findings, it is considered that the development at Land South of Ranelagh Road is unlikely to have a significant impact on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC, as a result of increased recreational pressure either alone or in combination with other plans or projects. It is therefore considered that it is unnecessary for Havant Borough Council to undertake an Appropriate Assessment.

2. INTRODUCTION

2.1 Background

Hampshire Ecological Services Ltd was commissioned by Savills (Property Consultants) on behalf of Orchard Homes in September 2010 to undertake ecological surveys and assessment of a proposed residential development (involving demolition of the existing buildings (stables) and building new dwellings) on a site at Kingscroft Farm and adjacent former allotments, Ranelagh Road, Havant, Hampshire. The results of the ecological appraisal and recommended work were reported in the *Ecological Assessment Report* (Hampshire Ecological Services Ltd 2012). Further recommendations on protected species were reported for bats in *Method Statement to accompany Natural England EPS licence application in respect of bats: Document 1 – Background and Supporting Information* (Hampshire Ecological Services Ltd 2012) and for reptiles in *Reptile Survey Report and Mitigation Strategy* (Hampshire Ecological Services Ltd 2012).

The application site is at Kingscroft Farm and adjacent former allotments on Ranelagh Road in Havant (from hereon referred to as the Site), with a central Ordnance Survey grid reference of SU 708 062 (see **Map 1**).

The rectangular area of land on the south side of Ranelagh Road was formerly allotments. This land, and adjacent land to the east (corner of Ranelagh Road/ Brockhampton Road) and the north side of Ranelagh Road is an allocated housing site in Saved Policy H3.9 of the Local Plan to provide 55 dwellings. The majority of the rest of the proposed development site is identified at Saved Policy EMP1.6 of the Local Plan. Portsmouth Water has advised that the land is surplus to its requirements. This land and the remaining part of the proposed development site, and a further area of Portsmouth Water owned land to the south-west, is identified as site H18 in the Strategic Housing Land Availability Assessment (SHLAA) (2011) totalling 3.6ha. A total of 79 dwellings have been proposed.

An area of adjacent land at Meyrick Road has been identified to meet the open space requirements for this allocated housing site.

Planning Permission is being applied for residential development at the Site and the outline Master Plan (see **Map 2** – Proposed Scheme) takes into account the recommendations for the mitigation and enhancement of ecological features as recommended in the *Ecological Assessment Report* (Hampshire Ecological Services Ltd 2012). This includes the provision of adjacent to the site accessible open space to address offsite recreational pressure on designated nature conservation sites within 5km.

This report has been reviewed by John Poland CEnv MIEEM CBiol MSB. John Poland is a full member of the Institute of Ecology and Environmental Management (MIEEM), a Chartered Environmentalist (CEnv) and a Chartered Biologist with over 12 years experience in ecological consultancy.

2.2 Purpose of this Report

A Habitat Regulations is a decision making process in which the 'Competent Authority' (in this case Havant Borough Council as lead Authority) needs to demonstrate that a plan (in this case the housing development of Land South of Ranelagh Road) would not have an adverse effect on the integrity of a European site, either alone or in combination with other plans and projects. A European site (also referred to as a *Natura 2000* site) is either a Special Area of Conservation (SACs) identified through the EU Habitats Directive (Council Directive 92/43/EEC) or Special Protection Area (SPAs) identified through the Birds Directive (Council Directive 79/409/EEC). Additionally, Ramsar sites listed under the Ramsar Convention 1976 are considered under this heading for the purposes of carrying out the Habitat Regulations, even though they are not technically classed as European sites. This follows guidance within Planning and Policy Statement 9 (PPS9) (ODPM, 2006).

An EIA Screening Opinion provided by Havant Borough Council (Havant Borough Council 2012) raised concerns about potential impacts on Chichester and Langstone Harbours and Solent Maritime from increased recreational pressure as a result of the development at Land South of Ranelagh Road, Havant *in combination* with other potential developments at other allocated sites. Chichester and Langstone Harbours are designated as Ramsar sites, Special Protection Areas (SPA) and a Site of Special Scientific Interest (SSSI). Chichester Harbour is also designated as an Area of Outstanding Natural Beauty (AONB). Solent Maritime is a Special Area of Conservation (SAC).

No extensive studies have been carried out on the impact of recreational pressure on European designated sites. However, advice from Havant Borough Council and Natural England includes the need to consider whether an Appropriate Assessment (AA) is required under the Habitats Regulations.

This report has been prepared to address the matter raised by the Council and Natural England regarding the increase of recreational pressure on Chichester Harbour SPA, Ramsar, SSSI and AONB; Langstone Harbour SPA, Ramsar and SSSI and Solent Maritime SAC, as a result of the development of Land South of Ranelagh Road, Havant *in combination* with other developments within the local area.

2.3 Relevant Legislation

The primary legislative protection covering the European designated sites of relevance to this report originates from the Habitats Directive. Articles 6(3) and 6(4) of the Habitats Directive are relevant to the development proposals in view of their potential to exert recreational disturbance effects upon the SPA, SAC, SSSI and AONB sites:

"3. Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either alone or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the

implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

4. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

The Habitats Directive thus requires that a sequential approach be adopted when addressing potential impacts upon European sites. Guidance for doing this in practice has been published by the European Commission and others, and is discussed below.

The Habitats Directive is transposed into UK law by the Conservation of Habitats and Species Regulations 2010. In particular, the main prescriptions of the Conservation of Habitats and Species Regulations 2010 relating to Appropriate Assessment and the protection of European sites are transposed by Regulations 61 to 67:

"A competent authority, before deciding to ... give any consent for a plan or project which is likely to have a significant effect on a European site ... shall make an appropriate assessment of the implications for the site in view of that sites conservation objectives ... The authority shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the European site".

2.4 The Habitats Regulations Assessment (HRA) Process

Guidance published by the European Commission entitled *"Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites"* (2001) provides guidance on meeting the correct stepwise approach required by Article 6 of the Habitats Directive. The whole process is known as "Habitats Regulations Assessment" (HRA) and is split into the following stages that are undertaken in sequence:

1. Screening the need for an Appropriate Assessment;
2. The Appropriate Assessment;
3. The Assessment of Alternative Solutions; and
4. Assessment where no alternative solutions exist and where adverse impacts remain (also known as the test for "Imperative Reasons of Overriding Public Interest" or IROPI).

Undertaking the Habitats Regulations Assessment process is the responsibility of the decision maker as the competent authority for the purposes of the Habitats Regulations (in this case Havant Borough Council), however, it is the responsibility of the proponent of a plan or project to provide the competent authority with the information that they require for this purpose.

In view of this, the aim of this report is to provide the information that may be required at each stage in the HRA process to determine the impact of the development and in order to enable Havant Borough Council to reach informed decisions on the likely effects of the proposals on the European designated sites.

It is anticipated that this will primarily be concerned with stage 1 (Screening) as set out above, as an objective of the assessment will be to introduce measures to address any identified potential impact as early as possible, thereby negating the need for Havant Borough Council to undertake an Appropriate Assessment.

2.5 *Scope of the Report*

This report is designed:

- To gather information to establish whether or not the development proposals of Land South of Ranelagh Road, Havant are likely to contribute to a significant impact from increased recreational use of Chichester Harbour SPA, Ramsar, SSSI and AONB; Langstone Harbour SPA, Ramsar and SSSI and Solent Maritime SAC, either alone or in combination with other plans and projects;
- To gather information to establish, if a significant impact is likely, whether or not it would adversely affect the integrity of the European designated sites; and
- To recommend impact avoidance and mitigation measures, if required, to address any potential impacts identified.

3. CHARACTERISATION OF THE PROPOSED DEVELOPMENT

3.1 Introduction

Guidance from the European Commission (2001) indicates that the first stage of providing the information that is necessary for a competent authority to undertake the Habitats Regulations Assessment process, is for all those elements of the project or plan which either alone or in combination with other plans and projects have the potential for having a significant effect on a Natura 2000 site to be identified and characterised.

In this instance, the concern that has been raised by Havant Borough Council and Natural England relates to the potential for the proposals to introduce new residents into the local area that might, through increased public pressure, such as pursuing informal recreational activity on the SACs, SPAs, Ramsars, SSSIs and AONB affect the features for which they were designated. This section therefore provides background information on those elements of the development proposal which either alone or in combination with other plans or projects have the potential for contributing towards this effect and have a potentially significant effect on a Natura 2000 site.

3.2 Outline of the Scheme

Planning Permission is being applied for residential development at the Site for 79 dwellings, including related infrastructure such as access roads and landscaping.

To avoid contributing significantly to offsite recreational pressures on designated nature conservations sites, part of the proposed development site also includes on site accessible open space available for informal public recreation. This is discussed further below. An area of adjacent land offsite at Meyrick Road has been identified which provides accessible open space within walking distance (see **Map 3**).

In addition to providing open space for residents, there are opportunities to meet local biodiversity objectives within the accessible open space. These could involve management options aimed at enhancing the Site for biodiversity and the enjoyment of people such as provision of open grassland areas with wildflower seed mix to increase diversity within the sward, planting of native fruiting shrub species to enhance wildlife corridors within the landscape and the provision of dead wood log piles to enhance habitat for invertebrates.

3.3 Calculation of Likely Number of New Residents

The proposed development will introduce new residents to the Havant area. According to information available from the Office for National Statistics, St. Faiths electoral ward within Havant contained a total of 4,220 dwellings with 8,699 residents at the time of the most recent Census (2011). This means that the average dwelling in this area can be expected to accommodate

just over 2 residents. It is important to note that local demographics are usually a better indicator of residential population than bedroom numbers or size of dwellings.

Based upon the above figures the proposed development for 79 new dwellings can be expected to introduce around 163 new residents into Havant.

3.4 *Potential Generation of Recreational Pressure*

It can be assumed that a number of the new residents of the proposals are likely to pursue recreational activity in nearby publicly accessible natural areas.

Data collected by Sport England in the “*Active People Survey*” (2005-2011) for East Hampshire District indicates that 23.6% of people surveyed in the District, and 18.6% of people in Havant, undertake a recreational walk of at least 30 minutes, at least three times per week.

This figure accords well with information collected by East Hampshire District Council (EHDC) in their “*Open Space, Sports and Recreation*” study (2008), which found that 27% of residents visited amenity open space and natural green space at least once per week.

The EHDC study indicates that 90% of people indicated that they were willing to walk up to 15 minutes (approximately 700m) to reach natural green space, but did not provide equivalent statistics for how far people were prepared to drive to reach natural green space areas.

Therefore, a large proportion of the total 27% of people who visit natural green space weekly may prefer to walk to areas of natural green space and are therefore less likely to visit the designated areas under question due to their distance. The Habitats Regulations however, require a precautionary approach to assessment (EC, 2000 & 2002) and it cannot therefore be assumed that those who would ordinarily choose to walk to a closer site would not on occasion drive to a SAC, SPA, Ramsar, SSSI or AONB.

Chichester Harbour is used for a wide variety of sailing, from dinghy racing to yacht marinas, and has several sailing clubs. Data collected by Sport England in the “*Active People Survey*” (2005-2011) for East Hampshire District indicates that 0.25% of people surveyed in the District participate in recreational sailing of at least 30 minutes, at least once a week. The study indicated that 0.56% of people surveyed participate in recreational sailing of at least 30 minutes, at least once a month.

Further information collected by EHDC in the “*Open Space, Sports and Recreation*” study (2008), found that the most common travel method for visiting outdoor sports facilities by walking (50.1%), followed by car 38.8%. However the actual predominant travel pattern by those using outdoor sports facilities most frequently was via car (63%). The most frequent travel time to the facility was between five and ten minutes (37%), followed by between 11 and 14 minutes (29%). This indicates that people are willing to travel to reach their chosen facility. The majority of the sailing clubs in Chichester Harbour are within a 15 minute drive of the Site.

The designated sites of Solent Maritime and Langstone and Chichester Harbours are popular sites for bird watching, attracting large numbers of visitors. The sites are also used for angling and bait-digging (all year), swimming (in restricted areas in the summer), sailing, windsurfing, canoeing, waterskiing and wildfowling (September to February). A study by Stillman, Liley, Clarke & Fearnley (2012) found 52 million households visit the Solent Maritime coastline per year. There is a 20% household visit rate with households within a 2km travelling distance (see Section 3 for details).

In addition, West Hayling Local Nature Reserve, "Langstone Oyster Beds", lie in the north eastern corner of Langstone Harbour, and Farlington Marshes Local Nature Reserve lie in the north western corner (see Section 3 for details).

A previous study (Fearnley, Clarke & Liley, 2011) at sites across the Solent coastline identified that 51% of people arrived by car and a further 46% arrived on foot. 52% of people visiting the Reserve travelled for less than 30 minutes. Half of all visitors arriving on foot lived within 0.7km, while half of all visitors arriving by car lived more than 4km away. Only 9% of foot visitors lived more than 2km away compared to 80% of all car visitors. This indicates that most visitors will live within 30 minutes drive of Langstone and Chichester Harbour Ramsar/ SPA/ SSSI.

West Hayling Local Nature Reserve is approximately a 5 minutes drive from the Site, with plenty of free parking available. It takes approximately 40 minutes to walk to the reserve. It takes however approximately 3 minutes to drive and 18 minutes to walk to the nearest part of Langstone Harbour at Southmoor Lane. Farlington Marshes Local Nature Reserve is approximately a 10 minutes drive, with plenty of free parking available. It takes however approximately 4 minutes to drive and 30 minutes to walk to the nearest part of Chichester Harbour at Langstone.

In view of the above and the need to adopt a precautionary approach, for the purposes of this assessment a worst case scenario has been adopted and it has been assumed that of new dwellings:

- up to 27% of the residents will be anticipated recreational walkers at least once per week (potential 44 of the 163 potential new residents a week);
- up to 0.56% of the residents will be anticipated to participate in recreational sailing at least once per week (potential 1 of the 163 potential new residents a week); and
- up to 20% of households visit rate for total recreational features a year (including bird watching, cycling, water sports and angling) (potential 16 of the 79 potential new dwellings, potential 33 of the 163 potential new residents a year)

could have high possibility to travel to the Ramsars/ SPAs/ SSSIs and SAC, if such areas are suitable for informal recreational activity (discussed further below).

This means that up to a potential **46 of the total 163** potential new residents might seek to pursue recreational activity at least once per week on any suitable Ramsars/ SPAs/ SSSI and SAC within the zone of influence of the proposals.

The lower number of people recorded by the ongoing Sport England survey (2005-2011) as undertaking recreational walks of at least 30 minutes (18.6% of all people, and all kinds of walk not just those on natural green space) at a frequency of 3 times per week indicates that the above number is likely to drop off markedly for users who would actually visit an Ramsars/ SPAs/ SSSI and SAC more often than once per week.

Notwithstanding the above, it should be noted that the above figures are likely to be considerable overestimates, for the reasons already set out.

Dog Walkers

The above statistics also do not distinguish between walkers who visit a site with, and without, a dog or dogs. Data provided for 2010 and 2012 by the Pet Food Manufacturer's Association (www.pfma.org.uk) suggests that approximately 20% of households in the South East own a dog.

This figure however does not provide a split between those dog owners who would drive to walk their dogs on Ramsars/ SPAs/ SSSIs and SAC, and those who would only use more local sites. A previous study at a similar site in East Hampshire found that 13% of total visitors were dog walkers.

This indicates that, of the total potential 44 recreational walkers generated by the development proposals who might visit any Ramsar/ SPA/ SSSI and SAC within travelling distance, **around 9 are likely to be dog walkers**. It should also be noted that, as with the general recreational users, some of these dog walkers are likely to prefer visiting more local sites in short walking distance.

A study by Fearnley, Clarke & Liley (2010) found visitors who listed dog walking as an activity were much more localised to the Ramsar/ SPA/ SSSI and SAC with half living within 1.20km whereas half of all walkers lived within 2.70km.

3.5 In-combination/Cumulative Impacts

Any remaining unmitigated impact arising as a result of the proposed development at the Site, even if it may be insignificant when considered *alone*, may have the potential to act *in combination* with the effects of other plans or projects to lead to a significant cumulative impact. Because of this, it is necessary to consider how many plans and projects may act in combination with the development proposals at the Site to increase recreational pressure upon on a Ramsar/ SPA/ SSSI and SAC.

In this instance, the potential impact under investigation is the potential for Ramsars/ SPAs/ SSSIs and SACs to be affected by increases in recreational pressure. That being the case, it is considered that the scope of the cumulative / in combination impact assessment should be restricted to other residential development coming forward in the local area.

In order to assess the potential cumulative impact that the proposals might have in combination with other nearby reasonably foreseeable residential development, it is required to identify such development proposals coming forward that might conceivably contribute towards an in combination impact on the Ramsars/ SPAs/ SSSIs and SACs. This however, was not possible to establish in this assessment.

The size of these developments (in dwelling units), and the potential maximum number of recreational users that they might be expected to generate who would visit the site at least once per week to pursue an informal walk, with and without dogs, or pursue other recreational activities, such as bird watching, sailing, cycling, water sports and angling, (using the same reasoning set out above for the proposed development) would need to be calculated and taken into account.

There are likely to be other developments coming forward within the visitor catchment of the designated sites, but identifying all of these is unfeasible and is recognised as a potential limitation of this study.

4. CHARACTERISATION OF THE SPECIAL AREAS OF CONSERVATION

4.1 Introduction

This section describes the internationally designated nature conservation sites which may be affected by the proposed development, either alone or in combination with other plans and projects.

The Solent area is highly designated with several overlapping European designated sites. Special Protected Areas (SPA) designated under the Birds Directive (Council Directive 79/409/EEC), Wetlands of International importance designated under the Ramsar Convention and Special Areas of Conservation (SAC) designated under the EU Habitats Directive (Council Directive 92/43/EEC).

There are three internationally designated nature conservation sites within 2km of the Site (see **Map 1**), some of which have multiple designations. These are Chichester and Langstone Harbours which are both designated as a Ramsar site, a Special Protection Area (SPA) and a Site of Special Scientific Interest (SSSI). Chichester Harbour is also designated as an Area of Outstanding Natural Beauty (AONB). There is also Solent Maritime which is a Special Area of Conservation (SAC). In addition to these, within 5km of the Site there are a further three internationally designated nature conservation sites. These are Solent and Isle of Wight Lagoons SAC, Warblington Meadow and Portsdown are designated as SSSI's.

The Council and Natural England expressed most concern about the potential impacts on Chichester Harbour SPA, Ramsar, SSSI and AONB (figure 1); Langstone Harbour SPA, Ramsar and SSSI (figure 1) and Solent Maritime SAC (figure 2), and so the report will mainly focus on these sites. Natura 2000 Data Sheets for these sites are appended at **Appendix 1**.



Figure 1: Chichester and Langstone Harbours SPA and Ramsar



Figure 2: Solent Maritime SAC

The following section outlines the key features, conservation objectives and vulnerabilities for the designated sites, identifying the sites that will be covered by the assessment. The information has been taken from Natural England (2001) Regulations 33, Natura 2000 standard data forms and Information sheets on Ramsar Wetlands (Joint Nature Conservation Committee website; <http://www.jncc.gov.uk>).

4.2 Features for which the designated nature conservation sites were designated

4.2.1 Chichester and Langstone Harbour SPAs

Chichester and Langstone Harbours covers two estuaries containing a wide range of coastal habitats supporting important plant and animal communities. The key coastal habitats are sand and shingle, shallow coastal waters, saltmarsh, intertidal mudflats, sandflats and mixed sediments. The site is of particular significance for water birds, especially in migration periods and in winter. It also supports important colonies of breeding terns.

The sites are strictly protected, classified in accordance with Article 4.1 of the EC Birds Directive. The harbours were designated due to their features of internationally important numbers of wintering waterbirds, internationally important numbers of migratory birds and internationally important numbers of breeding seabirds listed on Annex 1. The sites also qualifies under Article 4.2 of the EU Birds Directive by regularly supporting 1% or more of the biogeographic population of migratory species and 93,230 waterfowl.

4.2.2 Chichester and Langstone Harbour Ramsar sites

Chichester and Langstone Harbours are also Ramsar sites which are designated under the International Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention). The Harbours are large, sheltered estuarine basins comprising extensive mud and sand flats exposed at low tide (Figure J3.9). The site is of particular significance for overwintering wildfowl and waders and a wide range of coastal and transitional habitats supporting important plant and animal communities. The sites are designated under the Ramsar criteria 1, 5 & 6 (RIS, 2006):

Ramsar criterion 1

The site comprises of two large estuarine basins linked by a channel. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes.

Ramsar criterion 5 – Assemblages of international importance

Species with peak counts in winter:

76480 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6 – sp./pop. occurring at levels of international importance

- Ringed plover, *Charadrius hiaticula* (1.1% of the pop.)
- Black-tailed godwit, *Limosa limosa islandica* (2.5% of the pop.)
- Common redshank, *Tadorna tadorna* (1% of pop. in GB)
- Dark bellied brent goose, *Branta bernicla bernicla* (6% of the pop.)
- Common shelduck, *Tadorna tadorna* (1.8% of pop. in GB)
- Grey plover, *Pluvialis squatarola* (1.2% of pop.)
- Dunlin, *Calidris alpina alpina* (2.5% of the pop.)

Chichester and Langstone Harbours are also designated SSSIs due to its features of a wide range of intertidal and terrestrial habitats, internationally important numbers of waterbirds and nationally important species of flora and fauna.

Chichester Harbour SPA, Ramsar and SSSI has been designated due to exhibiting a wide range of intertidal and associated terrestrial habitats which is of particular significance for wintering wildfowl and waders and also breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of habitats which have important plant communities.

The Chichester Harbour extensive intertidal mudflats are the feeding grounds for internationally important numbers of ringed plover *Charadrius hiaticula*, grey plover *Pluvialis squatarola*, redshank *Tringa totanus*, black-tailed godwit *Limosa limosa islandica*, dunlin *Calidris alpina*, sanderling, curlew *Numenius arquata* and greenshank *Tringa nebularia*. Amongst the wildfowl, shelduck *Tadorna tadorna*, Eurasian teal *Anas crecca* and particularly dark-bellied brent goose *Branta bernicla bernicla* numbers are of international importance. The unimproved permanent pasture behind the sea wall provides alternative feeding sites for the geese and major high tide

wader roosts. The pasture contains scarce species such as green-winged orchid *Orchis morio* and adder's tongue fern *Ophioglossum vulgatum*. The site is owned and managed by the Chichester Harbour Conservancy and the Chichester Harbour Trust.

Langstone Harbour SPA, Ramsar and SSSI has been designated for the Annex 1 birds and regularly occurring migratory birds present on the site. The harbour is of international importance as a rich intertidal system with extensive coastal grazing cord-grass *Spartina anglica* marsh and lagoons. The marsh has several pools, both freshwater and brackish supporting high densities of intertidal invertebrates, and a broad stream, which provide feeding, roosting and overwintering sites for waders and wildfowl. It contains internationally important numbers of ringed plover *Charadrius hiaticula*, grey plover *Pluvialis squatarola*, redshank *Tringa totanus*, black-tailed godwit *Limosa limosa islandica* and dunlin *Calidris alpina*. The reedbeds are used by bearded tit, sedge and reed warblers for breeding. The grassland provides grazing for several thousand brent geese *Branta bernicla* and shelduck *Tadorna tadorna* in the winter and breeding sites for redshank, lapwing and skylark during the summer. The site also contains two Local Nature Reserves and is managed in parts, including West Hayling Local Nature Reserve, by the Royal Society for the Protection of Birds (RSPB). Land in the north west of the Harbour at Farlington Marshes is managed by Hampshire and Isle of Wight Wildlife Trust (HWT) as a Local Nature Reserve. These are under agreement with Hampshire County Council.

Farlington Marshes in the north-west sector of Langstone Harbour contains a variety of rare habitats – brackish marsh, fresh marsh, a large lagoon with associated reed *Phragmites* beds, *Agrostis stolonifera* grassland and scrub. It is a vital high water wader roost for the Harbour and a major feeding ground for Brent geese after the *Zostera* beds in the Harbour have been consumed. The grassland flora is especially rich for reclaimed silt, and includes over 50 species of grasses.

4.2.3 Solent Maritime SAC

The Solent Maritime SAC designation covers the subtidal areas off the mouth of Beaulieu estuary and also the estuarine intertidal areas of Chichester and Langstone Harbours as well as the subtidal areas at the mouth of both Harbours.

Solent Maritime SAC has been designated under the EU Habitats Directive for its Annex I habitats as a primary feature which include:

- *Salicornia* and other annuals colonising mud and sand
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- *Spartina* swards (*Spartinion maritimae*)
- Mudflats and sandflats - not submerged at low tide
- Annual vegetation drift lines
- Perennial vegetation of stony banks
- Coastal lagoons
- Shifting white dunes with *Ammophila arenaria*
- Estuaries
- Sandbanks - slightly covered by sea water all the time

The Solent encompasses a major estuarine system of four estuaries (including Langstone Harbour and Chichester Harbour). 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. Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting eelgrass *Zostera* spp. and green algae, sand and shingle spits, mudflats, and natural shoreline transitions. Includes the presence of very rare sponges and a sandy 'reef' of the polychaete *Sabellaria spinulosa*. Solent Maritime contains rare cord-grass species such as smooth cord-grass *Spartina alterniflora*, small cord-grass *S. maritima*, Townsend's cord-grass *S. x townsendii* and common cord-grass. The large Atlantic salt meadows supports a range of communities dominated by sea-purslane *Atriplex portulacoides*, common sea-lavender *Limonium vulgare* and thrift *Armeria maritima*. It shows rare and unusual transitions to freshwater reedswamp and alluvial woodland as well as coastal grassland.

The site is also designated for it's Annex II Desmoulin's whorl snail (*Vertigo moulinsiana*). Desmoulin's whorl snail is the largest *Vertigo* species. It normally lives on reed-grasses and sedges, such as reed sweet-grass. The species is present in policy unit 5A06. Like all Annex II *Vertigo* species, it is highly dependent on maintenance of existing local hydrological conditions.

Chichester Harbour SPA/ Ramsar/ SSSI/ AONB is located approximately 1.3 km southwest of the Site. Langstone Harbour SPA/ Ramsar/ SSSI is approximately 1.7 km southeast of the Site. Solent Maritime SAC is approximately 1.3 km south of the Site (at Chichester Harbour).

4.3 Sensitivity of Habitats

The habitats for which Chichester Harbour SPA/ Ramsar/ SSSI/ AONB; Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC have been designated are essentially associated with the estuarine system and mudflats and salt marshes, which tend to support more specialist vegetation communities, which supports wintering wildfowl and waders and also breeding birds.

These assessments will need to consider the full range of features for which these sites have been designated. Within these sites, some habitats are likely to be relatively robust and able to withstand increased recreational pressure from use and disturbance, also due to its difficult to access position in the landscape or fencing which restricts access to recreational users. These may be open shore and inter tidal mud flats - with or without saltmarsh. It is considered that such areas in their nature are generally unlikely to be suitable to recreational users such as dog walkers.

Other habitats, such as vegetated shingle, sand dunes and upper saltmarsh habitats are considered to be much more vulnerable as they are the most accessible habitats to people due to their open nature, not only to the effects of trampling and physical habitat damage but also to the disturbance of their typical species – for example breeding ringed plover on shingle, nesting redshank in upper saltmarsh and burrowing bees and wasps on sand dunes.

Relevant guidance on the effects of recreational activity and public access on coastal habitats including saline lagoons, sand dunes, coastal vegetated shingle, saltmarshes and mudflat habitats is provided by Natural England's Report entitled '*Access and Nature Conservation Reconciliation: Supplementary Guidance for England*' (2009), which has been taken into account in setting the scope of this assessment. The habitats are reliant on the underlying soil, geology, geomorphology and landscape, nutrient and soil features to support a distinct assemblage of plants that are specialist to the conditions. In the estuaries there is a unique hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area.

The emphasis of this assessment will therefore focus on the effects of recreational pressure on coastal habitats including saline lagoons, sand dunes, coastal vegetated shingle, saltmarshes and mudflats. The potential impacts to coastal habitats found on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC as a result of increased recreational pressure are listed below:

- Certain recreational activities in sensitive areas at sensitive times such as shellfishing (in terms of loss of material from the food chain) and dog walking (in terms of disturbance of waterfowl);
- Direct disturbance to qualifying bird species from bird watchers;
- Direct disturbance to qualifying bird species from recreational activity (e.g. walkers, cycling, water sports (i.e. canoeing, windsurfing, dinghy sailing and yachts/motorboats and moored boats);
- Selective removal of species (e.g. bait digging, shellfish collectors, wildfowl, recreational fishing);
- Trampling of sensitive plant species;
- Eutrophication arising from dogs fouling; and
- The potential to encroach on coastal land or result in physical loss of land for extra visitor facilities.

Whilst the above listed impacts will need to be assessed and addressed as appropriate, key sensitivities for the site are expected to include physical loss of intertidal habitats that support the migratory bird species and waterfowl, high tide nest sites being flooded which are important for Annex 1 terns and loss of eelgrass growing on muddy sand which is important for Brent geese (*Branta bernicla bernicla*).

However, disturbance is also a key sensitivity including physical disturbance through human activities and non- physical disturbance such as noise, which can have an effect by displacing birds from their feeding grounds thereby adversely affecting their survival. Research has been done recently on the disturbance of Annex 1 bird species on Solent SPA, SAC and Ramsar Sites (but also other areas such as the Thames Basin Heaths SPA) that have shown disturbance effects on:

- Birds feeding on the intertidal at low water;
- Birds roosting or feeding at high water on coastal habitats (saltmarsh, shingle, sea walls and other coastal structures);
- Birds on the water at high water and
- Birds that nest either on or close to the ground during the nesting season.

4.4 Manageable Levels of Recreational Pressure

Information on the existing recreational pressures present on Chichester Harbour SPA/ Ramsar/ SSSI/AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC has been gathered in order to provide a baseline for this assessment. The Solent Maritime SAC receives an average over 1.5 million visitors each year.

Langstone Harbour contains two Local Nature Reserves, West Hayling Local Nature Reserve and Farlington Marshes, managed by the Royal Society for the Protection of Birds (RSPB) and Hampshire and Isle of Wight Wildlife Trust (HWT) respectively. Chichester Harbour is managed by the Chichester Harbour Conservancy and the Chichester Harbour Trust. They are managed as publicly accessible recreational and educational resources. Much of the following information has been sourced from the respective websites that manage these sites (www.hwt.org.uk/pages/farlington-marshes-r.html; www.rspb.org.uk/reserves/guide/1/langstoneharbour/index.aspx and www.conservancy.co.uk).

Both the reserves are staffed by a mixture of paid staff and volunteers. The sites are largely open access with few facilities, however, there are:

- Various car parks;
- Boat trips;
- Programme of events and activities;
- Walking and Nature trails; and
- Picnic areas.

There are a number of walks which circumnavigate the harbour throughout the year including the Festival of Harbour Walks run by Chichester Harbour Conservancy. This has a day featuring Langstone Harbour with the Environment Officer organising and leading the walk. The Friends of Langstone Harbour also organise an annual walk round the harbour.

The sites provide the following recreational activities throughout the year:

- Walking, including dog walking: all year.
- Birdwatching: all year.
- Angling and bait-digging: all year.
- Swimming (in restricted areas): mostly summer.
- Sailing, windsurfing, canoeing, waterskiing: all year.
- Wildfowling: Sept-Feb.

There is easy access to both Chichester Harbour SPA/ Ramsar/ SSSI/ AONB and Langstone Harbour SPA/ Ramsar/ SSSI for recreational users. There are public access routes around most of the harbour, forming part of the Solent Way. There are good access roads around the sites with several car parks. The SPAs can be accessed from several points by walking trails. On fine days, virtually every part of the shore is visited: at low tide even the exposed areas of sand in the centre of the Harbour has visitors.

It is estimated that there are 11 car parks close to Langstone Harbour shoreline resulting in approximately 638 spaces. There are an additional 14 car parks in Chichester Harbour. The nearest car park to Chichester Harbour is located in Langstone and is approximately 2.4km for visitors travelling from the Havant area, and the nearest car park to Langstone Harbour is located in Southmoor Lane and is approximately 1.2km for visitors travelling from the Havant area. These are the same for Solent Maritime SAC.

Several clubs and marinas including those in Emsworth, on Hayling Island, Eastney, Dell Quay and Itchenor have recreational facilities for canoeing, windsurfing and dinghy sailing, yachts/motorboats and moored boats. Chichester Harbour provides 5,217 mooring facilities within its seven marinas and channels. This represents about 25% of all mooring facilities in the Solent. There are 19 sailing clubs and seven training centres using the 11 square miles of water of the Harbours, with its 17 miles of well marked and lit channels. There are also 8 places with launching facilities in Chichester Harbour and a further 3 in Langstone Harbour. There are four local angling clubs in Chichester Harbour and 4 in Langstone Harbour, in addition to casual fishing. Anglers also fish from many parts of the shoreline.

The Hampshire County Council management policy states that *"the site provides informal recreation for people from the Hampshire area and undertakes a major role in the conservation of its key habitats"* (HCC, 2004). It is aimed to ensure the special qualities of the sites can be protected and enhanced and the quality of life for its many visitors and residents improved. The key management objectives for the sites are:

- Retain the Harbour's importance nationally and internationally for nature conservation and wildlife;
- To conserve and enhance the value of the Harbours for sailing, boating and quiet recreation;
- Balancing the demand for more and improved boating facilities with environmental considerations;
- Promote sound land use planning and stewardship (by acquiring key sites);
- Work with natural processes;
- Keep the harbour free from pollutants;
- Support a thriving recreational harbour;
- Sustain the peace and tranquillity;
- Develop and provide well focussed activities with good information to help develop public awareness of the value of the SPA/ Ramsar/ SSSI/ AONB and the threats to its well-being and enjoyment; and
- Provide a role model for integrated coastal zone management.

Within the Management Plan there is current management regarding recreation, including:

- A cycle path has been provided around the northern part of the harbour with the route to the north of Farlington Marshes, adjacent to the A27 thus avoiding any impact on the marshes itself.
- Langstone and District Wildfowling and Conservation Association shoot over two intertidal areas in the Harbour, one held on an annual licence from the RSPB and one on a 5 year lease

- from Havant Borough Council. The Association also carries out wardening and conservation work.
- A Senior Patrol Officer has been appointed enabling the patrol team extended coverage of the harbour during the busy summer months and strengthen the Board's control of recreational activity at peak times and evenings.
 - Balancing the demand for more and improved boating facilities with environmental considerations.
 - To manage the number, type and location of moorings in the Harbour in order to exercise a level of control on the total number of vessels in the harbour and to retain the existing clear areas of water in the Harbour.
 - To prevent an overall increase in the size of vessels by change of mooring class or relaxation of restrictions in length.
 - Waterskiing is permitted within a designated area, by members of the British Water Ski Federation with a permit from the Harbour Authority. The Langstone Harbour Water Skiers Association is the only established club along the Solent coastline. Skiing is only permitted from April to September to minimise disturbance and landing on the islands within the Harbour is forbidden.
 - The friends of Langstone and Chichester Harbour organise regular work parties to collect litter on the foreshore of Budds Farm as it tends to accumulate quite readily in this area. Friends of the Hayling Billy also organise litter picks along the path.

Within the Management Plan there is also recreation objectives noted for the sites. It states that proposed management should provide suitable recreation to accommodate an increase in visitors expected from housing development in the area.

The Management Plans of the designated sites states that there is potential for conflicts to arise between recreational access and conservation features. Chichester Harbour, Langstone Harbour and Solent Maritime are already open access sites that support a large number of visitors a year. Visitor numbers are expected to rise due to planned housing development in the area and proposed management is required to be incorporated into future management plans to accommodate an increase in visitors and enable the site to meet objectives for both recreational users and the conservation interests.

5. ASSESSMENT OF POTENTIAL IMPACTS IN THE ABSENCE OF MITIGATION OR AVOIDANCE MEASURES

5.1 Introduction

This section considers the potential impacts associated with an increase in recreational pressure which might arise as a result of the development proposals at Land South of Ranelagh Road, Havant, either alone or in combination with other plans and projects, in the absence of mitigation or avoidance measures.

5.2 Potential Increase of Recreational Pressure as a Result of the Proposals Alone

Solent SPA, SAC and Ramsar Sites

The results of visitor surveys (Fearnley, Clarke & Liley (2010) undertaken at Solent SPA, SAC and Ramsar Sites, including those in the Solent Maritime and Chichester and Langstone Harbours, identified the reasons for people visiting the sites and components of activity. 77% of all events recorded occurred on the shore, and walkers and those with dogs were the most frequent activity overall (57%: 35% and 22% respectively). Other people on the shore, such as birdwatchers, fishermen, joggers and cyclists (17%), were also significant components of activity. It is therefore considered most likely that the largest user group for the sites contains mainly walkers and people that are visiting the site to see the view.

Activities such as bait-digging and shooting were relatively scarce overall (1%), although both were restricted by tide. Remaining activities were on the water (18% primarily motor vessels) or in the air (4%) composed of various aircraft (2%) and raptors (2%).

It can be assumed that most general recreational users coming from Land South of Ranelagh Road, Havant will access the *SPA/ SAC/ Ramsar sites* at the easiest and closest access points.

With this in mind it, should be noted that there are a number of alternative existing publicly accessible green open spaces that recreational users generated by the proposals are likely to visit instead of Chichester Harbour SPA/ Ramsar/ SSSI/AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC (either all of the time, or for at least a proportion of their recreational walks). These alternative areas are shown on **Map 3**.

Of these areas, Havant Park, is closer to the proposed development, in easy walking distance north-east from the Site, only approximately a 10 minute walk away. The Park is situated in 2.8 ha of land. Havant Park also has a range of other facilities, including picnic areas, cricket pitch, children's play area, tennis courts and skate park. As the park is already under active management and caters for a high level of recreational use it is unlikely to be sensitive to any increase in recreational pressure. It does however lack car parking. Bidbury Mead Recreation Ground is also located west of the site, approximately a 10 minute walk away. The Recreation Ground is situated

in 3.1 ha of land. It also has a range of other facilities, including a pavilion, football pitches, cricket pitch and children's play area.

Travel distances have been calculated between the Site and the access points for the SPAs/ SSSIs/ SAC/ Ramsar sites (see **Map 1**). These are approximately 2.4 km to the nearest Chichester Harbour car park and 1.2 km to the nearest Langstone Harbour car park. These are the same for Solent Maritime SAC. This compares with 700 m to Bidbury Mead Recreation Ground, which also has its own car park, and 950 m to Havant Park (see **Map 3**). Although Havant Park does not have on site car parking, there is a multi-story car park next to the park. However both are within easy walking distance, approximately a 10 minute walk away. This means that a significant proportion of the likely maximum 46 recreational visitors generated by the proposals are likely to visit Havant Park or Bidbury Mead Recreation Ground instead of Chichester Harbour and Langstone Harbour, although this is only an estimate.

A previous study on the Solent coastline (Fearnley, Clarke & Liley, 2011) identified that 52% of people visiting the sites travelled for less than 30 minutes, indicating that most visitors will live within 30 minutes drive of Langstone and Chichester Harbour Ramsar/ SPA/ SSSI.

The Management Plan indicates that the majority of visitors tend to use the trails along the shore, either walking, cycling or bird watching. One main leisure trail, Hayling Billy Leisure Trail, is a 9.6 mile route, starting at Havant train station and follows the coast to Hayling town. Visitors that wish to walk to Hayling Island from Havant or Emsworth tend to use this footpath.

Dog walkers are a small group of users, and the only user group that is likely to contribute towards eutrophication of habitats.

The SSSI citation for both SAC's state that the majority of the SSSI units are in unfavourable condition. This is mainly attributed to suffering adverse impacts due to rising sea level and 'coastal squeeze'. This means that the extent of habitat exposed at low tide will be declining and the area of salt marsh is likely to be diminishing. Changes in water level may also be having adverse impacts on the distribution and extent of biotopes associated with the intertidal sediments. There are no references to recreational pressures having an impact on the condition of these protected sites.

Recreational use of the shore is difficult to quantify and monitor. Research and questionnaires from Management Plans (Chichester Harbour Conservancy, 2008; Langstone Harbour Management Plan, 2009) found many people considered that it was increasing. Major changes in the last few years, such as the opening of the Hayling Billy Leisure Trail and extensions to car parking has encouraged casual recreational use of the shore for a range of informal activities.

Other major recreational pressure concerns from the Management Plans include:

- Car parking around the Harbours is adequate at off-peak times, but can become congested at peak periods, especially weekends. Some consultees at the Harbours said that this is as a welcome restraint on the numbers of people visiting the Harbours; others were concerned it led to irresponsible parking elsewhere which leads to degradation of verges and wildlife habitats.

- Recreational pressures on wildlife habitats are potentially greatest in the northern part of the Harbour, where the most sensitive wildlife habitats coincide with public access such as at Farlington, Broadmarsh, South Moor, Hayling Halt, Thorney Island, Chidham and Fishbourne. Wardening by the RSPB, the Hampshire Wildlife Trust and the County Council is concentrated in this area.
- A cycle path has been provided around the northern part of the harbour with the route to the north of Farlington Marshes, adjacent to the A27 thus avoiding any impact on Farlington Marshes Local Nature Reserve itself.
- If the total number of moorings in use was to increase substantially, the recreational character of the Harbour would be endangered and pressures on wildlife habitats increased.
- Eastney Point, Milton Common and Sinah Warren are also well used for casual recreation. The latter contains sensitive wildlife habitats and in this area some wardening is carried out by Havant Borough Council's Beach Patrol.
- Bait digging is carried out by anglers to provide for their own requirements. In several parts of the Harbour the amounts removed considerably exceed an individual's needs. Bait digging on this scale is a commercial activity and can damage habitats, disturb birds and, as the holes dug are rarely backfilled, encourage the loss of finer sediments and result in dangerous conditions for subsequent users.
- Increases in people results in increases of litter, which can be harmful to wildlife and can seriously detract from the amenity value of the Harbour.

It was noted that relations between the organised recreational users are said to be generally very good, reflecting both the work done by many individual clubs to ensure that their members abide by codes of practice and also the role of the Harbour Advisory Committee.

In the most sensitive areas of nature conservation (especially in the northern and north eastern parts of the Harbour around the RSPB and HWT reserves) there is a strong case for maintaining the status quo.

It is less easy to contain pressure for the informal use of the Harbour and its shores. Management is often required, involving wardening, control of the use of vehicular access points and slipways, and distribution of information about the value of the Harbour environment. The first two occur in only a few parts of the Harbour; the third is generally lacking.

Management of the paths is the most important management tool for ensuring that recreational pressures do not impact on habitats that are sensitive to recreational pressures. Trails are carefully monitored and maintained by the RSPB, Hampshire and Isle of Wight Wildlife Trust (HWT), Chichester Harbour Conservancy and the Chichester Harbour Trust, and although the sites are open access, the majority of users keep to designated trails. The Management Plans set out management tasks to ensure that the paths are maintained for public access and that this is monitored. With regards to other trails such as cycling trails, the management plan states that these have been designed to move bikes away from the more vulnerable habitats.

Additional vehicular access and car parking around the sites would result in increased recreational pressures on the water and peripheral open land, endangering wildlife and landscape conservation objectives. The need and justification for improvements to facilities for cyclists around the Harbour should be examined carefully. It must not conflict with nature conservation or other recreational activities and that the facilities should be low-key.

5.3 *Impact of disturbance on the Solent SPA, SAC, Ramsar and SSSI Sites*

There is evidence that the present level of recreational activity on the water or the shore significantly impairs the overall value of wildlife habitats or the general amenity of the Harbour. Several indicators suggest that the current balance is fragile and that substantial adverse impacts might result if recreational activity increased significantly. Informal and casual recreation in and around the Harbour is increasing, expanding to fill any new facilities such as car parks, access points and footpaths as they are provided. Casual users often have a limited awareness of the sensitivity and international value of the environment that they are using and their activities can stretch the limited resources available for wardening sensitive areas.

Cox and Ravenscroft (2009) conducted research investigating recreation disturbance on the internationally important assemblages of wintering waterfowl and internationally important populations of birds listed on Annex I of the EU Birds Directive found at sites across the Solent, including Chichester and Langstone Harbours.

Human disturbance is described as change in behaviour of the birds caused by human activities (e.g. recreation) or developments (e.g. roads, houses). Behavioural change includes movement (e.g. taking flight), switching activity (e.g. stopping feeding and becoming vigilant) or physiological changes (e.g. increased heart rate). Effects of birds responding to disturbance sources can include lost feeding time, reduction of feeding area, increased energy expenditure, increased cost of movement and movement to more risky locations

Disturbance issues at the sites have been reported, these include from recreational activity (e.g. walkers, cycling, water sports (i.e. canoeing, windsurfing, kite surfing, dinghy sailing and yachts/motorboats and moored boats), bait digging, shellfish collectors, wildfowling, recreational fishing).

The study found that 13% of activity caused disturbance of some degree to birds (1.3 per hour). 79% were caused by activities on the shore (23% by walkers, 32% by those with dogs, 16% by other people, and the remaining 8% by shots, bait-diggers, cyclists, joggers and vehicles). Only 8% of disturbance was caused by activities on the water. In contrast 12% was caused by non-recreational activities such as aircraft, raptors and other birds.

Although the dominant activities caused the majority of disturbance, there is no relationship between event and disturbance rates as birds were more sensitive to some activities than others. Birds showed the greatest response to scarce events such as shots and raptors. Passing cyclists had little impact, possibly as set back from the shore, as did sailing vessels. People lingering on the

shore, such as birdwatchers and fishermen, had higher impacts overall than those walking. Other vessels had higher impacts than those motoring or sailing, probably because this category was composed of vessels moving close to the shore, such as kite-surfing and canoeing.

Disturbance is not always expected to reduce survival. A study by Stillman, West, Clarke & Liley (2012) predicted that there is a threshold density of visitors / proportion disturbed after which shorebird survival decreases. Wader survival is potentially reduced if daily disturbance rates exceed 30 per ha. There are currently already a couple of sites in Chichester Harbour which exceed this. Several other sites, including those in Langstone Harbour, are currently just below this. There is concern that increases in visitor numbers from new housing developments may tip these sites over the threshold.

Summary of Potential Site Impacts

In summary, in the absence of impact avoidance and mitigation measures, any contribution that the proposals might make alone to recreational pressure on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC is likely to be small, with only a proportion of the total maximum 46 weekly visitors and 9 dog walkers visiting the site. Only 33 extra visitors a year are expected to visit the sites to take part in other recreational activities, including bird watching, cycling, water sports and angling. This is considered to have a non significant impact on recreational pressure at the sites.

Most of those that do choose to travel to the designated sites are expected to keep largely to the footpath network, minimising trampling impacts and eutrophication of sensitive habitats. These are also usually set back far enough to limit too much disturbance to wintering wildfowl and waders.

The additional small number of visitors is within the context of a site that is specifically managed to accommodate in excess of 1.5 million visitors per annum, and where the visitation is actively encouraged and its impacts mitigated through management measures.

5.4 *Potential Increase in Recreational Pressure on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC as a Result of the Proposals in Combination with other Residential Development.*

There are likely to be other developments coming forward within the visitor catchment of the designated sites, but identifying all of these is unfeasible and is recognised as a potential limitation of this study. These are likely to be of similar size to the proposed development at Ranelagh Road. However, these other projects will also be required to demonstrate that they will not have an impact on European Protected Sites, alone or in combination with other plans or projects in order to pass the Habitats Regulations. It is therefore likely that any contribution that they might make towards cumulative impact will be addressed.

Summary of Potential In Combination Impacts

In summary, it is likely that the other new developments are likely to only provide small additional impacts to protected sites. The proposed development on land south of Ranelagh Road is providing an area of adjacent land at Meyrick Road to meet the open space requirements that are anticipated to address the impacts and also have the potential to lower the existing recreational pressures on SPA/ SAC/ Ramsar/ SSSI/ AONB sites by providing open space to not only new residents but existing local residents.

It therefore appears that the potential for possible projects to act in combination with proposals to contribute towards a significant impact is low.

6. IMPACT AVOIDANCE AND MITIGATION MEASURES

6.1 Introduction

This section suggests proposed measures to be put in place by the proposed development, and additional enhancements, to address any potential effects on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC arising as a result of the proposed development either alone or in combination with other plans and projects.

It should be noted that, whilst there is not anticipated to be a significant effect on the designated sites, the measures described below as impact avoidance measures for potential effects would act in respect of preventing any increase in recreational pressure in these areas.

Where increased recreational use is predicted to cause significant adverse impacts to the important off-site supporting habitat, avoidance and mitigation should be considered by Havant Borough Council. Avoidance of recreational impacts at European sites involves location of new development away from such sites. This is difficult to achieve as according to the England Leisure Day Visits surveys, day visitors typically travel up to 25.5km to visit the coast for the day. A previous study on the Solent coastline (Fearnley, Clarke & Liley, 2011) indicates that most visitors will live within 30 minutes drive of Langstone and Chichester Harbour Ramsar/ SPA/ SSSI. Where avoidance is not possible, an alternative approach is for the local authority, Havant Borough Council, to manage recreational use of the coastlines. Mitigation can involve a mix of access management, habitat management and provision of alternative recreational space, but this cannot be delivered wholly by Havant in isolation.

- *Access management* – restricting access to some or all of a European site - is not usually within the remit of the Borough Council and restriction of access may conflict with a range of Government policies on access to open space, and Government objectives for increasing exercise, improving health etc. However, active management of access may be possible, for example as practised on nature reserves.
- *Habitat management* – improved habitat management can improve the general health and condition of European sites and thus reduce their vulnerability to recreational pressure if coupled with other measures.
- *Provision of alternative recreational space* – can help to attract recreational users away from sensitive European sites, and reduce additional pressure on them. Some species for which European sites have been designated are particularly sensitive to dogs, and many dog walkers may be happy to be diverted to other, less sensitive, sites. However the location and type of alternative space must be attractive for users to be effective.

In order to avoid impacts on European Designated sites, open space provision is an established impact approach. Much of the guidance surrounding this relates to the provision of Suitable Alternative Natural Greenspace (SANGs) in order to avoid impacts on Thames Basin Heaths Special Protection Areas (SPA's) which have been designated for their bird interest. The general

idea is to provide local alternative recreation opportunities in order to draw people away from the protected areas. These areas have to provide a similar experience to the protected sites in order to be attractive as an alternative destination.

6.2 *Provision of Accessible Open Space at Land South of Ranelagh Road*

There is evidence to suggest that the majority of recreational users of open green space, particularly regular users such as dog walkers, will visit sites and use footpaths that are in close proximity to their homes.

As part of the development proposals for the Site, an area has been set aside to provide accessible green space to residents of the local area. The provisions for accessible open space are an area of adjacent land at Meyrick Road (shown on **Map 3**), approximately 0.5ha.

The accessible green space will be located adjacent to the residential development, within a few minutes walk. It is proposed that this area will be managed both for enhancing biodiversity and to meet the needs of recreational users and the enjoyment of people. This could involve management options such as provision of open grassland areas with wildflower seed mix to increase diversity within the sward, planting of native fruiting shrub species to enhance wildlife corridors within the landscape and the provision of dead wood log piles to enhance habitat for invertebrates. However, both the open space at Meyrick Road and Bidbury Mead Recreation Ground also link up to public footpaths to that lead to Langstone Harbour at the nearest points, and follow the coastline.

The accessible open space is also proposed to be used as a reptile conservation area where the slow-worms found on site can be translocated to. Cutting a path through the grass will encourage users to follow a route and reduce destruction of suitable reptile habitat.

Although the accessible open space that is being provided as part of the Sites proposals are small, it is considered that the quality of this area will meet guidance set out Natural England's Green Infrastructure Guidance and Accessible Natural Greenspace guidance by providing an area for people and nature. The accessible green space to be provided adjacent to the site should be managed in order to maintain existing, and create new, habitats. Long-term management of the area to actively enhance the area for biodiversity is required. Outline of management objectives for reptiles have been provided in the *Reptile Survey Report and Mitigation Strategy* (Hampshire Ecological Services Ltd 2012). It is considered that this area of accessible open space can be multifunctional, by not only delivering local biodiversity objectives, but also ensuring that a natural area is easily accessible to residents which is aesthetically pleasing, secure and safe and provides opportunities for environmental appreciation.

The new and existing habitats on the open space will be managed in the long term in accordance with a Biodiversity Management Plan, and will enhance habitats for wildlife and provide access for informal recreation and the enjoyment of wildlife.

Though the amount of accessible open space being provided adjacent to the Site is small, it should be sufficient for the needs of this housing development, anticipating residents will also use the nearby Havant Park and Bidbury Mead Recreation Ground. Other developments in the area will also provide other areas of accessible open space.

It should be noted that East Hampshire Borough Council's Open Space, Sports and Recreation Study (2008) identified a deficiency in both publicly accessible informal open space and natural green space in East Hampshire. It can therefore be anticipated that a reasonable proportion of existing residents of Havant and the surrounding area will choose to use new publicly accessible open space areas provided for them, particularly if they are within walking distance since 90% of respondents to the EHDC study (2008) indicated that they would walk up to 15 minutes to use natural green spaces.

This means that the newly created publicly accessible open spaces being provided both by the proposed development, and by other new sites in the area, can reasonably be expected to be used by existing local residents on at least a proportion of their walks. There is potential for this to have an effect of lowering the existing baseline of pressure on Langstone and Chichester Harbour Ramsar/ SPA/ SSSI, in addition to mitigating the potential impacts of the development proposals themselves. This reduction can compensate, to some extent, for the occasional resident of the new developments who might visit SAC/ Ramsar/ SPA/ SSSI sites, for walking or other recreational activities.

As previously outlined, where increased recreational use is predicted to cause significant adverse impacts to the important off-site supporting habitat, avoidance and mitigation should be considered by the local authority i.e. Havant Borough Council. These are discussed below.

6.3 *Suggested provision of impact avoidance and mitigation measures at the designated sites to alleviate potential in combination significant impacts*

The Management Plans of the designated sites states that there is potential for conflicts to arise between recreational access and conservation features. Sustainable recreational initiatives, activities which conserve and enhance the Harbour's environment, should be encouraged. Proposed management is required to be incorporated into future management plans and the provision of impact avoidance and mitigation measures to accommodate an increase in visitors and enable the site to meet objectives for both recreational users and the conservation interests. These are outlined in **Table 1**.

Further increases in recreational activity in and around sites of particular significance to nature conservation, including the RSPB reserve, Farlington Marshes, Kench nature reserves and Sinah Warren, should be strongly discouraged.

Table 1: Management measures to minimise disturbance on coastal sites from large scale development in the area (Adapted from Stillman et al., 2009).

Management Measure	Description
Provision of viable alternative sites –	Provision may need to be combined with other measures such as education and on-site management on the designated site. Likely to need to be carefully designed and targeted so as to provide a viable alternative. Targeted for dog walkers, ensuring dog friendliness and suitable routes. For water-based activities gravel pits or similar may need careful landscaping and particular types of infrastructure.
Dog walking exclusion areas –	Dogs to be kept on leads during sensitive periods at those sites important for feeding, roosting or nesting.
Bait digging ban -	Ban on trench bait digging. Agreed bait digging locations and methods.
Education –	Potential to promote non-designated sites, for example through web / local media/ leaflets listing dog friendly sites and highlighting the conservation importance of sites and encourage responsible access. Specific tailoring to target specific user groups (e.g. cyclists, sailors, anglers etc). Literature about the Harbour should be produced to explain its value to recreational users. Better education in terms of responsibilities within the SSSI and SPA particularly for regular recreational users.
Changing by-laws at particular locations –	Allowing dogs off leads etc in particular locations that are not sensitive for nature conservation or other reasons may increase their attractiveness to dog walkers. Seasonal ban on access to the foreshore/saltmarsh in areas with high public access where habitat is suitable for breeding birds.
Review of parking charges –	Cheap or free parking at particular locations may encourage visitors and therefore help to redistribute access away from areas important for birds. Reduced parking fees in the early morning may be particularly effective in encouraging dog walkers. A higher cost during particular times of year or times of day may encourage people to choose alternative locations.
Control of parking –	Limiting car-park spaces or closing car-parks in particular locations is likely to be contentious, but is likely to be effective in reducing visitor numbers in the long-term. Not improve parking in sensitive areas.
Vehicular accesses –	No new vehicular accesses or launching places should be provided or the capacity of existing facilities increased, without a detailed assessment of the likely environmental impact, especially on nature conservation, recreation and the landscape.
Wardening –	Existing wardening arrangements in and around the Harbour should be coordinated and extended so that they cover all the principal areas of recreational use. Wardens can provide face to face contact and can directly intervene when they observe particular activities (such as dogs off the lead on mudflats). They can have an educational role, showing

	people wildlife etc.
Landscape design and careful design of routes –	Planting, screening, careful routing, provision of access infrastructure (boardwalks, marked paths, steps etc) can all influence visitor flows within sites and the potential of people to cause disturbance. Subtly directing people along the inside of borrow-dykes or below seawalls can mean they are invisible to birds on the mudflats. There is evidence that roosting waders will continue to use roosts where barriers exist to keep people back or at least keep people walking along a regular route.
Careful provision of facilities –	Provision of public slipways, trailer & vehicle access to shore etc. in predetermined locations where boat access is likely to be away from bird interest. Improvements to slipways should not substantially increase the launching capacity, especially in the northern part of the Harbour.
Zoning – Permits / vessel registration –	Designated areas for particular activities. Ensure craft such as Jet ski's etc do not start any regular use in an area by zoning/ marking it as a conservation area. System of permits or similar to limit numbers and maintain records.
Bylaws and Policing –	Bylaws to control particular activities. Policing of watercraft zoning, speed limits etc, with fines or other penalties for infringement.
Wildfowling Evidence-based restrictions –	Restrictions on wildfowling and other regulated activities, ensuring wildfowling clubs continue to operate sensible shooting policy.

• 7 • **CONCLUSIONS**

1. The proposed development at Land South of Ranelagh Road is for 79 dwellings and includes provision and long-term management of accessible open space, approximately 0.5ha, adjacent to the Site at Meyrick Road.
2. Although it can be expected that some new residents will travel to the designated sites to undertake recreation, including birdwatching and watersports and sailing etc. which are not provided by the open space, these numbers are likely to be low and the provision of new open space will also be available for existing residents and this can be expected to reduce existing use of the sites.
3. Langstone and Chichester Harbour Ramsar/ SPA/ SSSI are easily accessible, within a 5 minute drive, and there is plenty of car parking. Footpaths are located connecting the Harbours to Havant and Emsworth. The habitats in the northern parts of the Harbour are considered to be particularly sensitive to increased recreation pressures and disturbance of international important bird species.
4. The sites are already monitored and managed by the RSPB, Hampshire and Isle of Wight Wildlife Trust, Chichester Harbour Conservancy and the Chichester Harbour Trust as open access sites that support a large number of visitors a year (excess of 1.5 million people) and an expected rise in visitor numbers has been taken into account in the Management Plans for the sites to mitigate against impacts through management measures to meet objectives for both recreational users and the conservation interests.
5. In particular, the Management Plan for Chichester and Langstone Harbours address potential conflicts between recreational access and conservation features by restriction on certain activities, provision of trails for different users i.e. dog walkers and cyclists to avoid sensitive habitats, management of paths, control of parking, watercraft zoning, wardening and policing of path use and zoning.
6. Both Langstone and Chichester Harbour are considered to be mainly in unfavourable condition, however it is not considered that the existing recreational pressures are having an adverse impact on the conservation interest of these sites and this is mainly attributed to suffering adverse impacts due to rising sea level and 'coastal squeeze'. This results in the extent of habitat exposed at low tide will be declining and the area of salt marsh is likely to be diminishing.
7. As part of the proposed development at Land South of Ranelagh Road, an area of accessible open space is to be provided adjacent to the Site at Meyrick Road. The accessible open space is also proposed to be used as a reptile conservation area. Cutting a path through the grass will encourage users to follow a route and reduce destruction of suitable reptile habitat.

8. It is suggested that the provided area of accessible open space should be multifunctional, by not only ensuring that a natural area is easily accessible to residents which is aesthetically pleasing, secure and safe and provides opportunities for environmental appreciation, but also delivering local biodiversity objectives.
9. There are a number of alternative existing publicly accessible green open spaces near the housing development at Ranelagh Road that recreational users generated by the proposals are likely to use. Havant Park, located north-east from the Site, and Bidbury Mead Recreation Ground, located west of the site, are both in easy walking distance, approximately a 10 minute walk away.
10. In view of the above, it is considered that alone, the proposed development at Land South of Ranelagh Road will not contribute to an adverse effect on the SPA/ SAC/ Ramsar/ SSSI/ AONB sites.
11. The development at Land South of Ranelagh Road in combination with other possible developments in the area are likely to add only a small amount to the existing pressure on Langstone Harbour, Chichester Harbour and Solent Maritime. It does have the potential however to lower the baseline of pressure due to the provision of additional open space which has been identified as being required in the local area, which can also be used by existing residents. Impact avoidance and mitigation measures being delivered by these proposed developments will ensure that accessible natural green space is to be provided and management measures in the designated sites is implemented (if required). This will not only reduce the impact of new residents, but also existing residents within the Havant Area.
12. In addition impact avoidance measures and mitigation provided by other development will also have to pass the Habitats Regulations Assessment prior to receiving planning permission, and therefore provisions for open space in respect of other development can reasonably be expected to succeed in reducing the potential impacts.
13. In view of the above main points it is therefore considered that the development at Land South of Ranelagh Road is unlikely to have a significant impact on Chichester Harbour SPA/ Ramsar/ SSSI/ AONB, Langstone Harbour SPA/ Ramsar/ SSSI and Solent Maritime SAC, as a result of increased recreational pressure either alone or in combination with other plans or projects.
14. It is therefore considered that it is unnecessary for Havant Borough Council to undertake an Appropriate Assessment.

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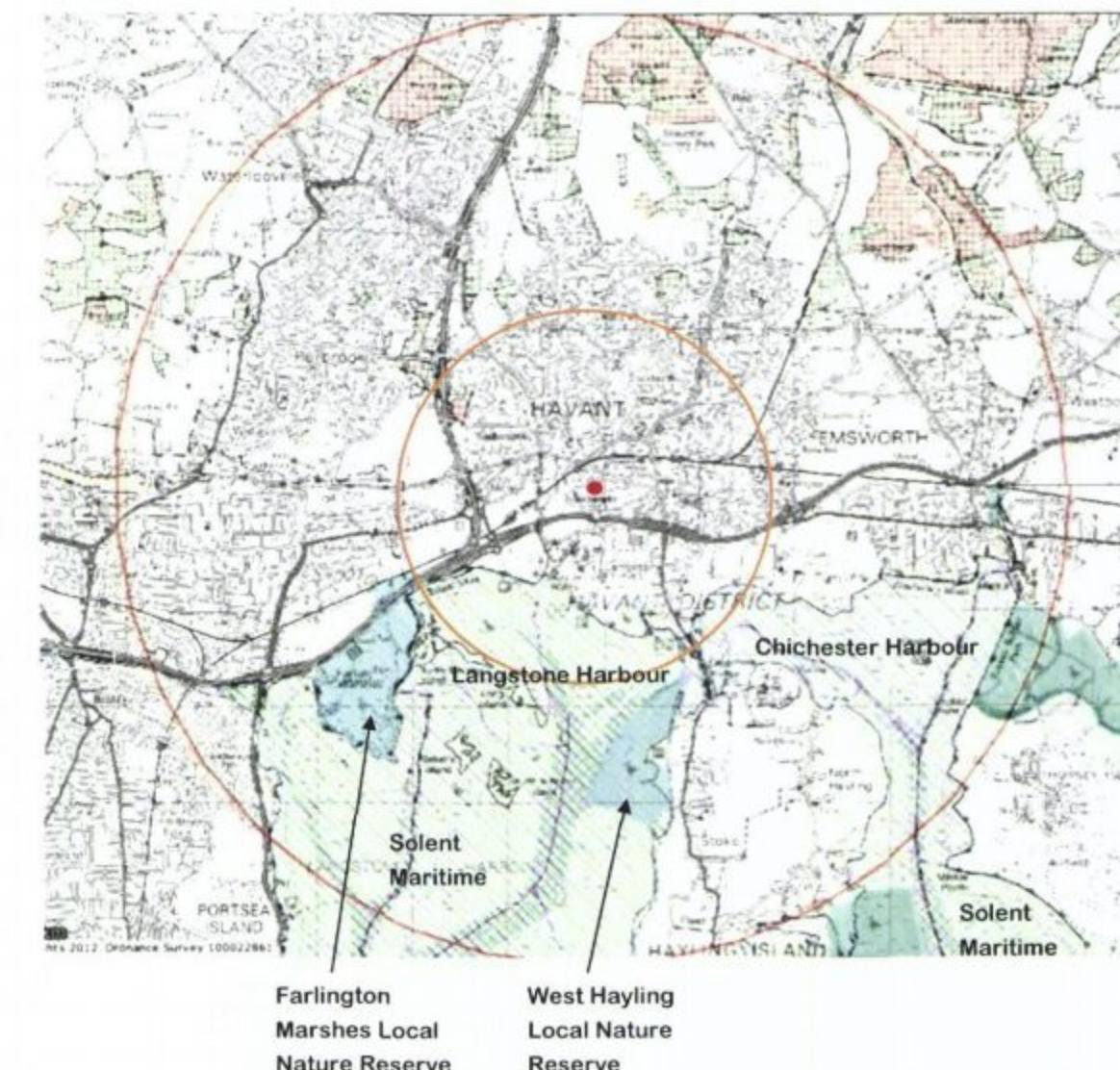
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9. MAPS

Map 1. Site Location and Designated sites



KEY

- Site Location
- 5km linear distance from site location
- 2km linear distance from site location

- Ancient Woodland (England)
- Ancient & Semi-Natural
- Ancient Replanted
- Local Nature Reserves (England)
- National Nature Reserves (England)
- Biosphere Reserves (England)
- Ramsar Sites (England)
- Special Areas of Conservation (England)
- Sites of Special Scientific Interest Units (England)
- Sites of Special Scientific Interest (England)

Map 2. Proposed Scheme

Ranelagh road

House type A- 9 no.
(2-bed 2 storey house, wide and narrow plan versions)

House type B- 39 no.
(3-bed and terrace or semi-detached 2-storey house;
wide and narrow plan versions)

House type C- 16 no.
(3-bed detached 2 storey house, wide and narrow plan
versions). 6 of which have single garages.

9 x 2-bed flats
6 x 1-bed flats

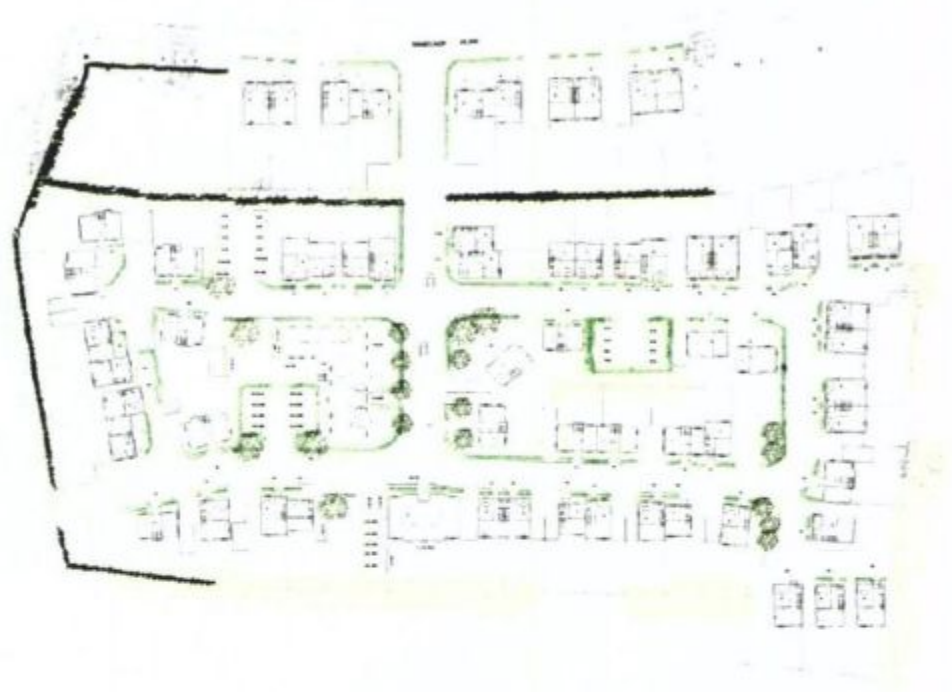
Total houses = 64 no.
Total flats = 15 no.
Total dwellings = 79 no.

Site area 1.99 hectares;
Density 40 dph;

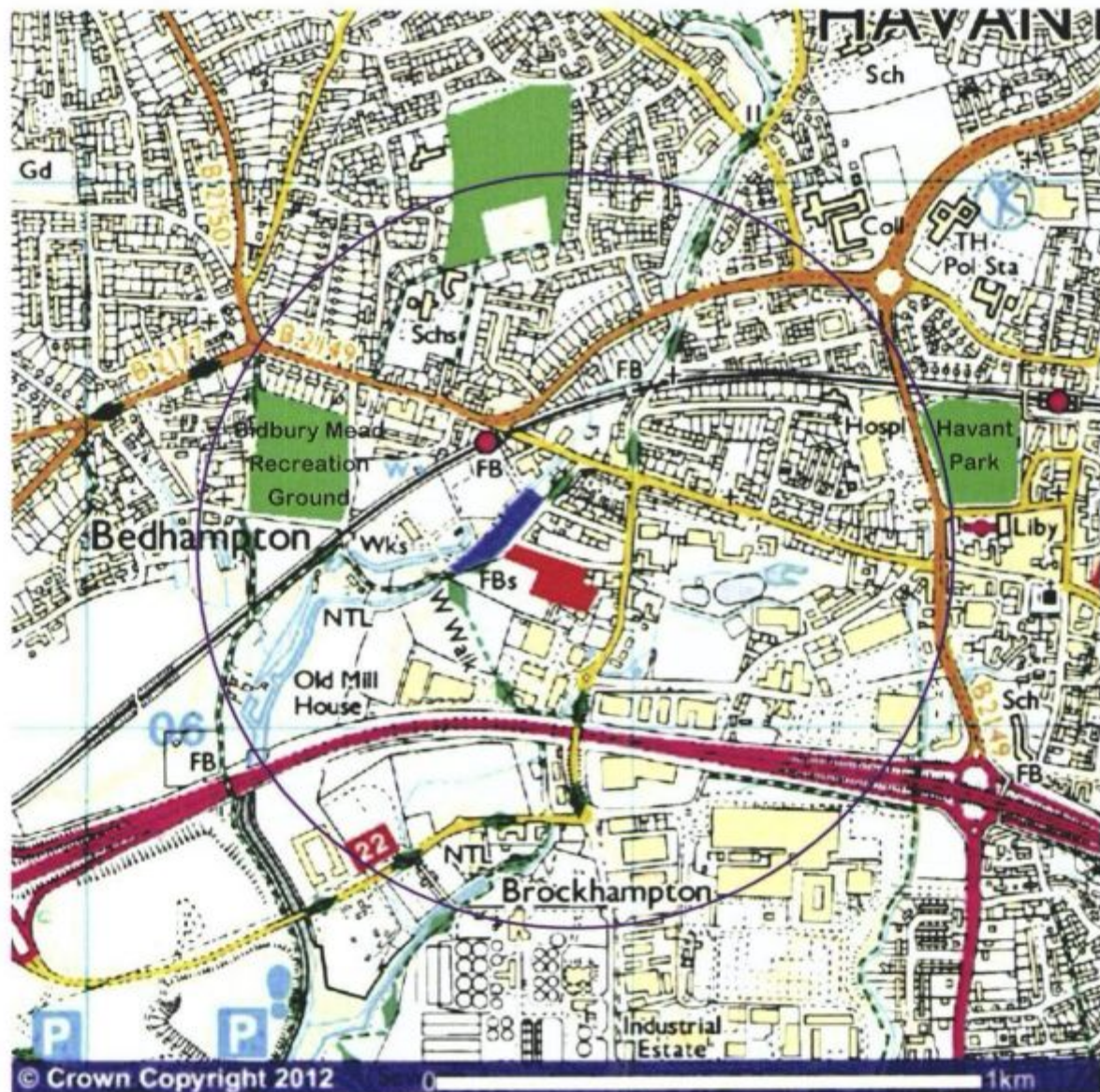
Affordable 30% = 24 dwellings comprising
6 x 1-bed flats;
9 x 2-bed flats;
4 x 2-bed houses;
5 x 3-bed houses;

Car parking- 2 spaces each in-curtilage for 56 (two and three
bedroom) houses and 2 spaces in shared courts (allo cated)
for remaining 8 (two and three bedroom) houses. Flats
parking (unallocated) at ratio 1.3 spaces for 2-bed flats and
0.9 spaces for 1-bed flats. All spaces identified on plan.

Proposed site plan



Map 3. Distribution of Open Space around the Site



KEY

- Site
- 700m walking catchment for the site
- Accessible open space adjacent to the site at Meyrick Road
- Alternative existing publicly accessible green open spaces