



Information to Support Habitat Regulations Assessment

Application Number: P/19/1193/OA

Description: Construction of 57 Dwellings, Together with Associated Parking, Landscaping and Access from Posbrook Lane

Site: Land East of Posbrook Lane, Titchfield

Background

Habitats Regulations Assessment (HRA) is the process that competent authorities must undertake to consider whether a proposed development is likely to have significant effects on a European site designated for its nature conservation interest.

Legislation & Guidance

The European Directive (92/43/EEC) on the Conservation of Natural Habitats and Wild Flora and Fauna (the Habitats Directive) protects habitats and species of European nature conservation importance. The Habitats Directive establishes a network of internationally important sites designated for their ecological status. These are referred to as Natura 2000 sites, sites selected to ensure the long-term survival of Europe's most valuable and threatened species and habitats. How a site is chosen depends on what it aims to protect. The choice of sites is based on scientific criteria specified in the directive, to ensure that the natural habitat types and the habitats of relevant species are maintained or, where appropriate, restored to a favourable conservation status in their natural range.

The term European (or Natura 2000) site is defined fully in Regulation 8 of the Habitats Regulations and includes:

- Special Areas of Conservation (SACs);
- candidate and proposed SACs;
- Special Protection Areas (SPAs);
- potential SPAs;
- proposed Wetlands of International Importance designated or proposed for their wetland features under the auspices of the Convention of Wetlands of International Importance (commonly referred to as 'Ramsar sites'); and
- sites identified for Natura 2000 compensatory measures.

The final two categories are afforded the same level of protection as SACs and SPAs as a matter of Government policy and the assessment provisions of the Habitats Regulations are applied to them (Natural England, 2017 & European Commission, 2016).

Requirements

The Habitats Directive is transposed into national legislation by the Conservation of Habitats and Species Regulations 2017; the 'Habitats Regulations'. Any project which is likely to have a significant effect on a European site (either alone or in-combination) and is not directly connected with, or necessary for the management of, the site, must be subject to a HRA to determine the implications for the site in view of its conservation objectives. There are four stages;

Stage 1: Screening

- Step 1. Determining whether the project or plan is directly connected with or necessary to the management of the Natura 2000 site(s);
- Step 2. Describing the project or plan and the description and characterisation of other projects or plans that in-combination have the potential for having significant effects on the Natura 2000 site(s);
- Step 3. Identifying the potential effects on the Natura 2000 site(s); and
- Step 4. Assessing the significance of any effects on the Natura 2000 site(s).

Stage 2: Appropriate Assessment

An Appropriate Assessment then needs to be carried out in respect of any plan or project which:

- either alone or in combination with other plans or projects would be likely to have a significant effect on a site designated within the European network; and
- is not directly connected with the management of the site for nature conservation.

Stage 3: Assessment of Alternatives

If a policy, application or site allocation would affect a European site, or if the impact is unclear, then an Assessment of Alternatives is required. This involves the consideration of alternative solutions / conditions / restrictions that would ensure the proposal would not adversely affect the integrity of the site.

Stage 4: Assessment of 'Imperative Reasons of Overriding Public Interest'

Stage 4 involves considering whether there are overriding reasons to allow a proposal to go ahead where it might impact upon a European site:

- Identify 'Imperative Reasons of Overriding Public Interest' (IROPI), these could be economic, social, environmental, human health or public safety reasons
- If none, remove policy or allocation from plan.
- If IROPI are identified, develop and secure compensatory measures.

Developments can be 'screened out' at any stage i.e. if it is evidenced that no adverse effects are likely there is no requirement for continued assessment.

Stage 1: Screening

Step 1:

The development proposal, for the provision of residential dwellings, is not connected with and is not necessary for the management of any internationally designated sites.

Step 2:

The proposed development consists of 57 dwellings with means of access from Posbrook Lane. The planning application is submitted in full.

Effects with the potential to result in Likely Significant Effects (LSE) are akin to those in the Fareham Borough Local Plan 2036 HRA (UE Associates, 2017). The LPAs' HRA was therefore reviewed to identify pathways for potential Likely Significant Effects (LSE) that could arise in-combination.

Effect	Impact Mechanism	Receptor
Atmospheric pollution	Eutrophication, acidification and physical injury to habitats and plant species as a result of emissions from vehicles associated with residential and employment developments	Solent Maritime SAC New Forest SPA River Itchen SAC, Chichester & Langstone Harbours SPA and Ramsar Portsmouth Harbour SPA and Ramsar, Solent & Southampton Water SPA and Ramsar
Disturbance from recreation	Increasing recreational pressure from higher number of residents resulting from new housing and/or improved facilities	Chichester & Langstone Harbours SPA and Ramsar, Portsmouth Harbour SPA and Ramsar, Solent & Southampton Water SPA and Ramsar The New Forest SPA and Ramsar
Loss / degradation of supporting habitats	Loss of areas outside European site boundaries, which are important feeding or roosting sites for protected species	Portsmouth Harbour SPA and Ramsar Solent & Southampton Water SPA and Ramsar
Water resources & abstraction	Increased abstraction for new residential development	River Itchen SAC Solent Maritime SAC Chichester & Langstone Harbours SPA and Ramsar Solent & Southampton Water SPA and Ramsar
Waste water pollution	Increased waste water production from new residential development	Solent Maritime SAC Portsmouth Harbour SPA and Ramsar Solent & Southampton Water SPA and Ramsar

Potential Pathways (UE Associates, 2017)

Sites which may be affected by the development are those statutorily designated sites within 10km of the site boundary and which are identified as receptors above;

Solent Maritime SAC

Sited 3.5km to the south-west and designated due to;

Annex I Habitats

- Estuaries;
- Spartina swards (*Spartinion maritimae*); and
- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*).

Annex I habitats as qualifying features;

- Sandbanks which are slightly covered by sea water all the time;
- Mudflats and sandflats not covered by seawater at low tide;
- Coastal lagoons;
- Annual vegetation of drift lines;
- Perennial vegetation of stony banks;
- Salicornia and other annuals colonizing mud and sand; and
- "Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")".

Annex II species as a qualifying feature;

- Desmoulin's whorl snail *Vertigo moulinsiana* (JNCC, 2015).

Conservation Objectives;

Ensure that the integrity of the site is maintained or restored as appropriate and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site (Natural England, 2018).

Portsmouth Harbour SPA

Approximately 4.5km east of the site and designated due to;

Annex II Species as qualifying features;

- *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)
- *Mergus serrator*; Red-breasted merganser (Non-breeding)

- *Calidris alpina alpina*; Dunlin (Non-breeding)
- *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)(JNCC, 2015).

Portsmouth Harbour Ramsar

Criterion 3

A wetland should be considered internationally important if it supports populations of plant and/or animal species important for maintaining the biological diversity of a particular biogeographic region.

Criterion 6

A wetland should be considered internationally important if it regularly supports 1% of the individuals in a population of one species or subspecies of waterbird.

Portsmouth Harbour SPA/ Ramsar Conservation Objectives;

Conservation Objectives for the SPA are listed below. Whilst no such objectives exist for the Ramsar it is considered that those for the SPA are applicable in light of the commonality of qualifying & designating ecological features. This approach has also informed the HRA for the Local Plan 2036 (UE Associates, 2017).

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site (JNCC, 2015).

Solent and Southampton Water SPA

Approximately 0.7km south-east and a wetland of international importance regularly supporting at least 20,000 waterfowl;

Annex I Species

During the breeding season;

- Common tern (*Sterna hirundo*)
- Little tern (*Sterna albifrons*)
- Mediterranean gull (*Larus melanocephalus*)
- Roseate tern (*Sterna dougallii*)
- Sandwich tern (*Sterna sandvicensis*)

Over winter;

- Black-tailed godwit (*Limosa limosa islandica*)
- Dark-bellied brent goose (*Branta bernicla bernicla*)
- Ringed plover (*Charadrius hiaticula*)

- Teal (*Anas crecca*)

Over winter, the area regularly supports 53,948 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: gadwall (*Anas streper*), teal, ringed plover, black-tailed godwit, little grebe (*Tachybaptus ruficollis*), great crested grebe (*Podiceps cristatus*), cormorant (*Phalacrocorax carbo*), dark-bellied brent goose, wigeon (*Anas penelope*), redshank (*Tringa tetanus*), pintail (*Anas acuta*), shoveler (*Anas clypeata*), red-breasted merganser (*Mergus serrator*), grey plover (*Pluvialis squatarola*), lapwing (*Vanellus vanellus*), dunlin (*Calidris alpina alpina*), curlew (*Numenius arquata*) and shelduck (*Tadorna tadorna*) (JNCC, 2001).

Solent & Southampton Water Ramsar

Criterion 1

Sheltered channels between a substantial island and mainland in European waters, exhibiting an unusual strong double tidal flow and has long periods of slack water at high and low tide. It includes many wetland habitats characteristic of the biogeographic region: saline lagoons, saltmarshes, estuaries, intertidal flats, shallow coastal waters, grazing marshes, reedbeds, coastal woodland and rocky boulder reefs.

Criterion 2

The site supports an important assemblage of rare plants and invertebrates. At least 33 British Red Data Book invertebrates and at least eight British Red Data Book plants are represented on site.

Criterion 5

Assemblages of overwintering waterfowl of international importance

Criterion 6

Species/populations occurring at levels of international importance, qualifying Species/populations that have peak counts in spring/autumn:

- Ringed plover

Species with peak counts in winter:

- Dark-bellied brent goose
- Eurasian teal
- Black-tailed godwit (JNCC, 1998).

Solent and Southampton Water SPA/ Ramsar Conservation Objectives;

Conservation Objectives for the SPA are listed below. Whilst no such objectives exist for the Ramsar it is considered that those for the SPA are applicable in light of the commonality of qualifying & designating ecological features.

Conservation Objectives;

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and,
- The distribution of the qualifying features within the site (Natural England, 2014).

Step 3:

In identifying the potential effects of development on the Natura 2000 site(s) potential pathways are considered with reference to those conservation objectives outlined above. Pathways identified as having no adverse effect are not considered in combination. It is of course only pathways with potential LSE that can have any impact on 'in-combination' considerations.

Atmospheric pollution

This impact pathway relates to the direct and in combination effects of pollution on the Solent Maritime SAC, Portsmouth Harbour SPA and Ramsar and the Solent and Southampton Water SPA/Ramsar.

There is no potential for air pollution to affect the SACs, SPAs or Ramsars during construction due to release of fugitive dust. This is because of the distance from the site to the boundaries of these European sites. The distance given in guidance from the Institute of Air Quality Management (2014) as being the maximum distance from source that fugitive dust can affect sensitive ecological receptors is 50m.

The 2019 report 'Air Quality Habitat Regulations Assessment (HRA) for Short-Term Development in Fareham Borough' confirms that development in Fareham can take place with no threat due to emissions to air to the ability of any European site to achieve conservation objectives or maintain their integrity. Development will result in no likely significant effect.

Disturbance from recreation

All residential development within 5.6km of Solent SPAs and Ramsar may result in increased visitor pressure and subsequent disturbance to qualifying bird species due to recreation (Bird Aware Solent, 2017). In the absence of the mitigation measures specified in the Solent Recreation Mitigation Strategy (Bird Aware Solent, 2017) the increase in recreational disturbance arising from the development and in-combination will have a likely significant effect on these Natura 2000 sites.

Loss/ degradation of supporting habitats

The development will result in the loss of SPA functional land which forms part of a network of terrestrial sites located outside of the Solent SPAs boundaries. The site is used by SPA species as an alternative area for roosting and foraging, is classed as a 'primary use site' and supports significant numbers of Black-tailed Godwit as well as lower numbers of Curlew, Lapwing and Snipe (Solent Brent Goose & Waders Strategy, 2018). Development will result in a likely significant effect.

Water resources & abstraction

This impact pathway relates to the direct and in combination effects of water abstraction on the Solent Maritime SAC and the Solent and Southampton Water SPA and Ramsar. Abstraction licences on the lower Itchen and related water sources have been amended and agreed between the Environment Agency and Southern Water to avoid adverse effects on integrity. The proposed development will not result in the requirement for additional abstraction licences.

Section G2 of the Building Regulations (2010) allows for environmentally sustainable development and establishes a standard for predicted mains internal water consumption of no more than 110 litres/day (per person) where secured by Condition. The applicant is happy to accept such and the measure will contribute to an overall reduction in water demand. There will be no likely significant effects.

Waste water pollution

Wastewater from the proposed development will discharge to the Solent following treatment at Peel Common Wastewater Treatment Works. The development therefore has the potential to result in a likely significant effect on designated site(s) and could potentially act in-combination with other developments which require waste water.

Step 4:

Pathways not considered to result in likely significant effect have been screened out. In assessing the significance of potential effects there are deemed to be three pathways with the potential to result in LSE that require further consideration.

Pathways that could result in LSE on the SAC, SPAs and Ramsar and which require Appropriate Assessment are;

- Disturbance from recreation
- Loss/ degradation of supporting habitats
- Waste water pollution

Stage 2: Appropriate Assessment

Disturbance from recreation

The proposal would result in a net increase of dwellings within 5.6km of a European site(s). In line with the Solent Recreation Mitigation Strategy (Bird Aware Solent, 2018), a permanent significant effect on the Solent and Southampton water SPAs and Ramsar due to increase in recreational disturbance as a result of the new development is likely. As such, in order to lawfully be permitted, the development will need to include a package of avoidance and mitigation measures.

The Solent Recreation Mitigation Strategy (SRMS) provides a strategic solution to ensure the requirements of the Habitats Regulations are met with regard to the in-combination effects of increased recreational pressure on the Solent SPAs arising from new residential development. This strategy represents a partnership approach to the issue which has been endorsed by Natural England.

Developer contributions paid to local planning authorities are pooled together for the implementation of mitigation measures through the Solent Recreation Mitigation Partnership. Whilst some schemes, due to their scale or location in relation to the SPAs, may need to provide bespoke mitigation measures in addition to making the financial contribution to ensure effective avoidance/mitigation of impacts on the SPAs, the application site is neither of the scale or location to require a bespoke mitigation package.

Payment to the Solent Recreation Mitigation Strategy will accord with the following; amounts will apply per unit (Bird Aware Solent, 2019):

- £346 for 1 bedroom dwelling
- £500 for 2 bedroom dwelling
- £653 for 3 bedroom dwelling
- £768 for 4 bedroom dwelling
- £902 for 5 bedrooms or more

The measures funded through SRMS comprise:

- The provision of Rangers;
- Communications, marketing and education initiatives;
- Initiatives to encourage responsible dog walking;
- Codes of conduct for user groups such as horse riding and water-based recreation;
- Provision of New/enhanced strategic greenspaces;
- Site-specific visitor management and bird refuge projects; and
- Monitoring (Bird Aware Solent, 2019).

The requisite financial contribution can be secured by legal condition. Once provided, it is considered that the impacts of disturbance on qualifying features and selection criteria of the SPAs and Ramsars would not be significant, either alone, or in combination. The integrity of designated sites would not therefore be affected by the proposed development.

No additional or further mitigation is considered to be required.

Loss/ degradation of supporting habitats

Wintering birds have been identified as an important ecological receptor at the site; with the eastern field being of the greatest importance for waders such as black-tailed godwit. The application includes proposals for an area to be retained, protected and enhanced as part of a new Bird Conservation Area with management of this area for the benefit of waders and other wintering birds to be secured in perpetuity as part of a legal agreement.

The Hampshire & Isle of Wight Wildlife Trust have, subject to contract, agreed to take on the ownership and subsequent management of the Bird Conservation Area. The requisite agreements can be secured by legal condition and once achieved; the integrity of designated sites would not be affected by the proposed development.

No additional or further mitigation is considered to be required.

Waste water pollution

Natural England advises that a nitrogen budget is provided and that development either avoids harm to European protected sites or provides the level of mitigation required to ensure that there is no adverse effect. Natural England's methodology for identifying a site's total nitrogen load is published within, 'Advice on Achieving Nutrient Neutrality for New Development in the Solent Region' and is relied upon in calculating the site's nitrogen budget (Natural England, 2019).

Stage 1: Calculate Total Nitrogen (TN) in kilograms per annum derived from the development that would exit the Wastewater Treatment Works (WwTW) after treatment

Calculating the additional population generated by the development: As per Natural England's 'Advice for LPAs (2019)' an occupancy rate per dwelling of 2.4 has been used.

Determining the water use of the scheme: Water usage is based on a "maximum predicted internal mains water consumption of 110 litres/ person/ day" as per NE advice (Natural England, 2019).

Confirming which waste water treatment works (WwTW) the development will use and identify the permit concentration limit for Total Nitrogen: The proposed development will discharge into the Peel Common WWTW, which has a permit limit for total nitrogen of 9mg/l. A worst-case scenario of the WWTW operating at 90% of its permitted limit has been applied.

Calculating the total nitrogen (TN) in kg per annum leaving the WWTW after treatment: The following table sets out the calculation;

Stage 1: Calculating the waste water total nitrogen load from the proposed development	
a) net number of new houses	57
b) Average population per dwelling	2.4
c) Additional population arising from the development (a x b)	136.8
d) Maximum water use per day (litres / person / day)	110

e) Permit limit for Total Nitrogen at Peel Common (mg/l)	9
f) 90% of Peel Common consent limit (mg/l TN)	8.1
g) Wastewater generated by the proposed development (c x d) (litres/day)	15,048
h) Total nitrogen discharged after treatment at sewage works (f x g) (mg/TN/ day)	121,888.8
Stage 1: Wastewater TN load (h/1,000,000 x 365) (kg/TN/year)	44.5

Stage 2: Calculating total nitrogen load from the land uses of the site

Stage 2: Adjust Nitrogen load to offset existing nitrogen from current land use

Identify the total area of land that will be lost due to development: The proposed development site extends to 12.53 ha (Site Location Plan No. 16.092.01).

Identify the farm type and the associated nitrate loss: The current farm land use type and related average nitrate-nitrogen loss has been taken from the Farmscoper Model (ADAS 2014). The site in its entirety is currently in use as horse paddocks. 'Advice for LPAs' sets out the lowland grazing figure is appropriate in this instance (Natural England, 2019).

Stage 2: Calculations	
i) Total area of existing urban development to be lost due to the development (ha)	12.53
j) Nitrate leaching for urban land type (kg/ha/yr)	13.0
Stage 2: Total nitrogen load current land use (i x j) (kg/yr)	162.9

Stage 3 – Adjust the Total Nitrogen load to account of the land uses within the proposed development

This calculation accounts for change in nitrogen load through change in land use. Plan No. 16.092.07 sets out the proposed land uses which inform the calculation the plan is included below for ease of reference.



Stage 3: Calculation of the nitrogen load from new development not received by WWTW	
k) Area of land occupied by new 'urban development' (ha)	3.48
l) Total nitrogen load from new urban development at a rate of 14.3kg/ha/yr (k x 14.3)	49.8
m) Area of open space and bird conservation area (ha)	9.05
n) Total nitrogen load from new open space and bird conservation area of 0.5ha or above at a rate of 5kg/ha/yr (m x 5.0)	45.3
Stage 3: Total nitrogen load proposed land use (l + n) (kg/yr)	95.1

Stage 4 – calculate the net change in the Total Nitrogen load that would result from the development

The nitrogen loss from the current land use will be removed and replaced by that from the proposed development land use. The net change in land use will need to be subtracted from or added to the

wastewater Total Nitrogen load (Natural England, 2019). Natural England recommends that a 20% precautionary buffer is also built in.

Stage 4: Calculate the total nitrogen load offset	
Step 1 Identify Nitrogen load from waste water (Stage 1) (Kg/N/yr)	44.5
Step 2 Calculate the net change in Nitrogen from land use change (Stage 3 – Stage 2) (95.1 – 162.9) (Kg/ N/yr)	-67.8
Step 3 Determine Nitrogen Budget: Total Nitrogen wastewater load for development plus Nitrogen load from land use change (Step 1 + Step 2) (Kg/N/yr)	-23.3
Step 4 Identify Nitrogen buffer (Step 3/ 5) (Kg/N/yr)	-4.7
Step 5 Identify Nitrogen Budget with 20% buffer (Step 3 + Step 4) (Kg/N/yr)	-28.0

Development would result in a deficit of nitrogen at -28.0 Kg/Yr. The proposals will not result in any adverse effects on the integrity of the Solent Coastal Special Protection Areas resulting from increased discharge of wastewater and will achieve better than 'nitrogen neutrality'.

No additional or further mitigation is considered to be required.

Summary & Conclusion

The European sites screened into the assessment at Stage 1 of the HRA were;

- Solent Maritime SAC
- Portsmouth Harbour SPA
- Portsmouth Harbour Ramsar
- Solent and Southampton Water SPA
- Solent and Southampton Water Ramsar

The findings of the Stage 1: Screening identified 3 no, pathways to LSE that required Stage 2: Appropriate Assessment;

- Disturbance from recreation
- Loss/ degradation of supporting habitats
- Waste water pollution

Stage 2: Appropriate Assessment concluded that the application of mitigation for the pathways to LSE relating to disturbance, loss/degradation of supporting habitats and water pollution would successfully remove any effect.

- There would be no impact on the integrity of the SAC, SPAs or Ramsars further to payment to the Solent Recreation Mitigation Strategy.
- Development would not result in the loss or degradation of supporting habitat in light of the proposed Bird Conservation Area.
- Development would result in better than nitrogen neutrality.

The development would not result in harm and there would be no adverse effect on the integrity of the designated sites.

The LPA, as Competent Authority, is invited to use the information hereby provided to inform the HRA.