BUILDING
A BETTER FUTURE

Habitats Regulations Assessment Screening for the Local Plan

August 2022

Havant
BOROUGH COUNCIL

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APPENDIX 1 – LOCATION OF EUROPEAN SITES WITHIN 10KM OF HAVANT BOROUGH

Executive Summary

Havant Borough Council has produced a consultation paper in accordance with Regulation 18 of the Town and Country Planning (Local Planning) Regulations 2012. The paper is the first stage in the development of a new Local Plan for Havant Borough. The plan will be known as the Building A Better Future Plan.

The consultation paper sets out the Council's broad vision and objectives for spatial development in the Borough. A total of 22 policy themes are included. Following consultation, the Plan will be further developed and include specific policies and development allocations. Further consultation will be carried out once the Plan is produced.

This document comprises a Habitats Regulations Assessment (HRA) screening of the Building A Better Future Plan consultation paper in accordance with the Conservation of Habitats and Species Regulations 2017 (the 'Habitats Regulations'). This HRA screening provides an analysis of the policy themes within the Plan consultation paper and seeks to establish whether or not these will result in any 'likely significant effect[1]' on internationally designated European sites in and around Havant Borough. Recognising that there are, at present, no specific policies or allocations, the HRA is anticipatory and seeks to provide an initial assessment of the Plan based on the current broad vision and objectives as set out in the consultation paper.

Each of the policy themes in the consultation paper has been assessed to determine whether there could be a likely significant effect on a European site if it went ahead. Importantly, the HRA identifies where further information is required in order to fully assess the Plan's effects. It is recognised that none of the policy themes within the paper is necessary for the management of any of the designated sites. This HRA considers the potential for likely significant effect on the following eighteen European sites:

Table 1: European sites included within the HRA screening assessment

Special Area of Conservation (SAC)	Special Protection Area (SPA)	Ramsar site
Solent Maritime	Chichester & Langstone Harbours	Chichester & Langstone Harbours
Solent & Isle of Wight Lagoons	Portsmouth Harbour	Portsmouth Harbour
South Wight Maritime	Solent & Dorset Coast	
Butser Hill	Pagham Harbour	Pagham Harbour
Kingley Vale	The New Forest	The New Forest
The New Forest	Solent & Southampton Water	Solent & Southampton Water
Singleton & Cocking Tunnels		

Findings

In accordance with the screening requirements of the HRA process, and therefore in the absence of appropriate mitigation measures, it is concluded that eight of the policy themes within the Plan could lead to likely significant effects alone and/or in combination with other plans or projects on European sites, due to the effects of habitat loss, recreational disturbance, air quality, coastal

[1] Any effect that may reasonably be predicted as a consequence of the plan or project that may affect the conservation objectives of the features for which a site was designated

squeeze and water resources. These potential impact sources will need to be taken forward to the next stage of HRA and be subject to appropriate assessment to determine whether, once mitigation measures are put in place, there is a residual impact on European site integrity.

Outcome of HRA Stage 1 - Screening

- A total of eight policy themes within the Plan are considered to have the potential to result in likely significant effect on a European site either alone or in-combination.

- Five policy themes are considered to have potential to result in either direct habitat loss impacts or functional habitat loss impacts to Solent Maritime SAC, Singleton & Cocking Tunnels SAC, Chichester & Langstone Harbours SPA/Ramsar, Portsmouth Harbour SPA/Ramsar or Solent & Dorset Coasts SPA.

- Four policy themes are considered to have potential for recreational disturbance impacts to Chichester & Langstone Harbours SPA/Ramsar or Portsmouth Harbour SPA/Ramsar.

- Seven policy themes are considered to have potential for increasing the potential impacts of coastal squeeze on Solent Maritime SAC and Chichester & Langstone Harbours SPA/Ramsar.

- Seven policy themes are considered to have the potential for in-combination impacts related to increases in atmospheric pollution on Solent Maritime SAC and/or Butser Hill SAC.

- Four policy themes are considered to have potential to result in in-combination impacts relating to nutrient neutrality on Solent Maritime SAC, Solent & Isle of Wight Lagoons SAC, Chichester & Langstone Harbours SPA/Ramsar, Portsmouth Harbour SPA/Ramsar, Solent & Dorset Coasts SPA or Solent & Southampton Water SPA/Ramsar.

Table 2: Summary of Policy Themes with potential to result in Likely Significant Effect

European Site	Policy Theme with potential to result in Likely Significant Effect
Solent Maritime SAC	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Butser Hill SAC	Regeneration, Economy & Employment, Housing, Infrastructure, Retail & Town Centres, Effective Transport & Communication
Solent & Isle of Wight Lagoons SAC	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Singleton & Cocking Tunnels SAC	Development Strategy, Housing, Economy & Employment, Regeneration
Chichester & Langstone Harbours SPA	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres,

Table 2: Summary of Policy Themes with potential to result in Likely Significant Effect	
European Site	**Policy Theme with potential to result in Likely Significant Effect**
	Flood Risk, Infrastructure, Effective Transport & Communication
Chichester & Langstone Harbours Ramsar	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Portsmouth Harbour SPA	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Portsmouth Harbour Ramsar	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Solent and Dorset Coast SPA	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Solent & Southampton Water SPA	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication
Solent & Southampton Water Ramsar	Development Strategy, Housing, Economy & Employment, Regeneration, Retail & Town Centres, Flood Risk, Infrastructure, Effective Transport & Communication

Outcome of HRA Stage 2 - Appropriate Assessment and the Integrity Test

In the absence of detailed policies and site-specific allocations it is not possible to robustly assess potential impacts to European site integrity. The HRA concludes that further assessment is required as the policy framework is developed further.

1. Introduction

Background

1.1 This report has been prepared for Havant Borough Council (HBC) and forms a Habitats Regulations Assessment (HRA) of the Building A Better Future Plan consultation paper. The report forms part of the evidence base for the Local Plan ('the Plan'). The HRA is anticipatory in that there are currently no specific policies or site allocations on which to undertake detailed assessment. However, by carrying out HRA of the broad policy themes as set out in the consultation paper, it is possible to anticipate potential effects that require further information and assessment for future iterations of the Plan. In this way, HBC can ensure that the emerging Plan is fully consistent with its legal obligations as 'competent authority' under the Habitats Regulations.

1.2 The purpose of this report is to set out the methodology, baseline evidence and screening used to assess the Building A Better Future Plan consultation paper. The objective of the HRA is to identify any aspects of the Plan consultation paper that would have the potential to have a likely significant effect on European sites either alone or in combination with other plans and projects, thereby potentially affecting the integrity of those sites.

The requirement for HRA

1.3 The application of HRA to land use plans is a requirement of Regulation 61 of the Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations), the UK's transposition of European Union Directive 92/43/EEC on the '*Conservation of natural habitats and of wild fauna and flora*' (the Habitats Directive). HRA must be applied to all local planning policy documents in England and Wales and aims to assess the potential effects of a land use plan or policy against the conservation objectives of any European sites designated for their nature conservation importance under the Habitats Directive and Birds Directive (Directive 2009/147/EC on the '*conservation of wild birds*'). Such sites are known collectively as the National Sites Network (formerly the Natura 2000 network).

1.4 The National Sites Network collectively provides ecological infrastructure for the protection of rare, endangered or vulnerable natural habitats and species of exceptional importance within the UK. These sites consist of Special Areas of Conservation (SACs, designated under the Habitats Directive) and Special Protection Areas (SPAs, classified under the Birds Directive). Additionally, UK Government policy (section 118 of The National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2018) and Circular 06/05 (ODPM, 2005)) recommends that Ramsar sites listed under the Convention on Wetlands of International Importance (UNESCO, 1971), are treated as if they are fully designated European sites for the purposes of considering development proposals that may affect them.

1.5 Under Regulation 63 of the Conservation Regulations, any HRA must determine whether or not a plan will undermine the published conservation objectives of the European site(s) concerned and as a result adversely affect the ecological integrity of the site(s). Where negative effects are identified, the process should consider alternatives to the proposed actions and explore mitigation opportunities, whilst adhering to the precautionary principle.

1.6 The European Commission (2000) describes the precautionary principle as follows:

> *"If a preliminary scientific evaluation shows that there are reasonable grounds for concern that a particular activity might lead to damaging effects on the environment, or on human, animal or plant health, which would be inconsistent with the protection normally afforded to these within the European Community, the Precautionary Principle is triggered."*

1.7 Decision-makers then have to determine what action to take. They should take account of the potential consequences of taking no action, the uncertainties inherent in the scientific evaluation, and they should consult interested parties on the possible ways of managing the risk. Measures should be proportionate to the level of risk and to the desired level of protection. They should be provisional in nature pending the availability of more reliable scientific data.

1.8 Action is then undertaken to obtain further information enabling a more objective assessment of the risk. The measures taken to manage the risk should be maintained so long as the scientific information remains inconclusive and the risk unacceptable. The hierarchy of intervention is important: where effects on ecological integrity are identified, plan makers must first consider alternative ways of achieving the plan's objectives that avoids significant effects entirely. Where it is not possible to meet objectives through other means, mitigation measures that allow the plan to proceed by removing or reducing significant effects may be considered. If it is impossible to avoid or mitigate the adverse effect, the plan-makers must demonstrate, under the conditions of Regulation 64 of the Regulations, that there are Imperative Reasons of Overriding Public Interest (IROPI) to continue with the proposal. This is widely perceived as an undesirable position and should be avoided if at all possible.

The Status of the Plan

1.9 The consultation paper for the Building A Better Future Plan is a high-level document, setting out the Council's broad vision and objectives: it contains no specific policies or site allocations. The Council is seeking feedback through a Regulation 18 consultation process to steer further iterations of the Plan and, ultimately, specific policies and site allocations.

1.10 The Plan does not contain specific, detailed policies such as the amount and location of new development. As such, the HRA may not be able to identify detailed effects on European sites arising from the Plan. However, the Plan does demonstrate the direction of travel for spatial development in the Borough and it is necessary for the Council to assess, as far as is reasonably possible, potential effects on European sites that may result from the future Plan. Importantly, the HRA should identify the need for additional information that will allow future detailed assessment.

Purpose and Structure of this report

1.11 This report documents the initial evidence gathering process and provides a screening of the Plan to determine whether it would have a 'likely significant effect' on the European sites

concerned. It then provides an 'appropriate assessment' to determine whether the plan would have an effect on the integrity of the European sites concerned.

1.12 The document is structured as follows:

- Chapter 1: Introduction
- Chapter Two: HRA methodology
- Chapter Three: European sites
- Chapter Four: Impact Pathways
- Chapter Five: Screening of the Building A Better Future consultation paper
- Chapter Six: Commentary on Effects
- Chapter Seven: Appropriate Assessment & the Integrity Test
- Chapter Eight: Summary and Record of the HRA.

Previous HRAs in the Borough

1.13 HRA screening was carried out in relation to the Havant Borough Local Plan Core Strategy (HBC, 2007; HBC, 2009) subsequent to which an Appropriate Assessment of the Core Strategy was carried out in 2010 (HBC, 2010). A full Appropriate Assessment was also carried out for the Havant Borough Local Plan (Allocations) (HBC, 2013). Most recently, HRA screening was also undertaken for the Havant Borough Housing Statement 2016 (HBC, 2016) and the previous Havant Borough Local Plan (HBC, 2022).

1.14 Both the Core Strategy and Local Plan (Allocations) are still relevant in relation to their HRA screening and Appropriate Assessment, and remain valid up until the time when the Building A Better Future Plan is adopted and the policies in the Core Strategy and Allocations Plan are replaced.

Background to the Building A Better Future Plan

1.15 The existing Adopted Local Plan is made up of the Havant Borough Local Plan (Core Strategy) and the Havant Borough Local Plan (Allocations). These were adopted by the Council in 2011 and 2014 respectively. Together with the Hampshire Minerals and Waste Plan these form the development plan for the Borough. This means that they are the starting point in determining planning applications as the National Planning Policy Framework (NPPF) sets out that development proposals should be "*determined in accordance with the development plan, unless material considerations indicate otherwise*".

1.16 It is proposed to produce a single Local Plan that will replace the Core Strategy and Allocations plans. This will be the Building A Better Future Plan. Once this is adopted, the development plan for the Borough will consist of:

- The Building A Better Future Plan
- The Hampshire Minerals and Waste Plan (2013)
- Any adopted Neighbourhood Plans

Structure of the Building A Better Future Plan

1.17 The consultation presents a series of 22 policy themes, with outline details on potential policies to be included in the forthcoming Plan. These policy themes are:

- Development Strategy
- Housing
- Economy and Employment
- Regeneration
- Land and Densities
- Retail & Town Centres
- Flood Risk
- Gypsies, Travellers and Travelling Showpeople
- Climate Change
- The Natural Environment
- Biodiversity Net Gain
- Local Nature Designations
- Affordable Housing
- Housing Design Standards & Specialist Accommodation
- Landscape & Loss of Agricultural Land
- Infrastructure
- Effective Transport & Communications
- Green Infrastructure
- Sports and Recreation
- High Quality Design
- Heritage and the Historic Environment
- Pollution

2.1 For each of these policy themes, the consultation paper provides details of the legislative framework, local evidence and the local policy framework, the proposed approach to the policy theme, and finally sets out a series of potential high-level policies.

2. Methodology

Introduction

2.2 Guidance on HRA is published online[2] by the UK Government (HM Government, 2021). Detailed technical advice on applied HRA continues to be published in The Habitats Regulations Assessment Handbook by David Tyldesley and Associates (DTA Publications, 2022).

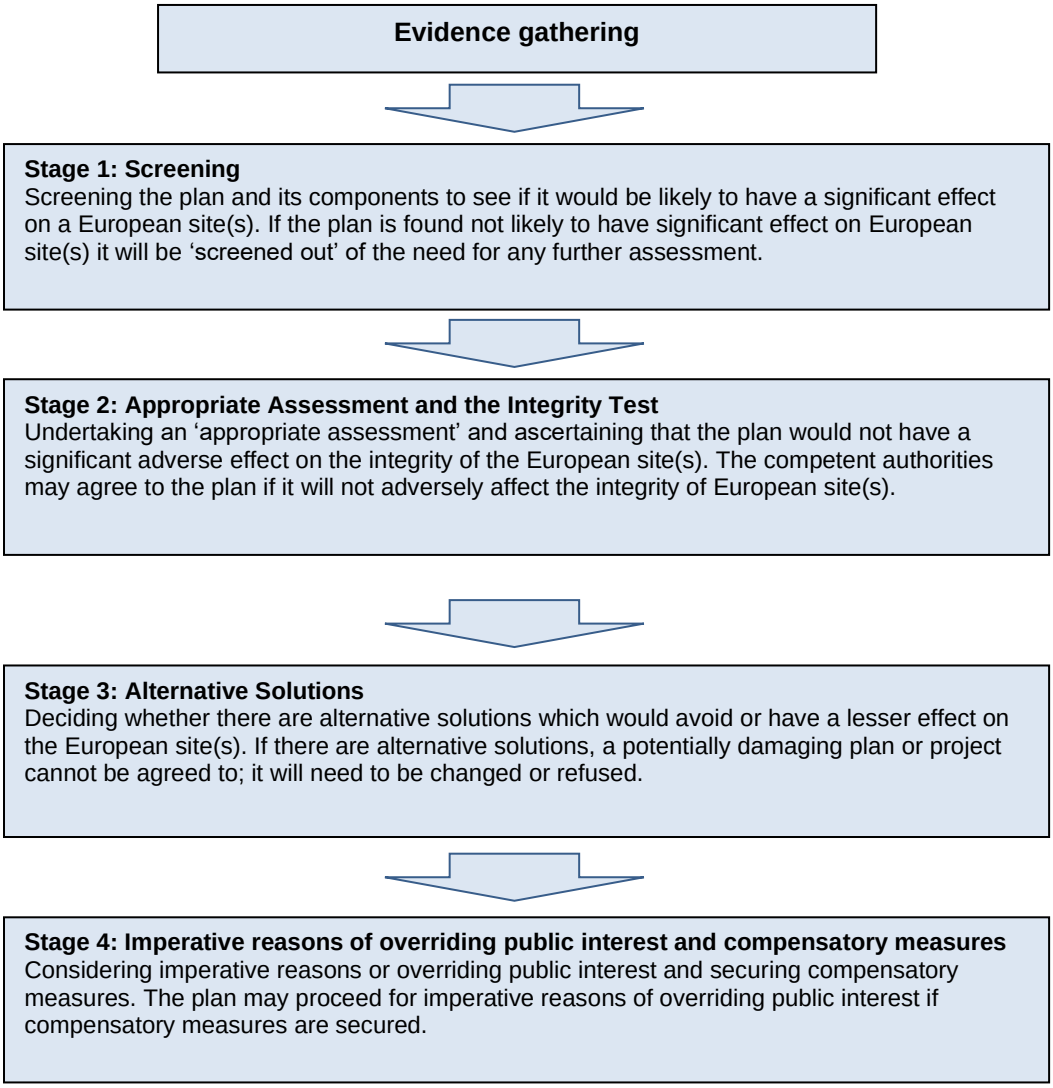
2.3 The guidance recognises that there is no single statutory method for undertaking HRA but rather that the adopted method must be 'appropriate' to its purpose under the Habitats Regulations; this concept is one of the reasons why HRA is often referred to as appropriate assessment. The UK Government online guidance identifies three stages to the HRA process, whereas DTA recognises four.

2.4 It is generally expected that through the iterative HRA process, the potential for likely significant effects on European sites can be avoided or reduced to levels where impacts to site integrity are insignificant. Where alternative solutions or mitigation measures to remove or reduce adverse effects to insignificant levels cannot be achieved, there may be a need to explore imperative reasons of overriding public interest (IROPI). This is included as Stage 4 by DTA. The three/four stages collectively make up the HRA, while Stage 2 is the point at which appropriate assessment of the plan is carried out if the evidence gathered at Stage 1 points to a need for such an assessment.

2.5 This document fulfils the requirements of Stage 1 and Stage 2 in providing a screening statement for the Building a Better Future Plan and, where effects cannot be screened out, proceeding to appropriate assessment and the integrity test. Figure 1 provides a visual representation of the HRA process used in the document.

[22] https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site

Figure 1: The four-stage approach to HRA

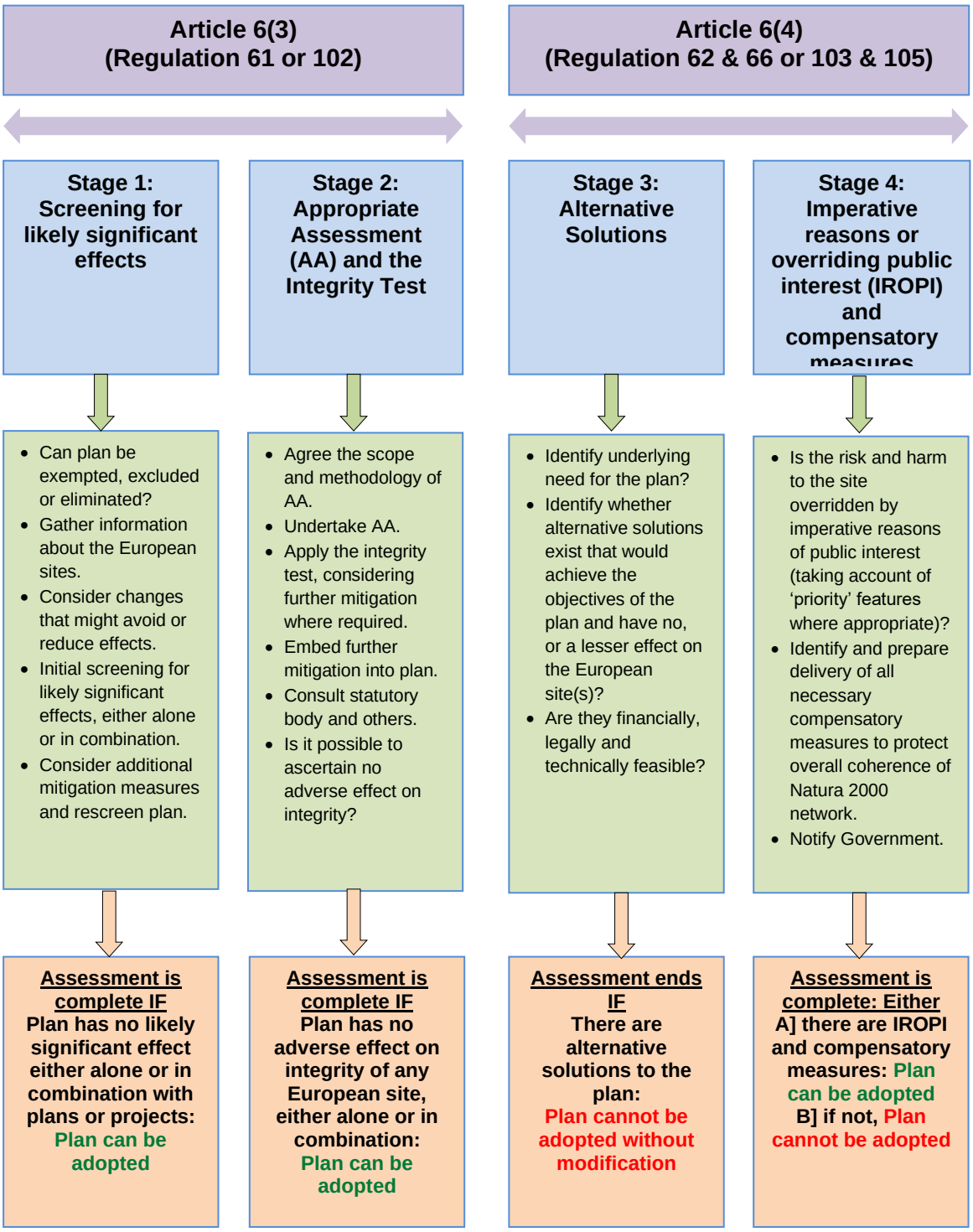


2.6 It is recognised that HRA may be undertaken at the same time as other assessment processes associated with the preparation of development documents (i.e. Sustainability Appraisal and Strategic Environmental Assessment (SA/SEA)) but should be recorded as a distinct procedure with its own legislative requirements.

Methodology

2.7 This assessment follows the methodology for Stages 1 and 2 prepared by David Tyldesley and Associates (2022), as described in Figure 2.

Figure 2: Outline of the four-stage approach to the assessment of Plans under the Habitats Regulations



Limitations and uncertainty

2.8 It is important to note the role of uncertainty in the HRA process. There are many factors which either alone or in combination may place caveats on the level of certainty that is able to be applied to the assessment and the degree to which conclusive statements on likely significant effect can be made. This is particularly the case when dealing with populations of wild organisms or other aspects of dynamic ecological systems.

Scientific

2.9 Scientific uncertainty arises owing to uncertainty about the predicted effects of one or more aspect of a plan on the interest features of a European site. Examples may be a lack of scientific knowledge of, or inadequate data concerning, a particular ecological feature e.g. bird numbers or distribution, habitat distribution or condition, or broad-scale environmental variables e.g. climate change. It may also occur where the assessor is unable to satisfactorily predict and estimate the nature, timing, scale or spatial extent of changes proposed by the plan. This last point is particularly relevant to higher-level plans where site-specific details are generally lacking.

2.10 In accordance with the Habitats Directive, wherever scientific uncertainty is encountered a precautionary approach should be adopted. If in doubt, further assessment should be undertaken, and the worst outcome assumed based on the best available evidence.

Regulatory

2.11 Some local planning documents will include references to proposals that are planned and implemented through other planning and regulatory regimes e.g. previous Local Plans, housing allocations. These will be included because they have important implications for spatial planning, but they are not proposals specific to the plan in question. Their potential effects will be/have been assessed through other procedures.

2.12 The competent authority may not be able to assess the effects of these proposals and it may be inappropriate for them to do so, resulting in unnecessary duplication. That said, the possible effects of such proposals, in combination with the plan in question may be relevant and where necessary, should be considered.

Planning Hierarchy

2.13 Higher level strategic documents will contain general and strategic provisions and therefore their effects are by definition more uncertain than for lower tier, site-specific proposals. The protective regime of the Habitats Directive is intended to operate at differing levels and in some circumstances assessment at a lower tier in the planning hierarchy (e.g. site-specific HRA) will be more effective in assessing the potential effects of a proposal on a particular site and protecting its integrity: at the strategic level consideration of potential effects is understandably generic but can set broad parameters to guide lower tier assessments, ensuring that future detailed plans are captured through the HRA process.

2.14 It is only appropriate to consider deferring detailed assessment to the site/project level where the HRA of a higher tier cannot reasonably assess the effects on a European site in a

meaningful way. A lower tier plan/project can identify more precisely the nature, scale, timing or location of development, and thus its potential effects. Therefore, HRA of policies or proposals at a lower level (e.g. a specific site proposal) will be able to change the proposal if an adverse effect on site integrity cannot be ruled out, because the lower tier plan is free to change the nature, scale, timing or location of the proposal in order to avoid adverse effects on the integrity of any European site. Additionally, the HRA of the plan or project at the lower tier is required as a matter of law and policy.

2.15 It is however seen as relevant and important for the HRA of higher tier plans to indicate what further assessment may be necessary in a lower tier plan and how the requirements may be adjusted, in the event that the HRA of the lower tier plan shows that adverse effects on a European site could not be ruled out.

2.16 Because, for the reasons detailed above, higher tier plans may be limited by uncertainties about the true effects on European sites resulting from site-specific proposals, it is important to adopt a precautionary approach. If adverse effects on European sites could occur as a result of the amount or location of development to be provided for within the higher tier plan, it is necessary to make every effort – given acknowledged limitations and constraints where fully justified - to adapt the higher tier plan to avoid such effects in any case. This may include changes to higher tier plan policy wording to ensure that restrictions are placed on certain policies i.e. ensuring that implementation of a certain policy would occur only after appropriate avoidance/mitigating measures are in place.

Implementation

2.17 As detailed above, in many situations the effects arising from a plan depend on how that plan is implemented. To ensure compliance with the Regulations, it may be appropriate to impose a caveat in relevant policies, or introduce a free-standing policy, which states that any development project that could have an adverse effect on the integrity of a European site will not be in accordance with the plan.

2.18 This would help to enable stakeholders to reasonably conclude, on the basis of objective information, that even where there are different ways of implementing a plan, and even applying the precautionary principle, no element of the plan that could adversely affect the integrity of a European site could be seen as being supported by the plan.

2.19 It is however not sufficient for the HRA to conclude no significant effects, merely because the plan contains a policy protecting European sites. Any policy introduced to remove uncertainty must be targeted specifically to deal with the issue that is causing the uncertainty. In assessing the effects on European sites, the HRA should assess (where known) the overall scale, location, timing and nature of new development. It should assess whether delivery of that development in the timescale of the plan, and the implementation of all its policies and proposals, would be likely to have a significant effect on a European site, alone or in combination with other plans or projects.

2.20 For some widescale potential impacts such as those resulting from air quality or water resource management issues, effects are not confined within the boundaries of a single local planning authority, and the effects may be caused in part, or mostly, by impacts within another competent authority's area. The effects of such cumulative impacts can only

reasonably be addressed across authority boundaries. Due to the differing timescales for local plan implementation between authorities, it is necessary for authorities to commit to joint working to address such widescale potential issues.

Precautionary nature of the 'likely significant effects' test

2.21 The decision-making process under the Habitats Directive is underpinned by the precautionary principle, whereby the Competent Authority acts to avoid potential harm in the face of scientific uncertainty. If it is not possible in a 'likely significant effect' test to rule out a significant effect on a European site on the basis of available evidence, then it should be assumed the significant effect identified is likely to occur as a result of the plan and needs to be dealt with at the next stage of HRA. This precautionary approach should be taken at all stages of the assessment where faced with uncertainty.

Cumulative Effects

2.22 It is a requirement of the Regulations that the potential cumulative effects of the subject plan and any other relevant plans or projects on European sites are assessed: this is referred to as the 'in-combination effect' and each proposal or policy within the plan should be screened for its potential to result in 'likely significant effect' on each European site either alone or in-combination with other plans or projects.

2.23 For the purposes of this assessment the following plans and projects have been considered when assessing the potential for cumulative impacts.

- Chichester Local Plan: Key Policies 2014-2029.
- Chichester Local Plan Review
- East Hampshire District Local Plan: Joint Core Strategy (adopted 2014)
- East Hampshire District Local Plan (Part 2): Housing and Employment Allocations
- East Hampshire District Council Draft Local Plan 2017-2036
- Habitats Regulations Assessment of East Hampshire's Regulation 18 Local Plan
- Eastleigh Borough Local Plan 2016-2036
- Eastleigh Borough Local Plan 2016-2036 Habitats Regulations Assessment 2018
- Fareham Local Development Strategy – Core Strategy 2011
- Fareham Local Plan part 2: Development Sites and Policies
- Fareham Local Plan part 3: the Welborne Plan (adopted 2015)
- Fareham Local Plan 2037 Revised
- HRA for the Fareham Local Plan 2036: Screening Report for the Draft Plan September 2017
- Gosport Borough Local Plan 2011 to 2029 (adopted 2015)
- Habitats Regulations Assessment for the Gosport Borough Local Plan
- Hampshire Local Transport Plan (2011-2031)
- Joint Hampshire Minerals and Waste Plan (adopted 2013) (includes Portsmouth, Southampton, New Forest National Park and South Downs National Park).
- North Solent Shoreline Management Plan (2010)
- The Portsmouth Plan (adopted 2012)
- Portsmouth Local Plan 2038 'Regulation 18' Consultation Document Draft for consultation September 2021

- Portsmouth City Council Habitats Regulation Assessment - Screening Report 2017
- Portsmouth Water Draft Water Resources Management Plan 2019
- South Downs Local Plan (2014-2033)
- South Downs National Park Authority Local Plan Habitats Regulations Assessment 2018
- Strategic development at Tipner and Horsea Island, Portsmouth
- Sub Regional Transport Model for South Hampshire (2010)
- Winchester District Local Plan Part 1 - Joint Core Strategy (adopted 2013)
- Winchester District Local Plan Part 2 – Development Management and Site Allocations (adopted 2013)
- Winchester District Local Plan 2018 – 2039 (Emerging)
- Winchester District Local Plan Habitats Regulations Assessment Scoping Report July 2020

Avoidance, Mitigation and Compensatory Measures

2.24 An intrinsic factor in the assessment of ecological impacts is the inclusion of mitigation measures, or measures to avoid or reduce an identified impact and the HRA process should of course be guided by this principle. The 'mitigation hierarchy' of 'avoid-mitigate-compensate' is a common thread running through good ecological practice.

2.25 A clear distinction must be made between mitigation measures and compensatory measures. The former are designed to cancel or lessen identified impacts, whereas the latter are designed to offset residual negative impacts.

2.26 A Local Plan will contain policies whose purpose is explicitly to ensure that ecological impacts are avoided, mitigated or compensated as appropriate. Some measures operate at a strategic level (e.g. mitigating recreational disturbance) whereas others will be most effective at the site level (e.g. requirement for full ecological assessment and mitigation strategy at planning application stage).

2.27 The longstanding protocol of applying so-called integrated mitigation measures (as detailed in the 'Dilly Lane' ruling: *R on the application of Hart DC v Secretary of State for Communities and Local Government [2008])* at HRA screening stage has been reversed. The Court of Justice of the European Union (CJEU) ruling *People Over Wind and Sweetman v Coillte Teoranta (Case C-323/17)* significantly changes how the competent authority is able to treat mitigating measures at the HRA screening stage.

2.28 The Sweetman ruling states that 'Article *6(3) of the Habitats Directive must be interpreted as meaning that, in order to determine whether it is necessary to carry out, subsequently, an appropriate assessment of the implications, for a site concerned, of a plan or project, it is not appropriate, at the screening stage, to take account of the measures intended to avoid or reduce the harmful effects of the plan or project on that site*'.

2.29 Whereas previously it was correct to take into account mitigating measures at the screening stage and often conclude that such measures effectively removed the potential for likely significant effect such that the potential effects could be 'screened out' from further assessment, the *People over Wind* ruling reversed this. Mitigating measures should not now

be taken into account in screening and therefore HRA should, in nearly all cases where mitigating measures are proposed, proceed automatically to the second stage; appropriate assessment and the integrity test. This has recently been confirmed by the Chief Planning Officer of Her Majesty's Government (MHCL, January 2019).

Other relevant case law

2.30 The 2018 Holohan v An Bord Pleanála case related to the interpretation of Article 6(3) of the EU Habitats Directive. This judgement concluded that: "*Article 6(3) of the Habitats Directive must be interpreted as meaning that an 'Appropriate Assessment' must, on the one hand, catalogue the entirety of habitat types and species for which a site is protected, and, on the other, identify and examine both the implications of the proposed project for the species present on that site, and for which that site has not been listed, and the implications for habitat types and species to be found outside the boundaries of that site, provided that those implications are liable to affect the Network Objectives of the site*."

2.31 This means that any Appropriate Assessment must consider the implications of a plan or project not only on the habitat types and species that the site is designated for, but also on:

- Species listed on Annex II of the Habitats Directive as well as birds listed on Annex I of the Birds Directive that are present on the site but not listed as qualifying species.
-
- Habitat types and species listed on Annex I and II of the Habitats Directive and Annex I of the Birds Directive that occur outside the boundaries of the designated site, if there are implications for these that affect the Network Objectives for the site.

3. European sites

Scope of the study

3.1 Each European site has its own intrinsic qualities (geological, hydrological and ecological) that enable the site to support the flora and fauna that it does. An important aspect of this is that the ecological integrity of each site can be vulnerable to change from natural and human induced activities in the surrounding environment. For example, sites can be affected by land use plans in a number of different ways, including the direct land-take of new development, the type of use the land will be put to (for example, a noise emitting use), the pollution a development generates and the resources it uses (during both construction and operation).

3.2 One intrinsic quality of any European site is its ecological functionality at the landscape level; in other words, how the site (and the flora and fauna which depend upon it) interacts with the zone of influence of its immediate surroundings, as well as the wider area e.g. an estuary would be influenced by activities occurring within the wider river catchment. Best practice guidance on HRA suggests that all European sites within the area of coverage of a plan, together with all those within a 10km buffer zone should be considered in the first instance as potential receptors for negative effects. In addition to these, other European sites further than 10km from the area of coverage of a plan may also be affected due to their specific environmental sensitivities and the activities proposed within the plan. This is particularly the case where there is potential for developments resulting from the plan to generate water-borne pollutants, where there are particularly high demands for water resources, where a specific recreational resource has a catchment area of greater than 10km, or where a plan would result in increased airborne pollutants affecting areas beyond the plan's boundary.

3.3 Table 3 lists eighteen European sites considered within the scope of this assessment. Appendix 1 shows the locations of Havant Borough and the European sites located within a 10km buffer zone.

Table 3: European sites in the vicinity of Havant Borough

Name	Location	Type
Solent & Isle of Wight lagoons	Within 10km buffer zone	SAC
Solent Maritime	Within 10km buffer zone	SAC
South Wight Maritime	Within 10km buffer zone	SAC
The New Forest	c. 20km to the west (straight line)	SAC
Butser Hill	Within 10km buffer zone	SAC
Kingley Vale	Within 10km buffer zone	SAC
Singleton & Cocking Tunnels	c.13km to the north-east	SAC
Chichester & Langstone Harbours	Within 10km buffer zone	SPA
Portsmouth Harbour	Within 10km buffer zone	SPA

Table 3: European sites in the vicinity of Havant Borough		
Solent & Southampton Water	Within 10km buffer zone	SPA
The New Forest	c. 20km to the west (straight line)	SPA
Solent and Dorset Coast	Within 10km buffer zone	SPA
Pagham Harbour	c. 15km to the east (straight line)	SPA
Chichester & Langstone Harbours	Within 10km buffer zone	Ramsar
Portsmouth Harbour	Within 10km buffer zone	Ramsar
Solent & Southampton Water	Within 10km buffer zone	Ramsar
The New Forest	c. 20km to the west (straight line)	Ramsar
Pagham Harbour	c. 15km to the east (straight line)	Ramsar

Qualifying features

3.4 The qualifying features of each European site (that is, the reasons for which the site is designated) are listed in Table 4. These comprise the species and habitats whose conservation is highly dependent on the designation and protection of the European sites.

Conservation Objectives

3.5 Natural England, as the statutory nature conservation body for England, formulates detailed conservation objectives for all SACs and SPAs[3]. Progress towards these objectives can be taken as an indicator of 'favourable conservation status' at a site (i.e. the cited qualifying features (species and habitats) are in a suitable conservation status at the national, biogeographical or European level).

3.6 Ramsar sites do not have agreed conservation objectives, but in most instances overlap with SPA site boundaries and for the purposes of this assessment the conservation objectives for SPAs are applied to Ramsar sites. However, it should be noted that Ramsar qualifying features often include a range of habitats and non-bird species common to SAC designations, as well as bird species and assemblages and their supporting habitats, which are common to SPAs.

3.7 The conservation objectives for European sites are broadly similar for SPAs and SACs and their purpose is to:

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/Habitats Directive, by maintaining or restoring;

- *The extent and distribution of qualifying natural habitats and habitats of qualifying species*
- *The structure and function of the habitats of the qualifying features*
- *The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely*

[3] Improvement programme for England's Natura 2000 sites (IPENS)

- *The population of each of the qualifying features, and,*
- *The distribution of the qualifying features within the site.*

3.8 In addition to these broad conservation objectives, Natural England has published Supplementary Advice on Conservation Objectives (SACO) for European sites, providing a list of attributes for each qualifying feature which '*if safeguarded will enable achievement of the Conservation Objectives*'. The SACO information also contains target thresholds for 'maintaining' or 'restoring' each attribute. It is important to note that '*the targets given for each attribute do not represent thresholds to assess the significance of any given impact in Habitats Regulation Assessments*'. It follows that it is not necessary for the HRA of a plan to ensure that these attribute targets are exceeded e.g. it would be unreasonable to require a particular plan to ensure that a certain population level of a species was maintained or restored, when the range of factors acting on that population may include some outside the possible influence of a land-use plan.

3.9 The attributes listed within the SACO information are broadly similar for each of the qualifying features e.g. they relate to maintaining current population levels/extent and distribution of habitat, reducing disturbance, maintaining concentrations of air pollutants below current thresholds etc.

3.10 Natural England has also published a series of Site Improvement Plans (SIPs) for European sites. Each plan provides a '*high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features'.*

3.11 Some SIPs include an aggregate of several sites. For example, the Solent SIP covers Chichester & Langstone Harbours SPA, Portsmouth Harbour SPA, Solent & Southampton Water SPA and Solent Maritime SAC. SIPs have also been produced for Butser Hill SAC, Kingley Vale SAC, The New Forest SPA and SAC and Pagham Harbour SPA.

3.12 Together, the conservation objectives and their supplementary advice provide a baseline for assessing the potential effects of the policies within the Local Plan.

Conservation Status

3.13 For the purposes of HRA, the assessment must investigate the current conservation status of the individual qualifying features of any given European site, with 'favourable conservation status' being the ultimate benchmark against which the plan is assessed. In other words, favourable conservation status of a qualifying feature is maintained (i.e. is not demonstrably reduced, irrespective of its baseline condition) if its conservation objectives are not undermined by the plan. If favourable conservation status is maintained, then it follows that a site's overall integrity would not be impacted.

3.14 Conservation status is defined as '*the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species*'.

3.15 The conservation status of a habitat is considered favourable when '*its natural range and areas it covers within that range are stable or increasing; the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future; and the conservation status of its typical species is favourable'*.

3.16 The conservation status of a species is considered favourable when '*population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and; the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and; there is, and will probably continue to be, a sufficiently large habitat to maintain its population on a long-term basis'* (JNCC, 2018).

3.17 In the UK, assessing favourable conservation status is carried out in broad accordance with European Union guidance and is based upon a system of 'Common Standards Monitoring' which combines site-level monitoring of Sites of Special Scientific Interest (SSSI) and European sites.

3.18 Natural England is currently undertaking condition assessments of marine features within Marine Protected Areas (MPAs). To date, condition assessments have been carried out only for marine habitat features of a number of SACs: in other words, only selected habitats within some SACs have been assessed and no assessments of SPAs have been conducted.

3.19 For the qualifying species of SPAs, assessments of status must therefore be based upon the latest data on populations where available. Natural England's own site information for SPAs recognise that there are gaps in the data for some qualifying species.

3.20 The most recent reporting on the condition of UK habitats (terrestrial and marine) listed under Annexe I of the Habitats Directive and Annexes II, IV and V of the Directive was published in 2019[4]. The fourth UK Habitats Directive Report details the results of monitoring for the period 2013 to 2018. The report details the condition of each habitat in terms of its range, area, structure and function whilst for each species details of range, population, habitat and its future prospects are provided.

3.21 For UK SPAs, the 11th Article 12 report was published in October 2019[5] and details population size and trend (short and long term); breeding distribution and trend (short and long term); species action plans; and details of pressures, threats, conservation measures and population size inside the UK SPA network

3.22 European sites are often underlain by one or more SSSIs and it is therefore logical to undertake condition assessments of habitats and species concurrently, as the condition of individual SSSI compartments allows an assessment of the current conservation status of the overlying European site. The Common Standards Monitoring is therefore an essential component of the HRA process.

3.23 It follows that the HRA process can be assisted by using SSSI compartment condition assessments to help determine the overall conservation status of a European site or part thereof. SSSI compartments in England are assessed on a rolling programme by Natural England: depending on the date of the most-recent surveys these condition assessments provide the most up-to-date information on site condition.

3.24 In some instances, site-specific surveys are carried out by statutory nature conservation bodies, by the local planning authority, by a non-governmental organisation or by a

[4] JNCC (2019) Fourth Article 17 UK Habitats Directive Report (2019): The UK Approach to assessing Conservation Status for the 2019 Article 17 reporting under the EU Habitats Directive 2019. Accessed https://hub.jncc.gov.uk/assets/6420776d-2a25-4575-8b6f-1922a6a13806

[5] JNCC (2019) Article 12 Birds Directive Report 2019. Accessed https://jncc.gov.uk/our-work/article-12-report-2019/

commercial consultant. Where available, these surveys can provide valuable evidence to inform the HRA process, providing detailed information on the distribution and condition of habitats or species relevant to the European site which can be used to determine condition status.

3.25 In addition, data held by local Biological Records Centres can be invaluable in determining the presence and distribution of European site qualifying features. Map-based data showing the location of Priority Habitats is readily available and these are often analogous to e.g. SAC qualifying habitats. It should be noted that for most European sites there is not a comprehensive, highly detailed map of vegetation communities and therefore a degree of uncertainty may remain when assessing the presence, extent or distribution of a particular qualifying habitat in the context of a specific site proposal within a plan.

Site Integrity

3.26 Site integrity is defined as '*the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was classified*' (JNCC, 2002). It therefore follows that for site integrity to be unaffected, there should be no impacts to a site's qualifying features resulting in harm to the ecological structure and functioning of the site, its supporting processes and/or adversely affecting the site's ability to meet conservation objectives.

The Qualifying Features of European sites

3.27 Table 4 below details the primary and secondary qualifying features (Annex I habitats and Annex II species) of each of the European sites included in this assessment.

Table 4: Qualifying Features of European sites		
Site Name	**Type**	**Qualifying Features**
Solent and Isle of Wight lagoons	SAC	1150 Coastal lagoons
Solent Maritime	SAC	1110 Sandbanks which are slightly covered by sea water all the time 1130 Estuaries 1140 Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats 1150 Coastal lagoons 1210 Annual vegetation of drift lines 1220 Perennial vegetation of stony banks; Coastal shingle vegetation outside the reach of waves 1310 *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand 1320 *Spartina* swards (*Spartinion maritimae*); Cord-grass swards 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) 2120 Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Shifting dunes with marram 1016 Desmoulin`s Whorl Snail *Vertigo moulinsiana*
South Wight Maritime	SAC	1170 Reefs 1230 Vegetated sea cliffs of the Atlantic and Baltic coasts 8330 Submerged or partially submerged sea cliffs
The New Forest	SAC	3110 Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*); Nutrient-poor shallow waters with aquatic vegetation on sandy plains 3130 Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*; Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels 4010 Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath 4030 European dry heaths 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows 7140 Transition mires and quaking bogs; Very wet mires often identified by an unstable `quaking` surface 7150 Depressions on peat substrates of the *Rhynchosporion* 7230 Alkaline fens; Calcium-rich spring water-fed fens

Table 4: Qualifying Features of European sites		
Site Name	**Type**	**Qualifying Features**
		9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrub layer (*Quercion robori-petraeae* or *Ilici-Fagenion*); Beech forests on acid soils 9130 *Asperulo-Fagetum* beech forests; Beech forests on neutral to rich soils 9190 Old acidophilous oak woods with *Quercus robur* on sandy plains 91D0 Bog woodland 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion* Alder woodland on floodplains 1044 Southern Damselfly *Coenagrion mercuriale* 1083 Stag Beetle *Lucanus cervus* 1166 Great Crested Newt *Triturus cristatus*
Butser Hill	SAC	6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites) 91J0 *Taxus baccata* woods of the British Isles; Yew-dominated woodland
Kingley Vale	SAC	6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) (*important orchid sites) 91J0 *Taxus baccata* woods of the British Isles; Yew-dominated woodland
Singleton & Cocking Tunnels	SAC	S1308 Barbastelle Bat *Barbastella barbastellus* S1323 Bechstein`s Bat *Myotis bechsteinii*
Chichester and Langstone Harbours	SPA	A046a Dark-bellied Brent Goose *Branta bernicla bernicla* A048 Common Shelduck *Tadorna tadorna* (Non-breeding) A050 Eurasian Wigeon *Anas penelope* (Non-breeding) A052 Eurasian Teal *Anas crecca* (Non-breeding) A054 Northern Pintail *Anas acuta* (Non-breeding) A056 Northern Shoveler *Anas clypeata* (Non-breeding) A069 Red-breasted Merganser *Mergus serrator* (Non-breeding) A137 Ringed Plover *Charadrius hiaticula* (Non-breeding) A141 Grey Plover *Pluvialis squatarola* (Non-breeding) A144 Sanderling *Calidris alba* (Non-breeding) A149 Dunlin *Calidris alpina alpina* (Non-breeding)

Table 4: Qualifying Features of European sites		
Site Name	**Type**	**Qualifying Features**
		A157 Bar-tailed Godwit *Limosa lapponica* (Non-breeding) A160 Eurasian Curlew *Numenius arquata* (Non-breeding) A162 Common Redshank *Tringa totanus* (Non-breeding) A169 Ruddy Turnstone *Arenaria interpres* (Non-breeding) A191 Sandwich Tern *Thalasseus sandvicensis* (Breeding) A193 Common Tern *Sterna hirundo* (Breeding) A195 Little Tern *Sternula albifrons* (Breeding) Waterbird Assemblage
Portsmouth Harbour	SPA	A046a Dark-bellied Brent Goose A069 Red-breasted Merganser A149 Dunlin A156 Black-tailed Godwit *Limosa limosa islandica*
Solent and Southampton Water	SPA	A046a Dark-bellied Brent Goose A069 Red-breasted Merganser A149 Dunlin A156 Black-tailed Godwit A176 Mediterranean Gull *Ichthyaetus melanocephalus* (Breeding) A191 Sandwich Tern A192 Roseate Tern *Sterna dougalli* (Breeding) A193 Common Tern A195 Little Tern
The New Forest	SPA	A072 European Honey-buzzard *Pernis apivorus* (Breeding) A082 Hen Harrier *Circus cyaneus* (Non-breeding) A099 Eurasian Hobby *Falco subbuteo* (Breeding) A224 European Nightjar *Caprimulgus europaeus* (Breeding) A246 Woodlark *Lullula arborea* (Breeding) A302 Dartford Warbler *Curruca undata* (Breeding) Wood Warbler *Phylloscopus sibilatrix* (Breeding)
Solent and Dorset Coast	SPA	A191 Sandwich Tern (breeding) A193 Common Tern (breeding)

Table 4: Qualifying Features of European sites		
Site Name	**Type**	**Qualifying Features**
		A195 Little Tern (breeding)
Pagham Harbour	SPA	A046a Dark-bellied Brent Goose (non-breeding) A151 Ruff *Philomachus pugnax* (non-breeding) A193 Common Tern (breeding) A195 Little Tern (breeding)
Chichester and Langstone Harbours	Ramsar	Ringed Plover Black-tailed Godwit Common Redshank Dark-bellied Brent Goose Common Shelduck Grey Plover Dunlin Little Tern
Portsmouth Harbour	Ramsar	Dark-bellied Brent Goose
Solent and Southampton Water	Ramsar	Dark-bellied Brent Goose Eurasian Teal Ringed Plover Black-tailed Godwit
The New Forest	Ramsar	Valley mires Rare wetland plants and animals, especially invertebrates
Pagham Harbour	Ramsar	Dark-bellied Brent Goose Black-tailed Godwit

4. Impact Pathways

Background

4.1 This section summarises the range of potential pathways which may lead to impacts on European sites and/or their supporting habitat as a result of the policy themes within the consultation paper. Impacts in this context can be defined as mechanisms or factors resulting in identifiable changes affecting the qualifying features of a designated site such that its conservation objectives are undermined.

4.2 The identified pathways may result in various impacts to the qualifying features of a site. These impacts may be physical, biological, chemical, hydrological or anthropological. In addition, they can exhibit differing characteristics in terms of their timing, duration, frequency or permanence and the effect on the site in question will be related to the characteristics of that site e.g. its sensitivity, vulnerability.

4.3 Impact pathways may operate over considerable geographical distances, especially in relation to air quality and the water environment and where qualifying features are highly mobile e.g. birds, fish or are susceptible to effects operating over large geographic areas. The proximity of an impact source to the site in question will clearly influence the likelihood of impacts (e.g. construction noise is unlikely to operate beyond the immediate vicinity), although there are some potential impacts for which proximity to the site is not a primary factor.

4.4 These pathways have been used to assess the potential consequences of the policy objectives within the Plan on the European sites taken forward for assessment. Further detailed comment on selected key pathways is provided in Chapter 6 below.

4.5 The range of potential impacts can be subdivided into those operating at a site-specific scale and those operating over a larger, strategic scale. Some pathways operate at both levels.

4.6 Construction-related impacts are used here to describe any activities during construction, remediation or decommissioning at a site. These are distinct from the operational phase impacts which are a result of the specified post-construction land-use at a particular site.

Site-specific Impact pathways

Habitat Loss

4.7 This refers to the direct physical or functional loss of habitat either within a European site or habitat outside a European site but supporting its qualifying features (e.g. habitat supporting key bird species). Loss in this context refers both to direct physical loss (land take) and functional loss resulting from e.g. construction-phase or operational-phase activities such as noise and visual disturbance.

4.8 Direct land take can occur within designated sites and result in direct impacts to SAC qualifying habitat features or land within a SPA/Ramsar. For example, works to repair or enhance coastal defences, to redevelop/encourage marine recreation or commercial facilities, or to increase recreational visitors may result in habitat loss or damage e.g. through trampling or construction as an indirect but predictable result of a policy or proposal.

4.9 For local plans to facilitate land take within designated sites is exceptional and therefore large-scale impacts to site integrity resulting from this are extremely rare. Where minor (in

extent or duration) losses are likely as a result of a policy or proposal then that loss will need to be viewed within the context of whole-site integrity. There may be circumstances where a seemingly trivial loss may have more profound impacts e.g. the loss of an important bird roosting/nesting site or a particularly notable vegetation community, or where small impacts to a larger dynamic system may have unintended consequences. Conversely, a small loss may not reasonably result in impacts to whole-site integrity.

4.10 Functional loss can occur without direct physical impacts (e.g. through the effects of the proximity of adjacent built development rendering a site unattractive to bird species) but the effect is analogous. This impact pathway is most relevant to non-designated habitat supporting SPA/Ramsar bird species which utilise this habitat for roosting, resting or feeding: the land is functionally linked to the European site. This impact could also be relevant to wide-ranging bat species, where development outside a designated site could result in the loss of valuable foraging, commuting or roosting habitat. The impact will result in total or partial loss of habitat and/or the permanent displacement of species. Functional loss can result from the following pathways:

Construction Noise

4.11 Noise generated during construction activities can result in changes in the presence and/or distribution of key qualifying features such as birds, with permanent or temporary displacement of birds from a site or area. This displacement can result in birds expending additional time and energy in finding undisturbed habitat and can ultimately affect their ability to survive and reproduce.

4.12 Common construction activities likely to result in novel disturbance events include excessive vehicle revving, reversing alarms, certain power tools and loud, percussive noises (e.g. via concrete breaking, piling). Research (e.g. Cutts *et al*. (2008); Wright *et al*. (2010)) has shown that noise levels approaching 70 decibels (dB) result in the most profound responses from bird species (i.e. site abandonment), whereas general background construction noise below c.55dB is unlikely to result in disturbance. It appears that irregular yet frequent loud noise exceeding 70dB is the most likely to result in effects, and that impacts can be observed for distances up to 300m in some species.

4.13 Birds' reactions to novel noise disturbance can vary from site abandonment to temporary displacement and are likely to be species-specific, with some species more or less tolerant than others. Similarly, there are likely to be differences in tolerance at different geographic locations.

4.14 Construction noise may be exacerbated by the density and/or quanta of built development and its location: noise disturbance from a high-density large housing development would be more likely to be disruptive than a low-density small-scale development, and development in a rural location would be likely to be more disruptive than in an urban one.

Construction Activity

4.15 In addition to noise, various construction activities can have impacts on mobile qualifying features such as birds within designated sites and their supporting habitat. Novel incidents such as increased human presence, vehicles or plant such as cranes could result in the displacement of bird species from a site with the same potential effects as for construction noise.

4.16 Research into the potential disturbance from construction activities specifically is sparse, although Cutts *et al.* (2009) and evidence collected for the Solent Disturbance Mitigation Project (SDMP) (Stillman *et al.* (2012) does provide evidence that human-induced disturbance (although not construction-related) can occur from 0-300m depending on species. It can be assumed that any potential impacts from construction-phase activities will be more profound with increasing proximity to the source of disturbance.

4.17 As with construction noise, the location, quanta and density of planned development may exacerbate issues of disturbance.

Construction-phase Pollution

4.18 Construction activities can result in the mobilisation of airborne and waterborne contaminants, either through novel introductions (e.g. a spillage, fumes/smoke, litter) or through the disturbance of existing contaminant sources.

4.19 Contamination events can have profound impacts on designated sites and/or their supporting habitat e.g. pollution of aquatic habitats, damage to terrestrial vegetation, harm to wildlife) and can operate at the site-scale and over broader geographic areas.

Obstruction of Flight- and Sightlines

4.20 The presence of novel construction-related artefacts such as buildings, fencing, hoarding or vegetation screening can result in incidental impacts to both designated sites and their supporting habitat. Many bird species favour open habitats in which to rest and feed and therefore the presence of novel obstructions could result in the displacement of bird species, with similar effects as for construction noise and activity.

4.21 Again, research is sparse although research carried out in relation to the Solent Waders & Brent Goose Strategy (Solent Waders and Brent Goose Project Steering Group, 2010) highlights that the most-favoured sites used by dark-bellied brent geese are generally several hundred metres from obvious obstructions such as buildings.

4.22 Within the Solent coastal plain there are a large number of supporting habitat sites used by high numbers of SPA/Ramsar bird species which are situated within densely developed urban areas (e.g. Gosport, Portsmouth). These birds appear to be accustomed to foraging and resting within very close proximity to buildings and human activity and therefore the potential impacts of flight- and sight-line obstructions should be viewed in a local context.

Operational Activity

4.23 Once a development site is operational there may be a range of novel activities which may result in impacts to designated sites and their supporting habitat. These impacts may include additional recreational pressure resulting in damage to SAC habitat, or the displacement of bird species as a result of increased human presence or activity.

4.24 Housing developments inevitably result in increased human presence in an area and its surrounds. Depending on the accessibility of the wider area (e.g. presence of public rights of way, car parking) an increase in human presence in previously undisturbed areas could result in displacement of bird species and/or damage to sensitive vegetation/soils (through trampling). This effect could be felt at considerable distance from the development site depending on the permeability of the landscape and the presence/location/type of suitable public greenspace. The effect would also be influenced by the location, density and quanta of development.

4.25 Increased human presence is often accompanied by an increase in dogs. Research carried out by Stillman *et al* (2012) showed the impacts of dog walking to birds in the Solent was likely to be reduced where dog walking was eliminated entirely and reduced somewhat where off-lead dog walking was replaced by on-lead dog walking. Again, the effects of increased dog walking will be to a large part dependent upon landscape permeability and the presence/location/type of suitable public greenspace.

Larger-scale Impact pathways

Recreational Disturbance

4.26 Development can increase the recreational use of the coast and associated habitats, which in turn has the potential to cause detrimental impacts on important bird assemblages as well as damage and disturbance to habitats. The impacts of increased recreational disturbance can be felt across a wide geographical area, particularly within a key coastal area such as the wider Solent which is such an attractive destination for visitors. These effects can impact both designated sites and their supporting habitat.

4.27 The impacts of recreational disturbance are analogous to impacts from direct habitat loss as recreation can cause important habitat to be unavailable for use (the habitat is functionally lost, either permanently or for a defined period). Birds can be displaced by human recreational activities (terrestrial and water-based) and use valuable resources in finding suitable areas in which to rest and feed undisturbed.

4.28 It is important to note that recreational impacts can be felt both as a result of individual development sites and/or as a cumulative consequence of multiple developments in combination, even over a large geographical area. Within the wider Solent the issue of recreational disturbance is addressed in a strategic manner in recognition of the fact that any net increase in residential dwellings within an agreed catchment contributes towards a cumulative impact.

4.29 The Solent planning authorities have developed the Solent Recreation Mitigation Strategy (SRMS) and adopted a definitive strategy in December 2017. The potential impacts from recreational disturbance must be viewed in combination with other pressures.

Coastal Squeeze

4.30 Coastal squeeze is a term used to describe the inability for coastal habitats such as mudflats or saltmarsh to respond to sea level rises by naturally ‘migrating’ inland due to the presence of artificial barriers such as sea defences: over time these liminal habitats are lost. This effect is particularly relevant to many areas across the wider Solent, where the viability of much residential and commercial development and infrastructure is dependent on the protection afforded by coastal defences.

4.31 Predictions for future sea level rises require a strategic-level approach to managing coastal defences, with various options considered ranging from ‘hold the line’ to ‘managed retreat’.

4.32 New residential and commercial development can exacerbate problems associated with coastal squeeze by providing impetus to maintain or enhance hard sea defences, and thereby removing the possibility of ameliorating coastal squeeze through managed retreat and with the potential to directly impact designated sites and their supporting habitat.

4.33 The loss of natural intertidal habitats through the process of coastal squeeze may result in increased frequency of bird species using non-designated land, with further potential for conflicts between nature conservation and other land use objectives.

Air Quality

4.34 The impacts of increased atmospheric pollution can be profound and operate across broad geographical areas. Within the Local Plan area, impacts can arise/be exacerbated through increases/changes in the distribution of vehicular movements (to and from residential and commercial development) and/or the location of significant point-source emissions (e.g. new factories).

4.35 The most significant consequences of increased atmospheric pollution are eutrophication and acidification through the contact of nitrogen oxides (NOx) with vegetation, soils and water. These anthropogenic sources operate at a much faster level than the normally slow cycling of 'natural' nitrogen in the environment. Nitrogen oxides can react with airborne water to form nitric acids which then result in impacts to vegetation through contact. Atmospheric pollution can also result in the deposition of NOx in soils and water, affecting vegetation therein.

4.36 The presence of airborne pollutants is often described in terms of critical levels and critical loads. Levels refer to the concentration of atmospheric pollutants above which harmful effects are considered likely. Load refers to the deposition rate of nutrients below which effects are considered unlikely to occur.

4.37 Increased NOx deposition can affect vegetation in several ways. Some vegetation types (e.g. bryophytes, ericaceous shrubs) can be directly impacted through contact, affecting photosynthesis, water transportation and growth.

4.38 Deposition of NOx can also influence vegetation composition, with increased soil and water nitrogen levels causing eutrophication and favouring coarser plant species over more sensitive species of conservation concern.

4.39 The effects of atmospheric pollution are most often felt within SACs designated for their sensitive vegetation communities.

4.40 Within most assessments of air quality impacts, it has been assumed that distance is a key factor, with impacts most evident within c.200m of the source of pollution (i.e. a road). Clearly, any effects will be dependent not only on the proximity to the source of pollution, but also on the characteristics of the habitats present and the overall background levels and loads.

4.41 The cumulative impacts of air quality will need to be viewed in light of a recent court judgement *Wealden District Council v. Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority [2017]* which has clarified the need for all strategic planning documents to account for the in-combination impacts of air quality on internationally designated sites and not just those within 200m of potential pollution sources.

4.42 Vehicle emissions are estimated to have produced around two-thirds of all UK NOx emissions in 2015 (National Atmospheric Emissions Inventory, 2017). The general trend over recent decades has been for atmospheric NOx emission to decline due to a stricter regulatory system and emission-reduction technologies and projections are that UK atmospheric NOx levels will continue to fall in this and subsequent decades (Wagner *et al.*,

2009; Misra *et al.* 2012). However, there are a number of factors which present uncertainties within any projection of future NOx levels.

4.43 There is now evidence (IAQM, 2016) that NOx emissions from road transport have not declined as expected since about 2011, in spite of regulatory frameworks and technological developments. Diesel vehicles, the primary source of NOx, remain popular and sales have increased. In addition, it is now known that some emission-reduction products result in increases in the proportion of nitrogen dioxide (NO_2) within NOx exhaust emissions (IAQM, 2016).

4.44 Havant Borough Council, in association with other Partnership for South Hampshire (PfSH, formerly PUSH) authorities, commissioned a full assessment of air quality issues across the PUSH area as a result of proposed development.

4.45 The PUSH Air Quality study (Ricardo, 2018) assesses baseline and future traffic-related pollution within the context of the proposed levels of growth on European sites within and beyond the study area. This takes into account strategic development locations and associated transport infrastructure which may have implications for air quality and apportions impacts to each local authority accordingly.

4.46 The study also considers potential mitigation measures or interventions required to mitigate the effects on air quality and evaluate their effectiveness in avoiding or reducing significant effects. This could be on an area-wide basis as a result of e.g. forecasts in modal shift; a rise in the use of electric and ultra-low emission cars; improving standards for cars/lorries/buses; and phasing out of older vehicles. In addition, there is an assessment of opportunities to avoid or reduce impacts through site-specific measures as part of development such as building design or landscaping and/or planning obligations to provide improved habitats within European sites.

4.47 Further to this, more detailed analysis has been undertaken at the local level to assess the potential impact of the specific proposals in the Havant Borough Local Plan 2036 (Ricardo, 2019).

Water Resources

4.48 The issue of water resources covers water quality in its broadest sense, encompassing water abstraction and supply as well as waste-water treatment and conveyancing and the effect of these on the wider water environment.

4.49 Impacts associated with water resources can include increased abstraction, pollution and changes in the composition and distribution of terrestrial and aquatic (freshwater and marine) ecological communities.

4.50 The potential impacts arising from water resources necessarily operate over broad geographic areas (catchments) and are best addressed in a strategic manner. Any strategic-level assessments should investigate the carrying capacity of the water environment and water resource infrastructure and their ability to accommodate the level and distribution of growth identified.

4.51 In 2018 PUSH commissioned an Integrated Water Management Strategy (IWMS) to provide an update to the previous 2008 version: an update to this study was published in 2020. These documents investigate how water resources, water quality and the environment can be protected and improved across the PUSH area within the context of projected development up to 2036. The IWMS takes a strategic approach to assess the constraints

and requirements that will arise from the potential growth within the PUSH area on the water environment. This includes a focus on ensuring that potential solutions can be identified to facilitate the envisaged level and broad distribution of growth, without adverse effects on the water environment and, where possible, enhancing it.

4.52 The study establishes a baseline level of information relating to the water environment and specifically address: the availability of water resources; existing wastewater infrastructure and infrastructure capacity; the environmental capacity (chemical and biological limits) of receiving waters (including watercourses and transitional and coastal water bodies); water quality; and ground water (including ground water quality).

Nutrient Neutrality

4.53 New development sites produce a source of nitrogen and phosphorous input to the Solent marine environment via wastewater and surface run-off. The majority of waters within Havant Borough are conveyed to the Wastewater Treatment Works (WwTW) at Budd's Farm near Langstone where, during normal dry weather periods and after treatment, they are discharged into the Solent via the Eastney Long Sea Outfall (LSO). During periods of wet weather combined wastewater and rainfall run-off can be discharged, without robust treatment, directly into the Solent via Combined Sewer Overflows (CSO) in order to prevent flooding.

4.54 Natural England have issued advice to Local Planning Authorities in the Solent region on the issue of nutrient enrichment affecting important marine habitats. Havant Borough Council have issued guidance[6] to developers based on this advice. NE advice is that there is a direct causal link between the presence of nitrogen, and to a lesser extent phosphorous, in surface and ground waters entering the Solent and human activities such as agriculture and development. Nutrient-enriched waters entering the Solent are causing blooms of marine algae which smother intertidal habitats, displace marine vegetation and reduce dissolved oxygen. These factors result in impacts to the European sites and their qualifying habitats and species.

4.55 Natural England's advice arose from a recent judgement[7] of the European Court of Justice which refined the definition of plans and projects which should be subject to HRA to include significantly more operations which have an impact on water quality, most notably runoff from agriculture.

4.56 As a result, it can only be concluded that new development within the Borough could increase nitrogen and phosphorous inputs to the Solent above consented levels. The resulting nutrient enrichment would result in a likely significant effect on the Solent European sites.

[6] https://cdn.havant.gov.uk/public/documents/Position%20statement%20and%20mitigation%20plan_0.pdf

[7] Cooperatie Mobilisation for the Environment UA and College van gedeputeerde staten van NoordBrabant (Case C293/17 and C294/17)

5. Screening of the Building A Better Future Plan Consultation Paper

Background

5.1 This section considers the policy themes presented within the Building a Better Future Plan consultation paper and, acknowledging that the Plan is not necessary to European site management, states whether or not they are likely to have adverse effects on a European site, either alone or in combination with other plans or projects. The screening exercise identifies those policy themes which may result in a 'likely significant effect' on a European site and which should be taken forward for further assessment in future iterations of the Plan. Any policy themes considered not to have an effect are 'screened out' of any further assessment.

Consideration of effects

5.2 All relevant policy objectives being presented within the Plan consultation paper have been screened for likely significant effects on the European sites in question. The potential impact pathways considered are those described in Chapter 4 above. In accordance with the *People over Wind* ruling, mitigating measures are not taken into account at this stage.

5.3 As with any strategic planning document there are a number of very broad policies or objectives which may either negatively or positively impact European sites in a generic manner or have no conceivable effect, as well as policies/objectives for which impacts are more readily predictable.

5.4 The policy themes within the Plan consultation paper can be sorted into one of twelve screening categories, which are listed below in Table 5. These categories help to screen which, if any, elements of the Plan would be likely to have an effect on any qualifying feature of a European site, alone or in combination with other plans or projects, directly or indirectly.

5.5 Any policies or proposals falling within categories A - H are deemed not to have an effect on a European site and can be screened out from further assessment. Those falling within categories I and L will certainly require further assessment as significant effects are likely either alone or in-combination. For policies or proposals falling into category J there may still be potential for in-combination effects whereas for category K there is no potential for impacts alone or in combination.

5.6 Table 6 illustrates the results of the HRA screening process (the Screening Matrix) for the policy themes detailed in the Plan consultation paper, where the letter in each of the coloured cells corresponds to a category listed in Table 5. For each policy theme its potential for likely significant effect on each of the seventeen designated sites is displayed as having no adverse effect (green shading) or the potential for an effect alone and/or in-combination (orange shading).

Table 5: HRA Screening categories (from The HRA Handbook, DTA Publications, 2015)

A. General statements of policy/general aspirations
B. Policies listing general criteria for testing the acceptability/sustainability of proposals
C. Proposal referred to but not proposed by the plan
D. Environmental protection/site safeguarding policies
E. Policies or proposals that steer change in such a way as to protect European sites from adverse effects
F. Policies or proposals that cannot lead to development or other change
G. Policies or proposals that could not have any conceivable adverse effect on a site
H. Policies or proposals the (actual or theoretical) effects of which cannot undermine the conservation objectives (either alone or in combination with other aspects of this or other plans or projects)
I. Policies or proposals with a likely significant effect on a site alone
J. Policies or proposals not likely to have a significant effect alone
K. Policies or proposals not likely to have a significant effect either alone or in combination
L. Policies or proposals likely to have a significant effect in combination

	Will have no adverse effect on a European site.
	Could have a potential effect on a European site, either alone or in combination with other plans or projects.

5.7 A total of seventeen European sites have been included in the screening matrix: South Wight Maritime SAC has been excluded entirely as it is situated at a considerable distance from Havant Borough and it is considered that there is no reasonable likelihood of any effect.

5.8 Of the seventeen European sites taken forward for screening, for eleven - Solent Maritime SAC, Butser Hill SAC, Solent & Isle of Wight Lagoons SAC, Singleton & Cocking Tunnels SAC, Chichester & Langstone Harbours SPA/Ramsar, Portsmouth Harbour SPA/Ramsar, Solent & Southampton Water SPA/Ramsar and Solent & Dorset Coasts SPA - there is considered to be a widespread potential for likely significant effect alone and/or in combination.

5.9 The potential for likely significant effects stems primarily from these sites' proximity to possible future built development and the potential for impacts from habitat loss (direct or functional), nutrient enrichment (via airborne or waterborne pathways) and/or recreational disturbance.

5.10 Parts of the Solent Maritime SAC lie in close proximity to the M27/A27 corridor and therefore potentially within zones of increased atmospheric pollution arising from any increases or

changes in vehicle movements. Any policy resulting in an increase or shift in vehicular movements would potentially contribute alone and in combination.

5.11 The Solent & Dorset Coast SPA is in close proximity to some housing sites and key sites. As this is essentially a marine designation for the protection of bird feeding areas, policies which have a realistic prospect of resulting in impacts offshore (e.g. through the promotion of water sports, leading to disturbance or via changes to water quality, leading to impacts to foraging resources) that have been highlighted.

5.12 For the remaining six European sites – New Forest SAC, Kingley Vale SAC, New Forest SPA and Ramsar and Pagham Harbour SPA and Ramsar – likely significant effects are considered to be unlikely due primarily to the distance between them and any potential impact pathways arising from the policy themes presented in the consultation paper. The initial screening exercise therefore assumes no impacts arising alone or in combination.

5.13 Table 7 provides an initial high-level screening of each policy theme: European sites are denoted by site codes as shown in Table 6. For those themes with a potential likely significant effect, Table 8 summarises the potential impact pathways and the European sites considered to be at risk of likely significant effect.

5.14 Following this, Chapter 6 discusses the range of potential impact pathways in greater detail, examining the mechanisms through which impacts may occur as a result on the Plan policies.

Table 6: European site codes used in screening

Site Code	Name	Type
A	Solent & Isle of Wight lagoons	SAC
B	Solent Maritime	SAC
C	The New Forest	SAC
D	Butser Hill	SAC
E	Kingley Vale	SAC
F	Singleton & Cocking Tunnels	SAC
G	Chichester & Langstone Harbours	SPA
H	Portsmouth Harbour	SPA
I	Solent & Southampton Water	SPA
J	The New Forest	SPA
K	Solent and Dorset Coast	SPA
L	Pagham Harbour	SPA
M	Chichester & Langstone Harbours	Ramsar
N	Portsmouth Harbour	Ramsar
O	Solent & Southampton Water	Ramsar
P	The New Forest	Ramsar
Q	Pagham Harbour	Ramsar

Table 7: Building A Better Future Plan - HRA Screening Matrix																	
Policy Theme	**European Site**																
	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**	**P**	**Q**
Development Strategy	I/L	G	I/L	G	I/L	I/L	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Housing	I/L	G	I/L	G	I/L	I/L	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Economy & Employment	I/L	G	I/L	G	I/L	I/L	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Regeneration	I/L	G	I/L	G	I/L	I/L	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Land & Densities	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K
Retail & Town Centres	I/L	G	I/L	G	I/L	G	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Flood Risk	I/L	G	G	G	I/L	G	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Gypsies, Travellers & Travelling Showpeople	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Climate Change	E	E	E	E	E	G	E	E	E	E	E	E	E	E	E	E	E
The Natural Environment	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E
Biodiversity Net Gain	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E
Local Nature Designations	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E	D/E
Affordable Housing	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

Table 7: Building A Better Future Plan - HRA Screening Matrix

Policy Theme	European Site																
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Housing Design Standards & Specialist Accommodation	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Landscape & Loss of Agricultural Land	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Infrastructure	I/L	G	I/L	G	I/L	G	I/L	I/L	I/L	G	I/L	G	I/L	I/L	I/L	G	G
Effective Transport & Communications	I/L	G	I/L	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Green Infrastructure	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Sports & Recreation	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
High Quality Design	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Heritage & The Historic Environment	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G
Pollution																	

Table 8: Building For A Better Future Plan - Summary of Potential Impacts				
Policy or Proposal	**Consequences**	**Designated Sites affected**	**Qualifying Feature affected**	**Impact Pathways**
Development Strategy	Commitment to set out overall housing requirement for the Borough and to set out a suite of housing allocations.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Singleton & Cocking Tunnels SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA	• SPA/Ramsar Birds • SAC Habitats • SAC bat species	• Habitat loss • Recreational disturbance • Coastal Squeeze • Air Quality • Nutrient Neutrality
Housing	Commitment to increase new housing development within the Borough.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Singleton & Cocking Tunnels SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA	• SPA/Ramsar Birds • SAC Habitats • SAC bat species	• Habitat loss • Recreational disturbance • Coastal Squeeze • Air Quality • Nutrient Neutrality
Economy & Employment	Commitment to regenerate key areas across the Borough.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Singleton & Cocking Tunnels SAC • Chichester & Langstone Harbours SPA	• SPA/Ramsar Birds • SAC Habitats • SAC bat species	• Habitat loss • Recreational disturbance • Coastal Squeeze • Air Quality • Nutrient Neutrality

		• Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA		
Regeneration	Commitment to deliver residential and commercial development, including site allocations.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Singleton & Cocking Tunnels SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA	• SPA/Ramsar Birds • SAC Habitats • SAC bat species	• Habitat loss • Recreational disturbance • Coastal Squeeze • Air Quality • Nutrient Neutrality
Retail & Town Centres	Commitment to identify redevelopment opportunities.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA	• SPA/Ramsar Birds • SAC Habitats	• Air Quality
Flood Risk	Commitment to identify and manage flood risk, including new	• Solent Maritime SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar	• SPA/Ramsar Birds • SAC Habitats	• Habitat loss • Coastal Squeeze

	infrastructure.	• Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Dorset Coasts SPA		
Infrastructure	Commitment to deliver infrastructure improvements from new development.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA	• SPA/Ramsar Birds • SAC Habitats	• Air Quality
Effective Transport & Communications	Commitment to identify transport improvements.	• Solent Maritime SAC • Butser Hill SAC • Solent & Isle of Wight Lagoons SAC • Chichester & Langstone Harbours SPA • Chichester & Langstone Harbours Ramsar • Portsmouth Harbour SPA • Portsmouth Harbour Ramsar • Solent & Southampton Water SPA • Solent & Southampton Water Ramsar • Solent & Dorset Coasts SPA	• SPA/Ramsar Birds • SAC Habitats	• Air Quality

6. Commentary on Effects

6.1 The purpose of the HRA screening stage in the preceding chapter is to identify any policy themes with potential to lead to a likely significant effect at a European site. This section provides commentary on the range of potential impacts identified through screening. For some impacts (e.g. direct/indirect habitat loss) the effects are discussed in more detail (as impacts are more predictable), whereas for others (e.g. air quality, water resources) the potential effects are viewed at a broader scale.

Habitat Loss

6.2 As noted above, the majority of the policy themes would be unlikely to result in direct habitat loss within the boundaries of any European site. There may be locations where, for example, sea defence works may require time-limited operations at the boundaries of a European site or where development may result in impacts such as trampling to protected vegetation (e.g. within the Solent Maritime SAC) and any such proposal would require an appropriate level of assessment to be provided as well as suitable mitigation measures.

6.3 It is possible for impacts to European sites to occur through impacts to land outside their boundaries, or to result in functional loss due to time-limited or seasonal activities within their boundaries. Impacts to non-designated supporting habitat could occur either through direct habitat loss or through other impacts resulting in the functional loss of habitat. For bird species in particular, their mobility presents difficulties in determining the extent of land necessary for the maintenance of populations at a favourable conservation status. Havant Borough, in common with other local authority areas in the wider Solent, contains areas of land outside designated sites which support SPA/Ramsar bird species seasonally. To include these areas within the permanent boundaries of the designated sites would place unreasonable constraints on activities which would otherwise be necessary e.g. land-use planning, agriculture, development, recreation. However, under the Habitats and Birds Directives such land is viewed as analogous to the designated site and therefore impacts need to be considered in the same light.

6.4 A total of seven policy themes within the Plan consultation paper could reasonably be assumed to ultimately result in development or land use changes that could cause habitat loss. New development/land use changes could be situated within or in close proximity to SPA supporting habitat and could result in the loss of that habitat. Impacts to supporting habitat will result in the displacement of qualifying species and therefore would be highly likely to undermine the conservation objectives of the SPAs. Similarly, impacts to habitats such as woodland, trees, scrub, hedgerows and grassland could result in the loss of supporting habitat for bat species outside the boundary of a SAC.

6.5 Certain activities facilitated by a plan, such as water sports, could result in functional habitat loss due to disturbance. The Solent & Dorset Coasts SPA is unusual in that it is designated solely for foraging tern species: any Plan-led increase in water-based activities could increase disturbance. Regeneration of the Hayling Seafront could result in new mixed use or recreational development. Any new water sports facilities here could potentially result in increases in the number and distribution of water-based sports activities and could potentially deter tern species from feeding offshore.

Recreational Disturbance

6.6 Development can increase the recreational use of the coast, which has the potential to cause detrimental impacts on important bird assemblages as well as damage and disturbance to habitats. With respect to birds, this is essentially analogous to impacts from habitat loss as recreation can cause important habitat to be unavailable for use by birds (the habitat is effectively lost, either permanently or for a defined period). Birds can be disturbed by human recreational activities and use valuable resources in finding suitable areas in which to rest and feed undisturbed.

6.7 The intertidal mudflats and associated estuarine habitats of Chichester & Langstone Harbours and Portsmouth Harbour contain the primary feeding resource for the key bird species, although for some species (e.g. Dark-bellied Brent Geese, some waders) terrestrial grasslands (including within developed areas) and arable farmland are important feeding/resting areas.

6.8 For the purposes of this HRA it is concluded that any net increase in residential development within 5.6km of the two SPAs would lead to a likely significant effect from recreational disturbance, in combination with other development taking place within the wider Solent area. The background evidence on which the 5.6km zone is based is presented within the Solent Recreation Mitigation Strategy[8].

Air quality

6.9 Any policy themes committed to either increasing new residential development, certain types of new commercial or energy generation development, or which could result in changes to patterns of road vehicle use, could reasonably be considered to potentially result in increased atmospheric pollution.

6.10 The effects of air quality (primarily the deposition of nitrogenous materials) is most obvious on sensitive vegetation communities e.g. calcareous grasslands or heathland and therefore most concern has been focussed on impacts to those sites nearest main roads, such as Butser Hill SAC. It is reasonable to assume that any increase in vehicles within the Borough may result in increased traffic movements on the strategic road network, in this case the A3(M) corridor and A27.

6.11 The A3(M) is the main north-south route from the Borough and passes within a few tens of metres of Butser Hill SAC. The characteristic calcareous grassland habitats of the SAC are considered to be particularly sensitive to nitrogen deposition, acid deposition and ground-level ozone all of which could result in changes to soil chemistry and vegetation cover. Any policy themes resulting in increased road traffic, or changes to patterns of road vehicle use, could potentially result in increased deposition affecting Butser Hill SAC.

8 https://birdaware.org/solent/wp-content/uploads/sites/2/2021/10/Solent_Recreation_Mitigation_Strategy.pdf

6.12 The A27 is the main east-west route through the Borough and passes within close proximity to parts of the Solent Maritime SAC, Chichester & Langstone Harbours SPA/Ramsar, Portsmouth Harbour SPA/Ramsar and Solent & Dorset Coasts SPA. As with Butser Hill SAC, these sites support habitats which are sensitive to the effects of increased nitrogen deposition, acid deposition and ground-level ozone. Habitats such as upper saltmarsh, coastal grasslands, vegetated shingle and annual vegetation of drift lines may be sensitive to atmospheric pollutants.

6.13 The assessment of air quality issues is complex and must take account of existing and future patterns of road use (itself a result of population rise and rise in car use from existing population), road type, vehicle type, fuel efficiency, weather and climate. In addition, until detailed designs for specific sites come forward the likely transport network requirements for serving new developments is unknown.

6.14 For the purposes of this HRA it is necessary to assume under the precautionary principal that there will be an increase in air quality issues within the Borough and therefore a significant effect is considered possible until further information is made available.

Table 9: Summary of Screening of Potential Air Quality Issues

European site	Summary of Potential Air Quality Issues
Solent Maritime SAC	Potential for 'alone' and 'in-combination' effects from Nitrogen deposition, Ammonia, Acid deposition and NOx.
Butser Hill SAC	Potential for 'alone' and 'in-combination' effects from Nitrogen deposition, Ammonia, Acid deposition and NOx.
Chichester & Langstone Harbours SPA/Ramsar	Potential for 'alone' and 'in-combination' effects from Nitrogen deposition, Ammonia, Acid deposition and NOx.
Portsmouth Harbour SPA/Ramsar	Potential for 'alone' and 'in-combination' effects from Nitrogen deposition, Ammonia, Acid deposition and NOx.
Solent & Dorset Coasts SPA	Potential for 'alone' and 'in-combination' effects from Nitrogen deposition, Ammonia, Acid deposition and NOx.

Coastal squeeze

6.15 Havant Borough has c.48km of coastal fringe, the vast majority of which is hard engineered to protect dwellings, industry and other infrastructure. Coastal protection has been set out in the North Solent Shoreline Management Plan which itself has been subject to HRA.

6.16 As firm policies emerge in later iterations of the Plan it will be necessary to assess potential impacts arising from the effects of coastal squeeze. Where changes to existing coastal protection infrastructure are proposed as part of the Plan, these will need to be assessed for their potential to exacerbate the effects of coastal squeeze.

Water Resources

6.17 There will be an inevitable net increase in housing across the Borough as a result of the Plan. Residential uses are the primary driver for increasing water consumption and wastewater production. Both mechanisms can lead to negative environmental effects on sensitive ecosystems.

6.18 Increased water abstraction could result in impacts to freshwater inputs to Chichester & Langstone Harbours and Portsmouth Harbour, affecting those two SPAs/Ramsar sites as well as Solent Maritime SAC and Solent & Dorset Coasts SPA. Given the interconnected nature of the Solent, it is considered that other SPAs outside the Borough should be screened-in in the absence of further information.

6.19 The groundwaters and springs used to provide water supplies in turn feed into various watercourses entering the harbours. Inputs of freshwater are important to coastal/marine habitats in maintaining salinity gradients and water circulation, as well as driving variations in vegetation communities such as saltmarsh. The composition and distribution of habitats in turn affects the availability of resources for bird species. It is considered that all Local Plan policies leading to or facilitating new housing and commercial development could potentially result in increased demand for water abstraction.

6.20 Within Havant Borough, all water resources are managed by Portsmouth Water. Water is abstracted from groundwater sources and springs at locations within the borough. Portsmouth Water's Draft Water Resources Management Plan 2019 (Portsmouth Water, 2017) states that there is currently a surplus of supply up to 2044, taking into account the projected growth in demand (arising in part from new development) and factors such as climate change (Figure 3). This demonstrates that, with the best-available evidence, there is no expected water supply deficit across the Local Plan period and therefore no impacts arising from water abstraction are expected.

6.21 Portsmouth Water, in maintaining a supply surplus, is able to operate a bulk supply relationship with Southern Water, providing water supplies to meet demand in other parts of the county and beyond. In recognition of the increasing demand elsewhere, Portsmouth Water is seeking to increase its capacity within Havant borough and its ability to continue to provide bulk supplies. The most effective method of achieving this is to construct a new winter storage reservoir at Havant Thicket.

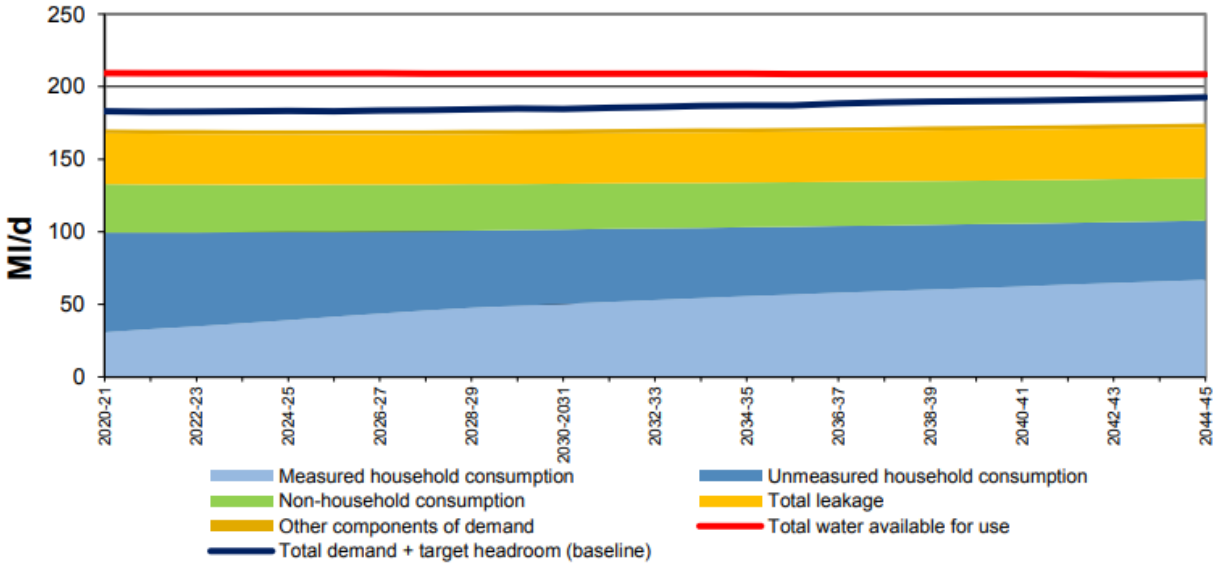


Figure 3: Portsmouth Water Baseline Supply/Demand Balance (Dry Year Annual Average) Exc. Additional Bulk Supplies

Nutrient Neutrality

6.22 Water quality can be significantly affected by increased levels of new residential and commercial development. Increases in both can place stress on existing drainage infrastructure and wastewater treatment facilities. Increasing the flow of wastewater to existing treatment facilities could result in increasing the nutrient load in effluent discharges (e.g. at outfalls) thereby decreasing water quality. Impacts to water quality can lead to negative effects on European sites such as increased eutrophication (nutrient enrichment) and algal blooms leading to oxygen depletion affecting aquatic organisms, as well as smothering of marine vegetation and muds.

6.23 All new housing and commercial development within the borough will require connections to existing drainage infrastructure. Within Havant borough, the bulk of existing drainage infrastructure enters the wastewater treatment works (WwTW) at Budds Farm, with some capacity dealt with at Thornham WwTW. According to the PUSH Integrated Water Management Strategy (IWMS) (PUSH, 2018) '*the growth areas in the Havant Council area are predicted to drain to the Budds Farm Havant WwTW. The water quality assessments indicated that there are no significant constraints to prevent future housing growth in the Council's area, although the WwTW will potentially require capacity upgrades by 2036 and there is a risk of increased sewer network overflows, so improvements might be required. The catchment has nitrate problems and catchment level nitrate measures are required now. To address the uncertainty relating to catchment measures, it is recommended that Local Plans acknowledge the gaps in the evidence base and recognise it will be necessary to respond to emerging evidence to determine whether housing development in later stages of the plan period would require mitigation*'.

6.24 The capacity of the WwTW at Thornham has been assessed as part of the Chichester District Water Quality Assessment (Chichester District Council, August 2018), taking into account planned development within the parts of Havant borough served by this facility. This study concludes that there is sufficient capacity at present but recommends a requirement for catchment-scale measures to address nitrate pollution, and that upgrades are likely required by 2025.

6.25 Conversely, the Environment Agency (EA) have issued a technical note regarding the issue of nitrates in the Solent (Environment Agency, 2019). The EA has confirmed that no further upgrade of the Solent WwTWs is required. The technical note states that that '*no further investment is needed to treat wastewater to a tighter nitrogen limit for any of the treatment works in the Solent area*' and '*Where new development can be accommodated within the current water discharge activity permit limits of individual Wastewater Treatment Works, i.e. that there is capacity to take the extra wastewater flows from new development whilst still treating effluent to the same standard, then we consider the development would be acceptable*'.

6.26 The situation with respect to WwTW capacity is therefore somewhat unclear at present and further investigation is currently underway on behalf of PUSH, looking specifically at capacity at the Budd's Farm WwTW.

6.27 In light of recent Natural England advice to the Solent planning authorities, it is concluded that any new housing within the borough has the potential to result in a likely significant effect on European sites as a result of increased nutrient inputs. NE have advised that the in-combination effects of increased nutrients have the potential to impact the Solent Maritime SAC, Solent & Isle of Wight Lagoons SAC, Chichester & Langstone Harbours SPA/Ramsar, Solent & Dorset Coast pSPA, Portsmouth Harbour SPA/Ramsar and Solent & Southampton Water SPA/Ramsar. Natural England have advised that all new development will need to demonstrate nutrient neutrality if impacts to these European sites is to be avoided.

6.28 There are currently two potential impact pathways leading to increased nutrient inputs to European sites. The majority of waters within Havant Borough are conveyed to the Wastewater Treatment Works (WwTW) at Budd's Farm where, during normal dry weather periods and after treatment, they are discharged into the Solent via the Eastney Long Sea Outfall (LSO). During periods of wet weather combined wastewater and rainfall run-off can be discharged, without robust treatment, directly into the Solent via Combined Sewer Overflows (CSO) in order to prevent flooding. It can be expected that the greater the intensity of inputs to the WwTW the higher the potential for use of CSOs in extreme conditions. There are CSOs located at Budd's Farm itself alongside a cluster at Court Lane and one at Fort Cumberland. These CSOs discharge directly into Langstone Harbour. The extent to which these occasional discharges impact the wider Solent marine system depends on the patterns of water exchange between the separate harbours.

6.29 Assessment carried out on behalf of Havant Borough Council is investigating the issue of nutrient neutrality. This work is looking specifically at source-pathway-receptor elements and assessing the significance of any potential effects on the European sites. In addition, independent investigation is being carried out on the capacity of the Budd's Farm WwTW and will form an addendum to the 2018 PUSH Integrated Water Management Study.

6.30 Current assessment concludes that the WwTW at Budd's Farm does not exceed capacity within the Local Plan timeframe. This is based on calculations of a housing occupancy rate of 2.4 persons/household. This is in line with current Natural England calculations. The forthcoming IWMS addendum will provide further clarity on this issue.

6.31 In terms of potential impacts to individual European sites, ongoing assessment by Havant Borough Council has identified the following pathways. It should be noted that further discussion is underway with Natural England on the potential impacts on Portsmouth Harbour SPA/Ramsar: it is currently unclear the degree to which there is water exchange between Portsmouth Harbour and Langstone Harbour. For the purposes of this assessment it is assumed that there is sufficient exchange for cumulative impacts to occur.

Table 10: Summary of Screening of Potential Nutrient Enrichment Issues		
European site	**Impact source/pathway**	**Effect**
Solent Maritime SAC	Increased use of Budd's Farm WwTW CSOs Long-term cumulative addition of nitrogen into Solent marine system	Increased nitrogen discharge directly into the northern part of Langstone Harbour, leading to eutrophication
Solent & Isle of Wight Lagoons SAC	Increased use of Budd's Farm and Court Lane CSOs Long-term cumulative addition of nitrogen into Solent marine system	There is some interchange of waters between Langstone Harbour and the saline lagoon system at Farlington Marshes. Introduction of nitrogen-laden waters into lagoons at spring tide, leading to eutrophication. The Court Lane CSO is directly west of the lagoon.
Chichester & Langstone Harbours SPA/Ramsar	Increased use of Budds Farm WwTW CSOs Dispersion of effluent into harbour via Eastney LSO Long-term cumulative addition of nitrogen into Solent marine system	Evidence suggests net flow is from Chichester Harbour into Langstone Harbour (east to west), therefore limited potential for effects on Chichester Harbour elements of Chichester & Langstone Harbours SPA/Ramsar. Potential for eutrophication of waters within Langstone Harbour. Eastney LSO discharge is currently within Environment Agency permits. Dispersion plume data for total effluent discharge and tidal circulation modelling data show little transfer of water into the harbours, with effluent remaining predominantly mid-Solent.
Portsmouth Harbour SPA/Ramsar	Increased use of Budds Farm WwTW CSOs Dispersion of effluent into harbour via Eastney LSO Long-term cumulative addition of nitrogen into Solent marine system	Data show minimal exchange between Langstone Harbour and Portsmouth Harbour. Impacts from CSO discharges therefore considered unlikely. Eastney LSO discharge is currently within Environment Agency permits. Dispersion plume data for total effluent discharge and tidal circulation modelling data show little transfer of water into the harbours, with effluent remaining predominantly mid-Solent.
Solent & Dorset Coast pSPA	Increased use of Budds Farm WwTW CSOs Dispersion of LSO effluent into harbour	Potential for impacts to foraging tern species via increased eutrophication resulting in smothering of prey habitat/changes in prey distribution/abundance.

Table 10: Summary of Screening of Potential Nutrient Enrichment Issues		
European site	**Impact source/pathway**	**Effect**
	Long-term cumulative addition of nitrogen into Solent marine system	Eastney LSO discharge is currently within Environment Agency permits. Dispersion plume data for total effluent discharge and tidal circulation modelling data show little transfer of water into the harbours, with effluent remaining predominantly mid-Solent. Small nitrogen inputs from Budd's Farm WwTW acting in combination with other WwTWs and agricultural sources may prevent baseline water quality targets for favourable condition being met.
Solent & Southampton Water SPA/Ramsar	Long-term cumulative addition of nitrogen into Solent marine system	Small nitrogen inputs from Budd's Farm WwTW acting in combination with other WwTWs and agricultural sources may prevent baseline water quality targets for favourable condition being met.

Conclusions of Screening

6.32 A total of eight policy themes within the Plan are considered to have the potential to result in likely significant effect on a European site either alone or in-combination.

6.33 Five policy themes are considered to have potential to result in either direct habitat loss impacts or functional habitat loss impacts to Solent Maritime SAC, Singleton & Cocking Tunnels SAC, Chichester & Langstone Harbours SPA/Ramsar, Portsmouth Harbour SPA/Ramsar or Solent & Dorset Coasts SPA.

6.34 Four policy themes are considered to have potential for recreational disturbance impacts to Chichester & Langstone Harbours SPA/Ramsar or Portsmouth Harbour SPA/Ramsar.

6.35 Seven policy themes are considered to have potential for increasing the potential impacts of coastal squeeze on Solent Maritime SAC and Chichester & Langstone Harbours SPA/Ramsar.

6.36 Seven policy themes are considered to have the potential for in-combination impacts related to increases in atmospheric pollution on Solent Maritime SAC and/or Butser Hill SAC.

6.37 Four policy themes are considered to have potential to result in in-combination impacts relating to nutrient neutrality on Solent Maritime SAC, Solent & Isle of Wight Lagoons SAC, Chichester & Langstone Harbours SPA/Ramsar, Portsmouth Harbour SPA/Ramsar, Solent & Dorset Coasts SPA or Solent & Southampton Water SPA/Ramsar.

Table 11: Summary of HRA Screening		
Impact Pathway	**Policy Theme**	**Designated site(s)**
Habitat Loss	• Development Strategy • Housing • Economy & Employment • Regeneration • Retail & Town Centres • Flood Risk • Infrastructure • Effective Transport & Communication	• Solent Maritime SAC • Singleton & Cocking Tunnels SAC • Chichester & Langstone Harbours SPA/Ramsar • Portsmouth Water SPA/Ramsar • Solent & Dorset Coasts SPA
Recreational disturbance	• Development Strategy • Housing • Economy & Employment • Regeneration	• Chichester & Langstone Harbours SPA/Ramsar • Portsmouth Water SPA/Ramsar
Air quality	• Development Strategy • Housing • Economy & Employment • Regeneration • Retail & Town Centres • Infrastructure • Effective Transport & Communication	• Butser Hill SAC • Solent Maritime SAC
Coastal squeeze	• Development Strategy • Housing • Economy & Employment • Regeneration • Flood Risk	• Solent Maritime SAC • Chichester & Langstone Harbours SPA/Ramsar • Portsmouth Water SPA/Ramsar • Solent & Dorset Coasts SPA
Nutrient Neutrality	• Development Strategy • Housing • Economy & Employment • Regeneration	• Solent Maritime SAC • Solent & Isle of Wight Lagoons SAC • Chichester & Langstone Harbours SPA/Ramsar • Portsmouth Water SPA/Ramsar • Solent & Dorset Coasts SPA • Solent & Southampton Water SPA/Ramsar

7. Appropriate Assessment & Integrity Test

7.1 Having carried out a screening assessment of the Building A Better Future Plan consultation paper, it is the Council's view that without mitigating measures a total of seven policy themes may lead to likely significant effects, either alone and in-combination, in relation to eleven of the European sites within the scope of the study.

7.2 It is concluded that future iterations of the Plan will require appropriate assessment in order to test the plan for its effects on European site integrity. Article 6 (3) of the Habitats Directive states that a plan may only be agreed '…*after having ascertained that it will not adversely affect the integrity of the site concerned*.'

7.3 Table 12 provides a summary of the mitigation measures considered necessary in order to avoid impacts to site integrity, and the emerging Building A Better Future Plan will need to ensure the delivery of such measures.

7.4 Further discussion is provided below on these mitigation measures and how they can be implemented to allow the competent authority to ultimately conclude that impacts to European site integrity will be avoided. Given the high-level nature of the current plan it is not currently possible to assess whether these measures will be wholly effective or will require further development to address impacts arising from future iterations of the plan.

Table 12: Mitigation Measures

Impact Pathway	Mitigation Measures	Impact to Site Integrity?
Habitat Loss	Solent Waders & Brent Goose Strategy (including the Guidance on Mitigation and Off-setting Requirements) – strategic measures to assess and mitigate impacts to SPA supporting habitat. No development permitted unless impacts assessed and appropriate mitigation strategy, based on accepted mitigation framework, secured. Commitment to establishing permanent SPA bird refuges within the borough.	UNKNOWN
Recreational disturbance	Solent Recreation Mitigation Strategy – strategic measures to address impacts to qualifying bird species within SPA boundaries. All new residential development within 5.6km of Solent SPAs subject to agreed financial contribution, secured by Local Planning Authority. Payments fund Solent-wide mitigation measures. All new development with potential to impact Solent SPAs must be accompanied by ecological assessment and, where required, detailed mitigation measures.	UNKNOWN

Air quality	Commitment to undertake an Air Quality Assessment to support the Habitats Regulations Assessment of the Plan.	UNKNOWN
Coastal squeeze	Adherence to principles of North Solent Shoreline Management Plan. All development at the coast must be accompanied by an appropriate level of ecological assessment.	UNKNOWN
Water resources/ Nutrient Neutrality	Adoption of recommendations of PUSH IWMS. Policy requirements for all new development to ensure protection of surface waters and groundwater sources and to ensure appropriate treatment of surface waters and drainage, incorporating SuDS wherever appropriate.	UNKNOWN

Habitat Loss

7.5 The screening exercise has demonstrated that there are six policy themes with potential to result in loss (direct or functional) to European site habitat. It is likely that detailed policy, and especially site-specific allocations, will highlight activities likely to entail development within/adjacent to SACs and SPAs/Ramsar sites. The extent of potential impacts is not quantifiable at this stage.

7.6 The emerging Plan will need to contain policies which ensure that, prior to any development-related works taking place that have the potential to result in impacts (direct or indirect) to the qualifying features of any European site, ecological assessment is carried out and the potential risks to the site are assessed.

7.7 Bespoke policies will be required that provide sufficient assurance that no development could conceivably take place that would potentially affect a European site without first ensuring that any impacts are understood, and an appropriate level of mitigation is secured, such that impacts to site integrity are avoided.

Impacts to Supporting Habitat

The Solent Waders & Brent Goose Strategy (SWBGS)

7.8 In recognition of the potential conflicts between human activities (particularly built development and recreation) in and around the Solent coastal plain and the distribution and population status of various migratory bird species, the SWBGS was initiated approximately 15 years ago. The purpose of the strategy is '*to inform decisions relating to strategic planning as well as individual development proposals, to ensure that sufficient feeding and roosting resources continue to be available and the integrity of the network of sites is restored and maintained, in order to ensure the survival of these coastal bird populations*' (SWBGS, 2010). The SWBGS has been instrumental in raising awareness of and providing a consistent approach towards the consideration of SPA/Ramsar supporting habitat throughout the wider Solent area.

7.9 The SWBGS provides a framework for identifying sites lying outside the physical boundaries of SPA/Ramsar sites but which are, or may be, used by bird species associated with the European sites. Such sites are termed Functionally Linked Land[9]. These sites serve a function to the species (e.g. by providing feeding or resting opportunities) and are functionally linked to the designated site(s) due to their potential for providing an important role in maintaining populations of the species at a favourable conservation status. SPA/Ramsar species may spend a significant proportion of their time feeding or resting within such non-designated areas.

7.10 Under the current SWBGS system, each SWBGS site should be subject to sufficient survey effort (counting birds) to enable its importance to be determined with the ultimate aim of identifying a coherent network of sites across the wider Solent area, comprising important sites plus others which provide secondary/additional habitat.

7.11 The SWBGS has recently undergone a phase of comprehensive revision with the aim of reducing uncertainty over the status of birds on numerous sites and providing a robust steer on which sites are most valuable to maintaining a coherent network across the Solent and the level of evidence necessary for assessing impacts.

7.12 The new phase of the SWBGS has, during the period 2016-2018, focussed on identifying the key network of sites across the eastern Solent through a series of surveys investigating site use and bird movements. This has provided new data on the condition and use of individual sites as well as analysis of the functional links between sites. Analysis of survey data has allowed a new site classification methodology to be developed with a strong emphasis on protecting key network sites.

7.13 The SWBGS is the most up-to-date mechanism for assessing the potential impacts on supporting habitat and now includes detailed information on mitigation measures required to avoid, reduce or compensate any impacts arising from development activities. The SWBGS has been adopted and implemented by all Solent planning authorities. Havant Borough Council is committed to implementing the SWBGS.

Mitigation Measures for Impacts to Supporting Habitat

7.14 In conjunction with an expert Steering Group comprising Natural England, the Hampshire & Isle of Wight Wildlife Trust (HIOWWT), the Royal Society for the Protection of Birds (RSPB), the Eastern Solent Coastal Partnership (ESCP) and Hampshire County Council (HCC), Havant Brough Council has been involved in the development of a framework of strategic mitigation measures for impacts to SPA/Ramsar supporting habitat. Given the landscape-scale of the issue of terrestrial supporting habitat, a strategic Solent-wide mitigation solution is the most desirable mechanism for ensuring that functionally linked land is addressed appropriately through the planning system.

7.15 The SWBGS Guidance on Mitigation and Off-setting Requirements (SWBGS Steering Group, October 2018) provides a tiered framework of mitigation requirements, linked to the

[9] http://publications.naturalengland.org.uk/publication/6087702630891520

status of each SWBGS site. For each level of site, specific costed mitigation requirements are provided. It is the view of the Steering Committee that by applying these mitigation requirements, impacts to supporting habitat can be effectively mitigated such that the conservation objectives of the Solent SPAs are not compromised.

7.16 Table 13 summarises the mitigation requirements for each level of SWBGS site.

Table 13: Mitigation Requirements for Impacts to SPA Supporting Habitat	
SWBGS Site Status	**Summary of Expected Mitigation Requirements**
Candidate	Additional surveys required to confirm status. When status resolved, apply appropriate mitigation package.
Low Use	On-site mitigation preferred option. If not feasible, financial contribution secured towards protection/maintenance of wider SWBGS network.
Secondary	On-site mitigation preferred option. If not feasible, financial contribution secured towards protection/maintenance of wider SWBGS network, ideally within similar geographic location.
Primary	Applications addressed on case-by-case basis through Local Plan. On-site mitigation preferred option. If not feasible, alternative land providing same or increased function within similar geographic location. Financial contribution secured for long-term lease and management by appropriate body.
Core	Presumption that impacts are avoided. Applications addressed on case-by-case basis through Local Plan. Mitigation as per Primary plus at least same extent and function of replacement land in similar geographic location plus long-term management lease and suitable management by appropriate body.

Bird Refuges

7.17 A developing initiative of the SWBGS is the provision of permanent refuge sites for overwintering birds. These would primarily be inland sites for Brent Geese but would also provide suitable habitat for some wader species depending on their location.

7.18 The provision of permanent refuges throughout the Solent region is seen as a desirable and achievable outcome. As much of the existing supporting habitat lies within agricultural land the location and suitability of supporting habitat is dependent to a large degree on the vagaries of crop rotation practices. This could theoretically mean that in any given year there may be no or a minimal amount of supporting habitat available. The establishment of refuges could ensure that suitable habitat is available on a permanent basis every year, contributing towards the favourable conservation status of qualifying species.

7.19 Research is ongoing into the provision of permanent bird refuges. It is apparent from early analysis that sites likely to prove most suitable for refuges are large, close to coastal habitat, contain improved grassland or winter cereals, and are generally free from significant disturbance (this may be facilitated by secure fencing).

7.20 Havant Borough Council is committed to establishing permanent bird refuge areas at Broadmarsh and Warblington Farm. Refuges will be developed, where feasible, in accordance with the requirements of the SWBGS mitigation guidance.

Recreational Disturbance

7.21 A total of three policy themes have potential to contribute towards a cumulative increase in recreational disturbance, either directly (by facilitating residential development) or indirectly (by facilitating changes/increases in the scale, location or type of recreational activity).

7.22 As with impacts to SPA supporting habitat, Solent planning authorities have approached the issue of recreational disturbance in a strategic manner.

The Solent Recreation Mitigation Strategy (SRMS)

7.23 Research into the impact of recreation on birds was carried out on a Solent-wide scale under the Solent Disturbance and Mitigation Project (SDMP): this research concluded that there is an overall likely significant effect on SPA/Ramsar sites due to recreational disturbance arising from development. The research was taken forward through the Solent Recreation Mitigation Partnership (SRMP) Interim Strategy 2014. In December 2017 a definitive strategy, the SRMS[10], was published and adopted by the Solent authorities, including Havant Borough Council.

7.24 The SRMS includes detailed mitigation measures to address the identified impacts arising from recreational disturbance. Mitigation measures comprise: a ranger team; communications, marketing and education initiatives; initiatives to encourage responsible dog walking; codes of conduct; new/enhanced strategic greenspaces; site-specific visitor management and bird refuge projects; and monitoring.

7.25 As part of the SRMS, a financial levy is generally provided for each new dwelling situated within 5.6km of the Solent SPAs[11]. This levy then funds the mitigation measures. The SRMS has seen an increase in the amount of financial contribution expected for development sites in order to fund a more comprehensive mitigation package.

7.26 The SRMS is fully supported by Natural England and is considered by them to provide sufficient mitigation to offset the bulk of recreational pressure from new development within the Borough. There may be situations however where on-site mitigation, in addition to the SRMS mitigation, is deemed necessary due to the scale or location of development. It is expected that any increase in dwellings in the Borough over the lifetime of the Building A Better Future Plan will continue to contribute towards the SRMS and thus any recreational impacts are mitigated. However, the Local Planning Authority will continue to assess whether additional on-site or off-site mitigation measures are needed in addition to SRMS contributions in consultation with Natural England. Havant Borough Council is committed to implementing the SRMS.

Air Quality

7.27 A detailed analysis of the potential effects of air quality issues on European site integrity was submitted with the previous Havant Borough Local Plan (Ricardo, 2019). This analysis built

[10] http://www.birdaware.org/strategy
[11] Portsmouth Harbour SPA, Chichester & Langstone Harbour SPA and Solent and Southampton Water SPA.

on an initial screening assessment and included site-specific assessment of the potential effects of air pollutants on the individual qualifying features of each European site.

7.28 This detailed analysis will need to be repeated for the emerging Building A Better Future Plan, taking into account any new/modified policies and site allocations. Where impacts are identified, policies will be required that address these.

7.29 Havant Borough Council is committed to addressing air quality issues in collaboration with neighbouring authorities and will continue to work collaboratively with its PUSH partners to develop a strategic approach towards water quality and air quality.

Coastal Squeeze

7.30 Coastal protection in Havant Borough has been set out in the North Solent Shoreline Management Plan and seeks to promote a sustainable coastal defence scheme for managing coastal erosion and flood risk.

7.31 The default protection scenario across the borough is 'hold the line' as demonstrated within the North Solent Shoreline Management Plan and further detailed by the Eastoke Sectoral Strategy Study, the Portchester to Emsworth Strategy and the South Hayling Beach Management Strategy (East Solent Coastal Partnership, 2018). Holding the line will entail an ongoing programme of physical coastal defence improvements whilst maintaining the general 'line' of current defences.

7.32 For some locations in the borough such as South Moor, Warblington and Conigar Point, the 'hold the line' strategy will be implemented for the next twenty years. This will allow for the completion of detailed studies on the longer-term management options for these areas and for time to establish compensatory habitat. For these areas a move away from 'hold the line' towards potential managed retreat options is being considered, but no firm details are available.

Water Resources/Nutrient Neutrality

7.33 There will be an overall net increase in housing across the Borough as a result of the Building a Better Future Plan. Residential uses are the primary driver for increasing water consumption and wastewater production. Both mechanisms can lead to negative environmental effects on sensitive ecosystems.

7.34 Within Havant Borough, water supply is wholly within the remit of Portsmouth Water. Portsmouth Water's Water Resources Management Plan (WRMP) demonstrates that the borough's strategic supply demands can be accommodated fully, with a surplus, taking into account existing water abstraction licenses and as supplemented by the proposed Havant Thicket Winter Storage Reservoir.

7.35 In terms of water quality, work is ongoing to investigate the requirement for new or enhanced water treatment capacity within the borough through the PUSH Integrated Water Management Strategy (IWMS). In conjunction with Natural England and the Environment Agency, PUSH has identified that additional research is required in order for water quality

issues to be addressed within the Local Plan period. Calculations completed by the PUSH group for the Integrated Water Management Strategy, concluded that the capacity of Budds Farm WwTW is sufficient for the Building A Better Future Plan period based on an occupancy are of 2.4 persons/household: this is consistent with advice from Natural England. An amended IWMS is due to be published and the Council is committed to implementing it fully.

7.36 The emerging Plan will need to be subject to nutrient budget calculations in line with a methodology provided by Natural England.

7.37 Havant Borough Council proposes to mitigate the impacts of nutrients through the cessation of intensive agricultural use on a total of 183 hectares (Ha) of land. This land will comprise 107Ha of agricultural grassland at Havant Thicket and a further 76Ha of agricultural grassland at Warblington Farm.

7.38 Bespoke policy for all new development should ensure that development would only be permitted where appropriate investigations have identified the risk to groundwaters and a deliverable mitigation strategy is provided, including where relevant a Sustainable Drainage Scheme (SuDS). Development should be expected to take full account of Source Protection Zones and the Environment Agency and Portsmouth Water will be consulted on all developments within sensitive locations.

7.39 It is recommended that the Policy will require all development to take full account of sensitive features such as surface waters and groundwaters and ensure that development does not result in impacts to such features.

7.40 In addition, the Plan should include robust requirements for surface water and sub-surface drainage management within development sites. Any future policy should ensure that drainage requirements are considered at the design stage and developed and implemented in accordance with recognised standards.

7.41 Havant Borough Council will continue to work collaboratively with its PUSH partners and Natural England on the issue of water quality.

8. Summary and Record of the HRA

8.1 Having carried out a screening assessment of the Building A Better Future consultation paper, it is the Council's view that in its current form and in the absence of mitigating measures the plan may lead to likely significant effects, both alone and in-combination with other plans or projects, in relation to some of the European sites within the scope of the study.

8.2 The HRA screening exercise has concluded that a total of seven policy themes have the potential to result in a likely significant effect, either alone or in-combination, on eleven European sites.

8.3 In the absence of detailed policy and site allocations it is not yet possible to determine the extent to which the emerging Plan could impact European site integrity. Further detailed assessment will be required as the plan policies and site allocations emerge.

8.4 The Council places a high level of confidence in the strategic-level ecological mitigation measures currently in place across the Solent region. These have been developed over many years with the cooperation of Natural England, local planning authorities and non-governmental organisations and are based on the best-available scientific knowledge, collected, analysed and interpreted using well-established methods alongside authoritative expert judgement.

8.5 It is recommended that the emerging Plan contains bespoke policies that are in full accordance with established strategic-level mitigation measures.

8.6 The Council is fully committed to continued joint working with neighbouring local authority partners in order to address the cumulative impacts of air quality and water resources issues.

References

Atkins (2009). *South Hampshire Integrated Water Management Strategy*. Accessed January 2019 from http://www.push.gov.uk/081223_-_iwms_final.pdf

Caporn, S, Field, C, Payne, R, Dise, N, Britton, A, Emmet B, Jones, L, Phoenix, G, Power, S, Sheppard, L & Stevens, C. (2016). *Assessing the effects of small increments of atmospheric nitrogen deposition (above the critical load) on semi-natural habitats of conservation importance*. Natural England Commissioned Reports, Number 210.

Communities and Local Government (2006). *Planning for the protection of European sites: Appropriate Assessment*. Accessed January 2019 from webarchive.nationalarchives.gov.uk/20061101113831

Communities and Local Government (2012). *The National Planning Policy Framework*. Accessed January 2019 from http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf.

Cutts, N, Phelps, A, & Burdon, D. (2008). *Construction and Waterfowl: Defining Sensitivity, Response, Impacts and Guidance*. Report to Humber INCA. Institute of Estuarine and Coastal Studies, University of Hull.

DTA Publications (2022). *The Habitats Regulations Assessment Handbook*. DTA Publications, Finchampstead.

European Commission (2000a). *Communication from the Commission on the Precautionary Principle.*

European Commission (2000b). *Managing Natura 2000 Sites: The provisions of Article 6 of the Habitats Directive 92/43/EEC*.

European Commission (2001). *Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of article 6(3) and 6(4) of the Habitats Directive*. Accessed January 2019 from http://ec.europa.eu/environment/nature/natura2000 /management/docs/art6/natura_2000_assess_en.pdf

European Council (1992): *Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.*

European Council (2009). *Council Directive 2009/147/EC on the conservation of wild birds.*

Fearnley H, Clarke R & Liley D (2010). *The Solent Disturbance and Mitigation Project, phase II - on-site visitor survey results from the Solent region*. Accessed January 2019 from http://www. solentforum.org/resources%20/pdf%20/natconsv/Final%20Solent%20Visitor%20Report.pdf

Fearnley H, Clarke R & Liley D (2011). *The Solent Disturbance and Mitigation Project. Phase II- results of the Solent household survey.* Accessed January 2019 from http://www.solentforum. org/forum/sub_groups/Natural_Environment_Group/Disturbance_and_Mitigation_Project/Report% 20phase%202%20Household%20Survey%20and%20Visitor%20Model.pdf

Hampshire Biodiversity Information Centre (2014). *Havant Winter Bird Survey 2012-2014.*

Hampshire Biodiversity Information Centre (2015). *Havant Winter Bird Survey 2012-2015.*

Hampshire Biodiversity Information Centre (2016). *Havant Winter Bird Survey 2015-2016.*

Hampshire Brent Goose Strategy Group (2002). *Brent Goose Strategy South East Hampshire Coast*. Hampshire and Isle of Wight Wildlife Trust, Eastleigh.

Havant Borough Council (2016). *Havant Borough Local Plan Housing Statement 2016: Habitats Regulations Assessment Screening Statement*. Havant Borough Council, Havant, Hampshire.

Havant Borough Council (2017). *Draft Havant Borough Local Plan 2016: Habitats Regulations Assessment Screening Statement*. Havant Borough Council, Havant, Hampshire.

Havant Borough Council (2018). *Draft Havant Borough Local Plan 2036*. Havant Borough Council, Havant, Hampshire.

Institute of Air Quality Management (2016). *Dealing with Uncertainty in Vehicle NOx Emissions within Air Quality Assessments.* IAQM, London.

Lepus Consulting (2013). *Addendum to the Havant Borough Allocations (Local Plan) Appropriate Assessment* Accessed January 2019 from http://havantstaging.webcurl.co.uk/sites/default/files/documents/LC-0047_Addendum_2_121213ND.pdf

Lepus Consulting (2013). *Habitats Regulations Assessment of the Havant Borough Local Plan (Allocations) Appropriate Assessment*. Accessed January 2019 from http://havantstaging.webcurl.co.uk/sites/default/files/documents/HBC%20Allocations%20Plan%20Habitats%20Regulations.pdf

Liley D, Stillman R & Fearnley H (2010). *The Solent Disturbance and Mitigation Project, phase 2: Results of bird disturbance fieldwork 2009/10*. Accessed January 2019 at http://www.solentforum.org/resources/pdf/natconsv/Solent%20Bird%20Report,%20Jan%202011.pdf.

Ministry of Housing, Communities & Local Government (2019). *Habitats Regulations Assessment: Letter from the Chief Planning Officer.* MHCL, London.

Misra A, Passant NR, Murrells TP, Thistlethwaite G, Pang Y, Norris J, Walker C, Stewart RA, MacCarthy J and Pierce M (2012). *UK Emission Projections of Air Quality Pollutants to 2030*. A report of the National Atmospheric Emissions Inventory AEA Group.

MVA Consultancy (2010). *Transport for South Hampshire Evidence Base Survey Report*. MVA Consultancy, Woking, UK.

New Forest District Council (2010). *The North Solent Shoreline Management Plan*. Accessed January 2019 from http://www.northsolentsmp.co.uk/CHttpHandler.ashx?id=15839&p=0

Office for the Deputy Prime Minister (OPDM) (2005). *Circular 06/2005: Biodiversity and geological conservation: statutory obligations and their impact within the planning system.* Accessed January 2019 from http://www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf

Partnership for Urban South Hampshire (2016). *Spatial Position Statement*. PUSH, Portsmouth, Hampshire.

Partnership for Urban South Hampshire (2008). *South Hampshire: Integrated Water Management Strategy*. PUSH, Portsmouth, Hampshire.

Partnership for Urban South Hampshire (2018). *Report to the Partnership for Urban South Hampshire Overview and Scrutiny Committee: South Hampshire Integrated Water Management Study*. PUSH, Portsmouth, Hampshire.

Portsmouth Water (2017). *Draft Water Resources Management Plan 2019*. Portsmouth Water PLC, Portsmouth, Hampshire.

Ricardo Energy & Environment (2018). *Partnership for Urban South Hampshire: Air Quality Impact Assessment*. Ricardo, Didcot, UK.

Ricardo Energy & Environment (2019). *Air Quality Habitat Regulations Assessment for Havant Borough Local Plan 2036 Issue 3*. Ricardo, Didcot, UK.

Solent Waders and Brent Goose Project Steering Group (2010). *Solent Waders and Brent Goose Strategy*. Accessed January 2019 from http://www.solentforum.org/forum/sub_groups/Natural_Environment_Group/Waders%20and%20Brent%20Goose%20Strategy/Solent%20Waders%20and%20Brent%20Goose%20Strategy.pdf

Solent Waders and Brent Goose Project Steering Group (2018). *Solent Waders and Brent Goose Strategy: Guidance on Mitigation and Off-setting Requirements.*

Southern Water (2009). *Water Resources Management Plan 2010-2035*. Accessed January 2019 from http://www.southernwater.co.uk/Environment/managingResources/public Consultation.asp

Stillman, RA, West, AD, Clarke, RT & Liley, D (2012). *Solent Disturbance and Mitigation Project Phase II: Predicting the impact of human disturbance on overwintering birds in the Solent*. Report to the Solent Forum.

Tesserae Environmental Consultants (2007). *Habitats Regulations Screening Statement for Havant Borough Council Core Strategy*. Accessed January 2019 from http://havantstaging.webcurl.co.uk/sites/default/files/documents/HRA%20Screening%20Statement%20for%20HBC%20Core%20Strategy%20Preferred%20Options%20and%20Policies.pdf

Tyldesley D (2009). *The Habitats Regulations Assessment of Local Development Documents – revised draft guidance for Natural England*.

UE Associates (2010). *Habitats Regulations Assessment for the Havant Core Strategy: Appropriate Assessment Report.* Accessed January 2019 from http://www.havant.gov.uk/sites/default/files/documents/HAB%20REGS%20REPORT.pdf

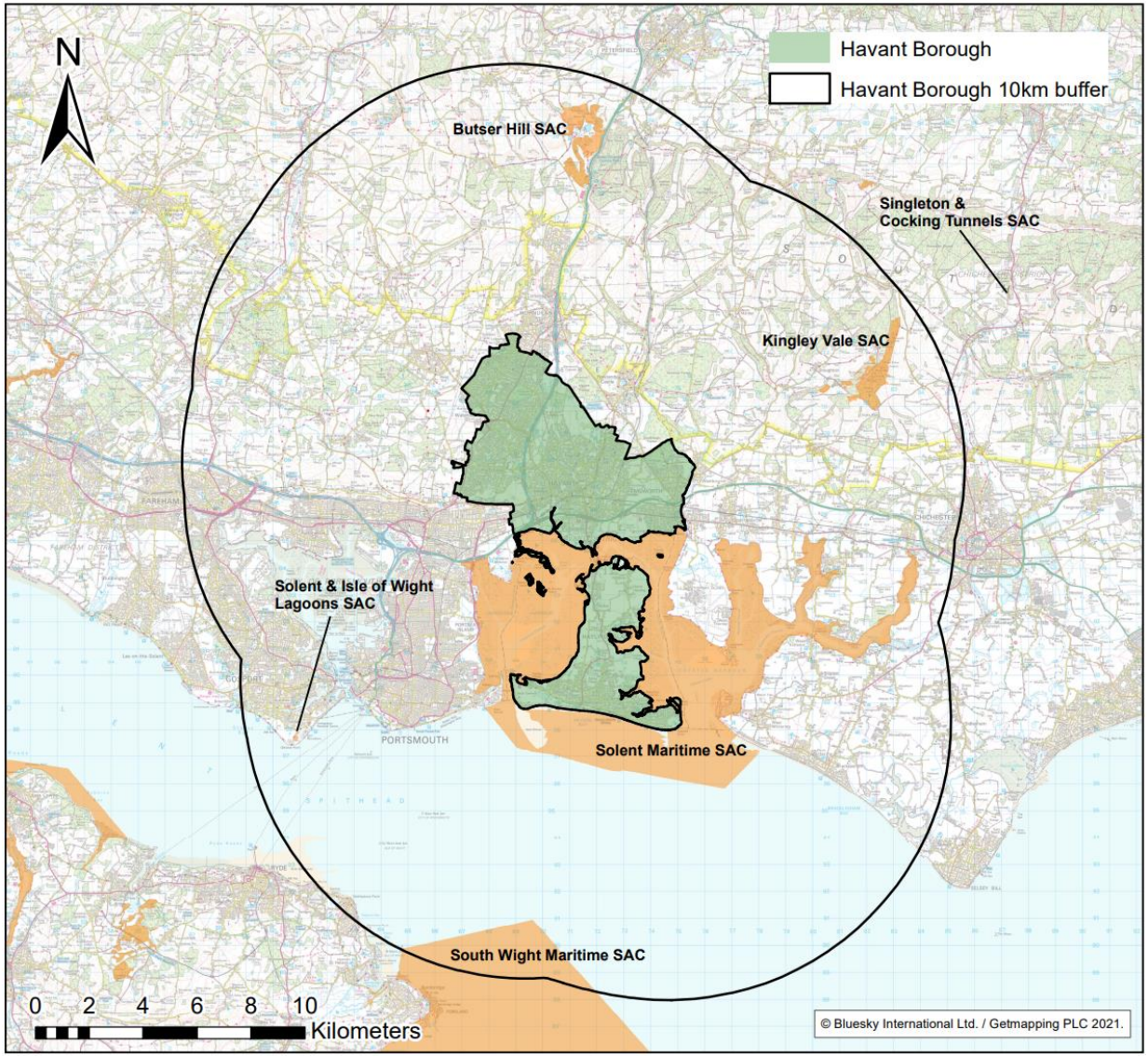
United Nations Educational, Scientific and Cultural Organisation (UNESCO) (1971). *Convention on wetlands of international importance especially as wildfowl habitat (Ramsar (Iran), 2 February 1971, UN Treaty Series No. 14583)*. Accessed January 2019 from http://www.ramsar.org/cda/en/ramsar-documents-official-docs/main/ramsar/1-31%5E7761_4000_0__.

Urban Edge Environmental Consulting (2017). *Habitats Regulations Assessment for the Fareham Borough Local Plan 2036 Screening Report for the Draft Plan*. Urban Edge Environmental Consulting, Brighton.

Wagner A, Wiley T, Murrells TP, Passant NR, Thistlethwaite G, Li Y, Norris J, Coleman PJ, Walker C, Stewart RA, Jackson J and Pierce M (2009). *UK Emission Projections of Air Quality Pollutants to 2020* - The results and assumptions of the 2007 to 2020 air quality pollutant emission projections. A report of the National Atmospheric Emissions Inventory AEA Group.

Wright, MD, Goodman, P & Cameron, TC. (2010). *Exploring behavioural responses of shorebirds to impulsive noise*. Wildfowl 60: pp150-167. Wildfowl and Wetlands Trust.

APPENDIX 1A - LOCATION OF SPECIAL AREAS OF CONSERVATION WITHIN 10KM OF HAVANT BOROUGH



APPENDIX 1B – LOCATION OF SPECIAL PROTECTION AREAS WITHIN 10KM OF HAVANT BOROUGH