West Sussex County Council

# WSTP4 HRA STAGE 1 SCREENING

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West Sussex County Council

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# 1 INTRODUCTION

1.1.1. The Local Transport Act (2000) as amended by the Local Transport Act (2008) requires West Sussex County Council (WSCC) to produce a Local Transport Plan Strategy (LTP). The fourth WSCC Local Transport Plan (WSTP4) Draft Strategy proposes an approach for addressing current and future transport issues in the County.

1.1.2. WSP has been appointed by WSCC to undertake the Habitats Regulations Assessment (HRA) for WSTP4 (Draft Strategy). Stage 1 (Screening), as presented within this report, represents the first step in the HRA process. The focus of the HRA process is on the potential for adverse effects as a result of the LTP policies on the integrity of European nature conservation sites.

1.1.3. It is a matter of Government policy (National Planning Policy Framework (NPPF) paragraph 118) that sites designated under the 1971 Ramsar Convention for their internationally important wetlands (commonly known as Ramsar sites) are also considered in the same way as European sites. Together, these sites are referred to as 'Habitats sites' in the NPPF and in this report.

1.1.4. Under The Conservation of Habitats and Species Regulations 2017[1] (as amended) (the 'Habitats Regulations') 'Competent Authorities' must assess plans and projects for their potential to cause Likely Significant Effects (LSE) on Habitats sites. Where the plan or project may lead to LSE it must be subject to an Appropriate Assessment to determine whether there will be adverse effects to any Habitats sites. Any Plan or project that would lead to adverse effects on the integrity of Habitats Site(s) cannot be permitted without meeting strict additional tests.

1.1.5. The Stage 1 (Screening), presented herein, builds upon the 'pre-screening' work completed to date (WSP 2020[2]). This comprised a desk-based review of relevant information, including biodiversity information and relevant HRA reporting (relating to other relevant plans and projects). The 'pre-screening' exercise identified all relevant Habitats sites where LSE could occur, particularly in relation to air quality changes and recreation pressures associated with the anticipated LTP policies. This exercise included the identification of all Habitats sites which fall within 200m of a road and which have sensitivity to changes in nitrogen oxide ($NO_X$) and ammonia ($NH_3$) concentrations and Nutrient Nitrogen deposition (NDep) and/or where source-effects pathways are identified. The information captured within the 'pre screening' exercise has formed part of the evidence base for this Stage 1 HRA (Screening) and subsequent HRA stages (including if necessary, a Stage 2 Appropriate Assessment (AA) (see Methodology Section 2).

## 1.2 REPORT FRAMEWORK

1.2.1. This HRA screening report has been produced alongside the Sustainability Appraisal (SA) that incorporates the requirement of a Strategic Environmental Assessment (SEA) for the WSTP4 Draft Strategy and associated plans.

1.2.2. At a screening level, this report will ensure that all HRA-related considerations are fully integrated into WSTP4 Draft Strategy as it is developed.

1.2.3. This report details:

- the HRA process and methodology for assessment;
- the relevant Habitats sites within the Zone of Influence (ZOI) for the WSTP4 Draft Strategy;

[1] The Conservation of Habitats and Species Regulations 2017. (Accessed 07/12/18)

[2] WSP, 2020. WSCC LTP4 HRA Pre-Screening Information. WSP UK Ltd, Basingstoke.

- the challenges of the WSTP4 Draft Strategy and how these may impact upon relevant Habitats sites, and;
- the screening of likely significant effects (Stage 1) of the WSTP4 Draft Strategy.

1.2.4. It should be noted that this HRA has been based solely upon the WSTP4 Draft Strategy and does not include a detailed analysis of any projects that may arise as a result of the Strategy.

## 1.3 OBJECTIVES OF THE STRATEGY

1.3.1. As communicated by WSCC, the implementation and development of a sustainable transport system will help bring about opportunities to enhance the County. Consideration must be given throughout the development of the WSTP to the following overarching vision in order to achieve this:

> "A West Sussex transport network in 2036 that works for communities in the Coastal West Sussex, Gatwick Diamond and Rural West Sussex economic areas by helping to address the spatial economic challenges of the County, level up the coastal economy and provide access to employment and services countywide.
>
> The transport network will be on a pathway to net zero carbon by 2050 through mass electrification, reduced use of fossil-fuels and local living. It will also be safer and more efficient overall with more walking, cycling and use of public or shared transport and less congestion on major routes that connect West Sussex towns with Gatwick Airport, London and nearby cities.
>
> The transport network will connect communities and allow residents to live healthy lifestyles with good access to the West Sussex coast and the protected South Downs, High Weald and Chichester Harbour.
>
> Active travel modes, public or shared transport will be attractive options in built up areas and between towns, and rural communities will have access to the services they need.
>
> Transport impacts such as air pollution, noise and rat-running on adjacent communities and the environment will be minimised to protect a quality of life that reflects the characteristics of the County."

# 2 RELEVANT POLICY, LEGISLATION, CASE LAW AND GUIDANCE

## 2.1 LEGISLATIVE BACKGROUND

2.1.1. Under The Conservation of Habitats and Species Regulations 2017[3] (as amended) (the 'Habitats Regulations') 'Competent Authorities' must assess Plans and projects for their potential to cause Likely Significant Effects (LSE) on Habitats sites. Where the plan or project may lead to LSE it must be subject to an AA to determine whether there will be adverse effects to any Habitats sites. Any plan or project that would lead to adverse effects on the integrity of Habitats site(s) cannot be permitted without meeting strict additional tests.

2.1.1. Defra guidance (2021)[4] states that Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) in the UK no longer form part of the EU's Natura 2000 ecological network. The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 have created a national site network on land and at sea, including both the inshore and offshore marine areas in the UK. The national site network includes:

- existing SACs and SPAs; and
- new SACs and SPAs designated under these Regulations.

2.1.2. Any references to Natura 2000 in the 2017 Regulations and in guidance now refers to the new national site network.

2.1.3. Maintaining a coherent network of protected sites with overarching conservation objectives is still required in order to:

- fulfil the commitment made by government to maintain environmental protections; and
- continue to meet our international legal obligations, such as the Bern Convention, the Oslo and Paris Conventions (OSPAR), Bonn and Ramsar Conventions.

2.1.4. This report presents information to enable the screening assessment required as part of Stage 1 of the HRA process, to establish whether or not the draft WSTP4 will have a LSE upon the national site network and Ramsar sites (Habitats sites).

2.1.5. The use of the term Favourable Conservation Status (FCS) is not amended by The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the term still has the meaning given by Article 1 of the Habitats Directive. Defra (2021) does however note that "an appropriate authority is only responsible for managing and adapting the national site network to secure FCS of a feature proportionately to the importance of the UK within the feature's natural range". The Habitats Directive provides further interpretation of the meaning of 'favourable conservation status' within Article 1 parts a, e and i as below.

'(a) conservation means a series of measures required to maintain or restore the natural habitats and the populations of species of wild fauna and flora at a favourable status as defined in (e) and (i); …

(e) conservation status of a natural habitat means 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 within the territory referred to in Article 2. The conservative status of a natural habitat will be taken as "favourable" when:

[3] The Conservation of Habitats and Species Regulations 2017. (Accessed 07/12/18)

[4] Department for Environment Food & Rural Affairs (2021). Changes to the Habitats Regulations 2017.

- its natural range and areas it covers within that range are stable or increasing, and
- 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 as defined in (i);

(i) conservation status of a species means the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the territory referred to in Article 2; The conservation status will be taken as "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 populations on a long-term basis'.

## 2.2 STAGES OF HABITATS REGULATIONS ASSESSMENT

2.2.1. Guidance on the Habitats Directive (European Commission, 2000)[5] sets out the step wise approach which should be followed to enable Competent Authorities to discharge their duties under the Habitats Directive and provides further clarity on the interpretation of Articles 6 (3) and 6 (4). As set out in Regulation 3 of The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 where Natura 2000 sites are referenced in previously issued guidance, this should be interpreted as relating to the national site network but does not otherwise affect guidance as it applied, before EU exit day.

- **Stage 1:** Screening: the process which initially identifies the likely impacts upon a Natura 2000 site of a plan or project, either alone or in combination with other plans or projects and considers whether these impacts are likely to be significant.
- **Stage 2:** AA: the detailed consideration of the impact on the integrity of the Natura 2000 sites of the plan or project, either alone or in combination with other plans or projects, with respect to the site's conservation objectives and its structure and function. This is to determine whether there will be adverse effects on the integrity of the site. Specific guidance on this stage is provided in habitat regulations guidance note 1[6].
- **Stage 3:** Assessment of Alternative Solutions: the processes that examine alternative ways of achieving the objectives of the plans or projects that avoid adverse impacts on the integrity of the Natura 2000 site.
- **Stage 4:** Assessment where no Alternative Solutions Exist and where Adverse Impacts Remain: an assessment of whether the development is necessary for Imperative Reasons of Overriding Public Interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the Natura 2000 network.

2.2.2. This report presents the findings of the Screening undertaken as part of Stage 1 of the HRA process to establish whether or not the likely impacts of the WSTP4 Draft Strategy could have LSE on Habitats sites.

2.2.3. This document provides this information by undertaking the following steps:

[5] Assessment of plans and projects significantly affecting Natura 2000 sites (European Commission, 2001).

[6] English Nature (2004). Habitat Regulations Guidance Note #1: The Appropriate Assessment (Regulation 48), The Conservation (Natural Habitats & c.) Regulations, 1994.

- determining whether the plan is directly connected with or necessary for the management of applicable Habitats sites;
- describing the project/plan impacts that may have the potential for significant effects upon applicable Habitats sites; and
- Description of the potential pathways of impacts, both alone and in-combination with other plans and projects.

2.2.4. The precautionary principle is applied at all stages of the HRA process. In relation to screening this means that projects and plans where effects are considered likely and those where uncertainty exists as to whether effects are likely to be significant must be subject to the second stage of the HRA process, AA.

## 2.3 RELEVANT CASE LAW

2.3.1. There are a number of recent Court of Justice of the European Union (CJEU) rulings which are relevant to this assessment and these are given below for information. As the general provisions for the protection of Habitats sites and the procedural requirements to undertake HRA to assess the implications of Plans or Projects for Habitats sites remain, this previous case law established prior to the UK's exit from the EU is considered to apply unless superseded by the judgement of an appropriate UK court.

### THE WEALDEN JUDGEMENT

2.3.2. The Wealden Judgement[7], handed down in March 2017, has introduced additional complexities into the assessment process in relation to in-combination and cumulative effects.

2.3.3. Prior to this Judgement, it was deemed that air quality impacts on Habitats sites need only be considered alongside roads where the traffic growth associated with the individual Plan or project being assessed exceeded specified screening criteria. These criteria were typically based on changes in vehicle movements and taken from the Design Manual for Roads and Bridges (DMRB, HA207/07[8]) which has been subsequently withdrawn, namely:

- Increases of 1000 vehicles per day or 200 Heavy Goods Vehicles per day (as Annual Average Daily Traffic (AADT)).

2.3.4. The Wealden Judgement found that the application of the criteria to the traffic growth associated with a single Local Plan was unsound on the basis that two Local Plans collectively contributing more than 1000 AADT could lead to a potentially significant effect. The Judge determined that further assessment of air quality impacts on Habitats sites should have been carried out and quashed part of the Local Plan that would have led to an in-combination exceedance of 1,000 AADT.

2.3.5. This judgement poses several challenges for Local Authorities and Council Officers, namely:

- Uncertainty – at present, there is no widely accepted approach to the appropriate use of screening criteria and when these may be used to rule out the need for detailed modelling of potential air quality impacts on Habitats Sites. Natural England has published Internal Guidance[9] (albeit published externally) which, provides a staged approach for assessing in-combination

[7] Judgment in Wealden District Council v. Secretary of State for Communities and Local Government, Lewes District Council and South Downs National Park Authority [2017] EWHC 351 (Admin) DATE: 21 Mar 2017.

[8] Design Manual for Roads and Bridges (DMRB), Volume 11, Section 3, Part 1 (HA207/07). (Accessed 09/09/20)

[9] Natural England (June 2018) Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. (Accessed 02/12/18)

effects which has been referred to within undertaking this Stage 1 (Screening) for the Draft WSTP.

- Lack of a clear 'de minimis' – there is case law that supports the use of de minimis thresholds in the assessment of potential impacts on Habitats sites, i.e. where no 'appreciable effect' may occur[10] as the result of a plan or project. Some practitioners have argued that Wealden suggests there is no de minimis threshold for increases in traffic emissions, and a development leading to an increase of even one vehicle per day should be prohibited or subject to further assessment for in combination traffic growth whilst others have argued that the Wealden judgement applies to the use of traffic thresholds alone;

### THE PEOPLE OVER WIND CASE

2.3.6. The Court of Justice of the European Union's (CJEU's) decision in the matter of People Over Wind and Sweetman v Coillte Teoranta (C-323/17) (hereafter referred to as the 'Sweetman Case')[10], states that: 'Article 6(3) ……. 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 measures intended to avoid or reduce the harmful effects of the plan or project on that site.'

2.3.7. In the new judgement the CJEU concluded that mitigation measures could not be considered as part of the project, and thus that the screening stage of HRA should not take account of them. This will undoubtedly be tested further in the courts in coming months and years, but the key issue is whether the mitigation measures proposed can genuinely be considered as part of the project, in that they would happen in any case, irrespective of the habitats site. If not, then they should be considered mitigation measures, and considered at the Appropriate Assessment stage of HRA.

2.3.8. This is an emerging issue for local authorities and means that, alongside the Wealden judgement and the potential for 'in-combination' effects, the fact that HRA Screening should not take into account measures targeted at mitigating effects on Habitats sites, full AA is more frequently required.

### CJEU RULING IN THE NETHERLANDS NITROGEN AND AGRICULTURE CASES C-293/17 AND C-294/17

2.3.9. The final Court Judgement in relation to these two cases was handed down on the 7th November 2018. The judgement relates to the assessment of agricultural activities under the Habitats Regulations, but has potential implications for the assessment of changes in nitrogen (N) deposition in relation to air quality. Notably, the Court of Justice of the European Union ruled that:

- An 'appropriate assessment' may only take into account the existence of Article 6(1) 'conservation measures', or Article 6(2) 'preventive measures', or specific measures adopted for a conservation programme, or 'autonomous' measures not in the programme, if the expected benefits of those measures are certain at the time of the assessment.
- National measures such as procedures for the surveillance and monitoring of farms whose activities cause nitrogen deposition and the possibility of imposing penalties, up to and including the closure of those farms, are sufficient for the purposes of complying with Article 6(2).

## 2.4 NATIONAL PLANNING POLICY

### NATIONAL PLANNING POLICY FRAMEWORK

2.4.1. In relation to biodiversity and the WSTP4, the following paragraphs in the document are relevant:

[10] Sweetman v. An Bord Pleanála, Case C-258/11, CJEU judgment 11 April 2013.

- Paragraph 170, which states ‘Planning policies and decisions should contribute to and enhance the natural and local environment by:

  a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

  b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

  d) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate; and

  e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans’.

- Paragraph 171 which states ‘Plans should:

  distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.’

## 2.5 RELEVANT GUIDANCE

### NATURAL ENGLAND’S INTERNAL GUIDANCE

2.5.1. In June 2018, Natural England published guidance[11] on their approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations. The document draws upon Annex F of the DMRB (now withdrawn) but takes into account the Wealden Judgement and need to assess ‘in-combination’ effects on Habitats sites as a result of air pollution.

2.5.2. The guidance provides a framework around the assessment of road traffic emissions and subsequent effects on Habitats sites. Notably:

- Step 1 – Does the proposal give rise to emissions which are likely to reach a Habitats Site;
- Step 2 – Are there qualifying features within 200m of a road sensitive to air pollution;
- Step 3 – Could the sensitive qualifying features of the site be exposed to emissions; and
- Step 4 – Application of the Screening Thresholds.
  - Step 4a: apply the threshold alone;
  - Step 4b: apply the threshold in-combination with emissions from other road traffic plans and projects; and
  - Step 4c: apply the threshold in-combination with emissions from other non-road plans and projects.
- Step 5: Advise on the need for Appropriate Assessment where thresholds are exceeded, either alone or in-combination.

[11] Natural England (June 2018) Natural England’s approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations (Accessed on 27/11/18)

2.5.3. The relevant thresholds in relation to Step 4 are as follows:

- Changes in AADT of 1000 vehicles a day (or more); and/or
- Changes of 1% of the relevant Critical Load and/or Level as a result of the Plan/Project.

### IAQM'S GUIDE TO THE ASSESSMENT OF AIR QUALITY IMPACTS ON DESIGNATED NATURE CONSERVATION SITES

2.5.4. The Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites (IAQM, May 2020)[12] provides advice for ecologists relating to air quality assessments (AQAs), to evaluate the effects of air pollution on habitats and species, by increasing their understanding of the information provided by air quality specialists. The Guide focusses on the AQA process and no specific detail on the subsequent stage of the overall process, i.e. the assessment of the effects that air quality impacts may have on habitats and species, is provided in this guidance.

### UPDATED DMRB (LA 115 – HABITATS REGULATIONS ASSESSMENT)

2.5.5. DMRB document LA 115 - Habitats Regulations Assessment[13] states that HRA shall include systematic collection, assessment, and reporting of the implications of highways projects on Habitats sites and shall be implemented forthwith on all projects involving Habitats Regulations Assessment on the motorway and all-purpose trunk roads. In addition to identifying the habitats site designations to be considered within HRA and the format of reporting, the document sets out (principles and purpose) that:

- The precautionary principle shall be applied in reporting through all HRA stages.
- Recourse to the precautionary principle may be relevant when there:
  1. are "potentially negative effects"; or
  2. is "insufficiency of the data, which makes it impossible to determine with sufficient certainty the risk in question".
- Site conservation objectives should prevail where there is uncertainty.
- Adverse effects should be reported in the HRA in the absence of evidence to the contrary.

### CIEEM ADVISORY NOTE: ECOLOGICAL ASSESSMENT OF AIR QUALITY IMPACTS

2.5.6. This guidance[14] from the Chartered Institute of Ecology and Environmental Management is intended to take ecologists (and air quality specialists) through the issues that they should consider in order to make an informed judgement as to the ecological effects of changes in pollution concentrations and deposition rates. The approaches set out build on the advice and guidance from Natural England and IAQM, but focus on the ecologist role to interpret the numerical output of air quality assessments to reach evidence-based conclusions on ecological significance.

### OTHER RELEVANT GUIDANCE AND POLICY:

- Department for Communities and Local Government (August 2006) Planning for the protection of European Sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents. Draft.

[12] Holman et al (2020). A guide to the assessment of air quality impacts on designated nature conservation sites – v1.1. (Accessed 16/06/2021)

[13] Highways England (November 2019) Design Manual for Roads and Bridges, LA115 – Habitats Regulations Assessment. (Accessed 10/09/20).

[14] CIEEM (January 2021) Advisory Note: Ecological Assessment of Air Quality Impacts. Available at: (Accessed 20/03/21).

- English Nature (2006) draft Guidance – The Assessment of Regional Spatial Strategies and Sub-regional strategies under the provisions of the Habitats Regulations;
- European Commission (2000). Managing Natura 2000 Sites, the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Accessed [27/04/2020]
- Scottish Natural Heritage (January 2015) Habitats Regulations Appraisal of Plans Guidance For Plan-Making Bodies In Scotland Version 3.0 originally prepared by David Tyldesley And Associates;
- Tyldesley, D. and Chapman, C. (2013) The Habitats Regulations Assessment Handbook (July 2020 Edition) UK DTA Publications Ltd.
- Highways England (2019) Design Manual for Roads and Bridges Sustainability & Environment Appraisal LA 105 Air quality (formerly HA 207/07, IAN 170/12, IAN 174/13, IAN 175/13, part of IAN 185/15) Revision 0
- Convention on Wetlands of International Importance especially as Waterfowl Habitat. Ramsar (Iran), 2 February 1971. UN Treaty Series No. 14583. As amended by the Paris Protocol, 3 December 1982, and Regina Amendments, 28 May 1987.
- Joint Nature Conservation Committee (JNCC) (2016). SAC and SPA Standard Data Forms and Ramsar Information Sheets. Accessed [27/04/2020].


## HRA POLICY GUIDANCE


- Council of the European Union (1992). Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora. Accessed: [27/04/2020]
- Council of the European Union (2009). Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. Accessed: [27/04/2020]
- Department for Communities and Local Government (DCLG) (2019). National Planning Policy Framework.
- European Communities (2007). Guidance document on Article 6 (4) of the 'Habitats Directive' 92/43/EEC. Accessed: [27/04/2020]
- Her Majesty's Stationary Office (2017). The Conservation of Habitats and Species Regulations 2017/490.

# 3 OUTCOME OF PRE-SCREENING EXERCISE

## 3.1 IS HRA REQUIRED?

3.1.1. The pre-screening Information looked to specifically answer each of the questions set out in the initial steps of the HRA methodology. It should be noted that the level of detail of the WSTP available at the time of this review only allowed for an anticipated assessment of the need for HRA based on experience of similar plans and projects (see Table 3-1 below).

**Table 3-1 – Is HRA required?**

| | Question | Response |
|---|---|---|
| 1 | Is the whole of the plan directly connected with or necessary to the management of a Habitats Site for nature conservation purposes? | No |
| 2 | Is the plan a 'strategic development plan' or 'local development plan' or 'supplementary guidance' or a core path plan or a revision thereof? | No |
| 3 | Does the plan provide a framework for deciding applications for project consents and / or does it influence decision makers on the outcome of applications for project consents? | Yes |
| 4 | Does the plan contain a programme, or policies, or proposals which could affect one or more particular Habitats Site? | Yes |
| 5 | Is the plan a general statement of policy showing only the general political will or intention of the plan-making body, and no effect on any particular Habitats Site can reasonably be predicted? | No |

3.1.2. When the answer to either questions (1) or (5) is 'no', but the answer to any of questions (2), (3) or (4) is 'yes', then the requirement for further HRA is identified.

3.1.3. In this case, the answers to questions (1) (2) and (5) are 'no', while the answers to questions (3) to (4) are all 'yes'. It was therefore confirmed, based on the availability of current information, that the Draft WSTP4 for WSCC does therefore require HRA.

# 4 HABITATS SITES

4.1.1. The following section provides a summary of the results of the review of Habitats sites data which forms the baseline for HRA.

4.1.2. It is necessary to consider all the Habitats sites within a broad area or ZOI of the WSTP and the specific policies therein.

## 4.2 HABITATS SITES IDENTIFICATION

4.2.1. Relevant Habitats sites include all those that fall within a potential ZOI for the relevant policies and visions of the WSTP. The ZOI is defined by the potential effects arising from the project or plan and the available pathways for those effects to reach and impact the interest features of Habitats sites.

4.2.2. In order to identify all strategic corridors where potential direct, indirect and in-combination effects could reasonably be considered possible, an initial buffer of 10km around the WSCC boundary was applied (30km for bats as highly mobile species). The premise is that 10km represents the average trip length from the National Transport Survey and therefore identifies the area of greatest risk of LSE.

4.2.3. Thirty-one Habitats sites lie within the potential ZOI for the WSTP, including eight SPAs, five Ramsar and 18 SAC's located within the search areas (see Figure 2 and Appendix A). Information summarising the vulnerabilities of each Habitats site is given in Table 4-3. Note that this detail is not available for all Habitats sites, notably in the case of Ramsar sites.

4.2.4. The reasons for designation of these sites and their known vulnerabilities are also summarised in Appendix A, which has been collated from the Natura 2000 standard data forms (JNCC, 2016) and Site Improvement Plans (Natural England (NE) (NE, 2014).

4.2.5. With regard to the qualifying features and information on vulnerability of the sites detailed in Appendix A, the broad conservation objectives for SACs and SPAs are to:

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

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

4.2.6. Specific conservation objectives for Ramsar sites are not currently available.

## 4.3 CRITICAL LOADS AND LEVELS

The relevant Critical Levels for NOx and $NH_3$ relating to the protection of vegetation and ecosystems are summarised in Table 4-1.

**Table 4-1 - Relevant NOx and $NH_3$ Critical Levels for the Protection of Vegetation and Ecosystems**

| Pollutant | Concentration (µg/m³) | Averaging Period |
|---|---|---|
| Nitrogen oxides ($NO_x$) | 30 | Annual Mean |
| | 75 | 24-hours |
| Ammonia ($NH_3$) | 1-3 | Annual Mean |

4.3.1. A summary of the relevant Critical Loads for the identified Habitats sites is provided in Appendix B for the SPAs and Appendix C for the SACs.

## BASELINE CONDITIONS

4.3.2. Existing background annual mean $NO_x$ values for 2020 within the study area have been taken from the national maps provided on the Department for Environment Food and Rural Affairs (Defra)[15], where background concentrations of $NO_x$ have been mapped at a grid resolution of 1x1km for the whole of the UK and are summarised in Table 4-2.

**Table 4-2 - Background NOx Concentrations (µg/m³), 2020**

| Grid Square | Background $NO_x$ Concentration 2020 (µg/m³) |
|---|---|
| 471500,119500 | 12.6 |
| 474500,131500 | 9.4 |
| 477500,136500 | 9.9 |
| 480500,132500 | 10.6 |
| 481500,118500 | 9.4 |
| 482500,111500 | 9.8 |
| 482500,133500 | 11.0 |
| 487500,114500 | 9.6 |
| 489500,140500 | 10.1 |
| 491500,153500 | 12.9 |
| 497500,113500 | 8.8 |
| 497500,127500 | 8.3 |
| 502500,123500 | 8.7 |
| 503500,114500 | 8.8 |

[15] DEFRA: Background Maps.

| Grid Square | Background $NO_x$ Concentration 2020 (µg/m$^3$) |
|---|---|
| 537500,106500 | 9.8 |
| 544500,130500 | 9.0 |
| 545500,130500 | 8.7 |

4.3.3. Annual mean $NO_x$ concentrations within the study area are all below the relevant Critical Level.

4.3.4. In relation to the maximum NDep values presented in Appendix B and C, these show that there are already some locations within the designated sites where the Critical Loads are currently exceeded. This is not to say that all these areas will be significantly impacted by the WSTP4 but it highlights areas that are currently experiencing NDep above the relevant Critical Loads, which includes locations within the following designated sites:

- Ashdown Forest SPA;
- Ashdown Forest SAC;
- Butser Hill SAC;
- Chichester and Langstone Harbours SPA;
- Duncton to Bignor Escarpment SAC;
- East Hampshire Hangers SAC;
- Ebernoe Common SAC;
- Mole Gap to Reigate Escarpment SAC;
- Pagham Harbour SPA;
- Shortheath Common SAC;
- Singleton and Cocking Tunnels SAC;
- Solent Maritime SAC;
- The Mens SAC;
- Thursley, Ash, Pirbright and Chobham SAC;
- Thursley Hankley and Frensham Commons SPA;
- Wealden Heaths Phase II SPA; and
- Woolmer Forest SAC.

4.3.5. From an initial review of the data provided in Appendices B and C, the following designated sites are also of concern in relation to annual mean $NH_3$ concentrations, as baseline concentrations are already above the relevant Critical Levels:

- Ashdown Forest SAC;
- Buster Hill SAC;
- Castle Hill SAC;
- East Hampshire Hangers SAC;
- Mole Gap to Reigate Escarpment SAC;
- Shortheath Common SAC;

- Thursley, Ash, Pirbright and Chobham SAC; and
- Woolmer Forest SAC.

4.3.6. Solent and Dorset SPA is a recently classified site, having only been classified 16th January 2020. As such, full information in regard to its vulnerabilities to air pollution or other pressures and threats are not currently available from the JNCC website or APIS. However, in the case that the qualifying features of this site overlap with features of other designated sites, some interpretation of potential effects can be made. As the SPA is designated for open water foraging areas for tern species, this is not considered a limitation to the assessment of the WSTP4.

## 4.4 INFORMATION RELATING TO POTENTIAL EFFECTS ON HABITATS SITES

Table 4-3 overleaf summarises other pressures and threats listed on the Site Improvement Plans (SIPs) for SPAs and SACs that will need to be considered during screening and appropriate assessment of the WSTP4.

**Table 4-3 - Pressures and threats listed on Habitats sites SIPs[16]**

Impacts highlighted as red should be given primary consideration in screening and appropriate assessment of the WSTP4 policies, those highlighted amber should be considered as indirect effects as a result of the WSTP4 policies and those highlighted green are unlikely to be considerations in screening and appropriate assessment of the WSTP4 policies

| Site Name | Air pollution: impact of atmospheric nitrogen deposition | Water pollution | Hydrological changes | Public access/ disturbance | Habitat fragmentation | Habitat Connectivity | Physical Modification | Coastal squeeze | Change in land management | Inappropriate Management | Offsite habitat availability/ management | Invasive species | Direct impact from third party | Military | Fisheries: marine and estuarine | Forestry and woodland management | Under grazing | Wildfire/ arson | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arun Valley SAC/SPA | | T | T | | | | | | | T - ditches | | | | | | | | | |
| Ashdown Forest SAC/SPA | P | | T | T | | | | | P | | | | | | | | | | |
| Briddlesford Copses | P | | | | | | | | P/T | | P/T | | | | | P/T | | | |
| Butser Hill SAC | T | | | | | | | | | T - scrub control | | | | | | | T | | |
| Castle Hill SAC | P | | | | | | | | | | | | | | | | T | | T - Fertiliser use |
| Chichester and Langstone Harbours SPA/ Portsmouth Harbour SPA/ Solent Maritime SAC | P | T | T | T | | | | T | T | | | T | T | | T - commercial | | | | T - Changes in species distribution, changes in site conditions, climate change, direct land from development, biological resource use and extraction from non-living resources |
| Duncton to Bignor Escarpment SAC | | | | | | | | | | | | | | | | | | | No pressures or threats identified |
| East Hampshire Hangers SAC | T | | | | | | | | | | | P | | | | P | | | |
| Ebernoe Common SAC | T | | T | P/T | T | | | | P/T | | P | | | | | P/T | | | |
| Kingley Vale SAC | P | | | | | | | | | | | | | | | | T | | T - Deer, other agriculture |
| Mole Gap to Reigate Escarpment SAC | T | | | T | | | | | T | P - scrub control | | | | | | | | | P/T - Disease |
| Pagham Harbour Ramsar | | | | | | | | | | | | | | | | | | | |
| Pagham Harbour SPA | | T | | P/T | | | P/T | | T | | | | | | T - commercial/ recreational | | | | |
| Shortheath Common SAC | P | | | T | | | | | | T - scrub control | | | P/T | | | | | | |
| Singleton and Cocking Tunnels SAC | T | | | P/T | P | | | | | | | | | | | | | | |
| Solent and Dorset SPA | | | | | | | | | | | | | | | | | | | No SIP available for this site |
| Solent and Isle of Wight Lagoons SAC | T | | T | | | | | T | | T - weed control | | T | | | | | | | |
| South Wight Maritime SAC | | | | P | | | P/T | | | P/T - coastal | | P/T | | | P - commercial | | | | |
| The Mens SAC | T | | | P/T | | P/T | | | P/T | | | T | | | | P/T | | | |

[16] P = Pressure, T = Threat

| Site Name | Air pollution: impact of atmospheric nitrogen deposition | Water pollution | Hydrological changes | Public access/ disturbance | Habitat fragmentation | Habitat Connectivity | Physical Modification | Coastal squeeze | Change in land management | Inappropriate Management | Offsite habitat availability/ management | Invasive species | Direct impact from third party | Military | Fisheries: marine and estuarine | Forestry and woodland management | Under grazing | Wildfire/ arson | Other |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thursley, Ash, Pirbright and Chobham SAC and Thursley, Hankley and Frensham Commons SPA | P/T | | T | P/T | P | | | | | P - weed control | | P/T | | T | | P | P | P | |
| Wealden Heaths Phase II SPA and Woolmer Forest SAC | P | | P | T | | | | | T | | | P | | P | | | | P/T | |

# 5 APPROACH TO STAGE 1 SCREENING

5.1.1. The guidance referred to in Section 2.5 has been referred to in undertaking the Stage 1 screening of the WSTP4 objectives. The approaches set out by the guidance have been interpreted to the level of detail available within the objectives, policies and description of projects based on the descriptions contained within the draft WSTP4, noting that the Strategy is a high-level document. At a greater level of plan detail, and as normally required with specific project level HRAs for example, the screening and AA stages have more specific data requirements.

## 5.2 AIR QUALITY INPUT

5.2.1. The sensitivity of Habitats sites to changes in air quality is fundamental to the screening and AA of the WSTP4 and associated projects. A number of Habitats sites within the ZOI are identified as having sensitivity to changes in air quality (see Section 4.3). In particular, the Critical Load for NDep is already being exceeded at locations within the identified Habitats sites, making them particularly sensitive to any changes in air quality that may arise as a result of the draft WSTP4 objectives and policies.

5.2.2. Unlike Local Plan assessments or development focussed HRA, where the traffic change is directly linked to the number of dwellings or employment floorspace proposed, it is not possible to calculate traffic change due to LTPs in the same way as:

- Impacts of many of the measures (e.g. sustainable transport measures, measures to promote modal shift) are not easily quantifiable; and/or
- Detail regarding the proposed interventions/infrastructure is not yet known and time frames for implementation are yet to be established.

5.2.3. Therefore, in determining the potential for LSE, reference has been made to the traffic data thresholds contained within the guidance documents produced by Natural England (July 2018) and the IAQM (May 2020). However these thresholds have only been considered qualitatively and at a high level. Moreover, professional judgement has been used to determine the potential for LSE taking into account:

- The findings of the baseline review (detailed within Section 4);
- The relevant ZOI for the WSTP4 objectives and interventions and which Habitat sites fall within the identified ZOI;
- The proximity of the identified interventions to the nearest Habitat site/s;
- The distance of the Habitats site to the nearest road likely to be affected; and
- The likely effects of the objective or interventions on local air quality (e.g. positive due to modal shift, negative due to the potential restristribution of traffic on the local road network).

5.2.4. The main air quality effects on Habitats sites as a result of the draft LTPs are considered to comprise:

- Effects arising due to construction phase effects of any interventions (including on-site construction activities and/or construction traffic);
- A reduction in traffic due to the promotion of sustainable transport measures and measures to encourage modal shift; and
- Effects associated with the redistribution of traffic on the local road network which could result in more traffic passing within 200m of Habitats sites.

## 5.3 IN-COMBINATION ASSESSMENT

5.3.1. It is a requirement of the Habitats Regulations to consider the effects of projects or plans "in combination" at the screening stage. Articles 24, 63 and 105 of the Habitats Regulations require Natural England and other competent authorities to consider the effects of plans or projects alone and in combination with other plans or projects. The 'in-combination' requirement is undertaken in order to make sure that prior to their authorisation the effects of numerous proposals, which alone would not result in a significant effect, are further assessed to determine whether their combined effect would be significant enough to require more detailed assessment.

5.3.2. The landmark Waddenzee judgment provides a clear interpretation of the legislation. Paragraphs 53 and 54 of the Judgment state:

> "according to the wording of that provision [Article 6(3) of the Habitats Directive] an appropriate assessment of the implications for the site concerned of the plan or project must precede its approval and take into account the cumulative effects which result from the combination of the plan or project with other plans or projects in view of the sites conservation objectives. Such an assessment therefore implies that all the aspects of the plan or project which can, individually or in combination with other plans or projects, affect those objectives must be identified in the light of the best scientific knowledge in the field. ..."

5.3.3. Table 5-1 outlines the types of plans and projects that should be considered in an in-combination assessment:

**Table 5-1 - Types of plans and projects considered at "In-combination" assessment**

| Types of Plans and Projects |
|---|
| ▪ The incomplete or non-implemented parts of plans or projects that have already commenced; |
| ▪ Plans or projects given consent or given effect but not yet started; |
| ▪ Plans or projects currently subject to an application for consent or proposed to be given effect; |
| ▪ Projects that are the subject of an outstanding appeal; |
| ▪ Ongoing plans or projects that are the subject of regular review; |
| ▪ Any draft plans being prepared by any public body; |
| ▪ Any proposed plans or projects published for consultation prior to application; |
| ▪ Projects being proposed or being undertaken by a competent authority itself which require no external autorisation. |

5.3.4. WSCC has additionally provided a review of adopted statutory development plans for the WSTP4 area and their associated HRA's. With reference to Section 2.2, case law and methodology relating to HRA has changed rapidly over recent years. One of the most notable changes as a result of CJEU rulings has been the clarification that mitigation measures cannot be included in HRA Stage 1 (Screening). As this was previously a common practice, many HRAs will have concluded no LSE on Habitats sites, based on the likely effectiveness of mitigation measures. The outcome of this is that preceding plan-level HRAs can be unreliable in terms of adopted conclusions of 'no LSE'.

5.3.5. Based on this complexity and need for consistency in the assumptions relating to mitigation, a precautionary approach has been adopted when considering the HRA conclusions of overlapping plans and projects in-combination.

# 6 HRA STAGE 1 SCREENING OF WSTP4

6.1.1. Table 6-1 sets out the findings of the Stage 1 screening process and identifies where the ptioential of LSE arises. The objectives, policies or projects which trigger the need for Stage 2 AA have been set out on an “Objective” basis where a number of objectives have been grouped within the WSTP4.

**Table 6-1 - Types of plans and projects considered at "In-combination" assessment**

**WSTP Section: WSTP Objectives**

| Subsection | Key Text | Habitats sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|---|
| Prosperous West Sussex | Our economic objectives for a prosperous West Sussex are:<br>▪ Objective 1: Support sustainable economic prosperity across the County by levelling-up underperforming areas and recovering from the COVID-19 pandemic.<br>▪ Objective 2: Support development and regeneration plans across the County by enabling local living and through strategic investments at the right time and place to ensure the transport network is fit for the future. | All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area). See Table 4-3 | ▪ Any development to support economic recovery /prosperity has the potential for increased traffic (and therefore impacts on air quality).<br>▪ These objectives could result in development in proximity to Habitats sites which could lead to LSE. | Any increase in traffic due to development to support economic recovery /prosperity has the potential to give rise to 'in-combination' effects with other plans and projects. | ▪ Objective 1 – Yes<br>▪ Objective 2 - Yes |
| Healthy West Sussex | Our objectives for a healthy West Sussex are:<br>▪ Objective 3: Accommodate the needs of an ageing population that is expected to grow most in existing settlements in the Gatwick Diamond and Coastal West Sussex areas.<br>▪ Objective 4: Minimise air, noise and light pollution from use of the transport network to minimise impacts on public health and well-being.<br>▪ Objective 5: Ensure the transport network allows residents to live healthy lifestyles with good access to green and blue spaces, particularly on the West Sussex coast and in the protected South Downs, High Weald and Chichester Harbour.<br>▪ Objective 6: Ensure rural communities can live locally by accessing nearby towns. | All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area). See Table 4-3. This includes Ashdown Forest SAC and SPA. | ▪ Objective 3 – Could result in development. Habitats sites are present in the likely ZOI in the 'Gatwick Diamond' area. Parts of 'Coastal West Sussex' also lie within proximity to Habitats sites. Therefore, the potential for LSE cannot be discounted in relation to Objective 3.<br>▪ Objective 4 – Shift to public transport and active travel is likely to be highly beneficial to local air quality. Viewed in isolation, this objective is not likely to result in LSE.<br>▪ Objective 5 –Effects will depend on the mode of travel used to access the blue/green spaces (i.e. public transport and active travel vs journeys via private car). Has the potential to increase visitor pressure from existing residents (and car journeys) to Habitats sites and supporting habitats which could give rise to LSE.<br>▪ Objective 6 – Effect dependant on route and model of transport. Viewed in isolation, this objective is not likely to result in LSE. | Any increase in traffic due to development to support demographic change has the potential to give rise to 'in-combination' effects with other plans and projects.<br>Visitor pressure may be further increased as a result of additional residents and journeys delivered under Local Plan policies and development schemes. | ▪ Objective 3 – Yes<br>▪ Objective 4 – No<br>▪ Objective 5 – Yes<br>▪ Objective 6 - No |
| Protected West Sussex | Our objectives for a protected West Sussex are:<br>▪ Objective 7: Enable the transport network to be on a pathway to net zero carbon by 2050.<br>▪ Objective 8: Minimise the impacts of the transport network on areas that are protected for their landscape, ecological or historic characteristics.<br>▪ Objective 9: Improve the transport network whilst protecting or enhancing the natural, built and historic environment.<br>▪ Objective 10: To monitor and adapt infrastructure to the effects of climate change. | All Habitats Sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area) are considered relevant (see Table 4-3). | ▪ Objective 7: Unlikely to result in LSE. Likely to be of benefit to the Habitats sites if this includes the provision of increased EV infrastructure and shifts to public transport and active travel modes.<br>▪ Objective 8: Unlikely to result in LSE. Likely to be of benefit to the Habitats sites.<br>▪ Objective 9: Unlikely to result in LSE. Likely to be of benefit to the Habitats sites although effect depends upon the nature of improvements to the transport network.<br>▪ Objective 10: Unlikely to result in LSE. | ▪ Objectives 7, 8 and 10 - Measures are likely to reduce any 'in-combination' effects as a result of other plans and projects (including forecast growth in traffic over the LTP period).<br>▪ Objective 9 - Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other plans and projects if the redistribution results in increased traffic in the vicinity of Habitats sites.<br>▪ Objective 10 – Unlikely to result in 'in-combination' effects. | ▪ Objective 7 – No<br>▪ Objective 8 – No<br>▪ Objective 9 – Yes<br>▪ Objective 10 – No |

| Subsection | Key Text | Habitats sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|---|
| Connected West Sussex | Our objectives for a connected West Sussex are:<br>▪ Objective 11: Reduce the need to travel by car by enabling local living.<br>▪ Objective 12: Improve the efficiency of the County Strategic Road Network, particularly east-west routes including A27, through targeted improvements to address congestion, pollution, rat-running and road safety issues.<br>▪ Objective 13: Minimise the impacts on the transport network of surface access to Gatwick Airport by passengers and employees and ensure transport network improvements take the needs of other users and communities that share these routes into account.<br>▪ Objective 14: Ensure the rail network is an attractive option for travel between West Sussex towns and to surrounding cities by improving the speed and quality of West Coastway and Arun Valley Line services and capacity on the Brighton Main Line.<br>▪ Objective 15: Improve bus network efficiency by reducing the effects of congestion into and within West Sussex towns, particularly where there are gaps in the rail network.<br>▪ Objective 16: Ensure the bus network is customer focussed to provide an attractive option for journeys to nearby towns.<br>▪ Objective 17: Extend and improve the network of active travel facilities, taking account of potential usage and stakeholder support, so it is coherent and high quality enough to make active travel an attractive option for short distance trips. | ▪ Where these Objectives are associated with a physical location, a 1km refined ZOI has been applied to further screen for the identified pressures and threats to habitats, physical modification and impacts on the water environment. :<br>➢ Arun Valley SAC/ SPA (water environment threat)<br>➢ Portsmouth Harbour SPA/Ramsar (water environment threat)<br>➢ Solent and Isle Wight Lagoons SAC (water environment threat)<br>➢ Chichester and Langstone Harbours SPA/Ramsar (water environment threat)<br>▪ Air quality - All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area) are considered relevant (see Table 4.3). This includes Ashdown Forest SAC and SPA. | ▪ Objective 11: Unlikely to result in LSE. Likely to be of benefit to the Habitats sites.<br>▪ Objective 12: Cannot rule out the potential for LSE as a result of works in proximity to coastal Habitats sites or the redistribution of traffic on the local road network. Also potential effects alongside the routes themselves if they fall within 200m of Habitats sites.<br>▪ Objective 13: No Habitats sites within 10km of Gatwick Airport. Could have potential effects within Habitats sites used to access Gatwick Airport but given distance to nearest Habitats site the potential for LSE is considered unlikely.<br>▪ Objective 14: In relation to air quality, likely to be of benefit to the Habitats sites. The Arun Valley Line Services run through Arun Valley SAC/ SPA whilst the West Coastway Line runs through Portsmouth Harbour SPA/Ramsar, Solent and Isle Wight Lagoons SAC, Chichester and Langstone Harbours SPA/Ramsar. The proximity of these sites to these routes may result in LSE if infrastructure development works are undertaken.<br>▪ Objective 15: Unlikely to result in LSE. Likely to be of benefit to the Habitats sites.<br>▪ Objective 16: Unlikely to result in LSE. Likely to be of benefit to the Habitats sites.<br>▪ Objective 17: Likely to provide a possible air quality benefit to the Habitats sites, but if the objective results in the development of new routes, additional pressures/threats to habitats, physical modification and public access could arise. Redistribution of traffic has also been considered under Objective 9 but it is not within the Plan or Project objectives for active travel facilities to result in traffic redistribution that could give rise to LSE as a result of impacts from other forms of transport and such effects are not considered likely at this Plan stage. | ▪ Objective 11 - likely to reduce any 'in-combination' effects as a result of other plans and projects.<br>▪ Objective 12 - Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other plans and projects if the redistribution results in increased traffic in the vicinity of Habitats sites.<br>▪ Objective 13 – No likely 'in-combination' effects<br>▪ Objectives 14 – If improvements require infrastruture development works, these may be 'in combination' with other nearby plans or projects.<br>▪ Objectives 15, 16– likely to reduce any 'in-combination' effects as a result of changes in air quality due to other plans and projects.<br>▪ Objective 17 - If improvements require development works, these may be 'in combination' with other nearby plans or projects. | ▪ Objective 11 – No<br>▪ Objective 12 – Yes<br>▪ Objective 13 – No<br>▪ Objective 14 – Yes<br>▪ Objective 15 - No<br>▪ Objective 16 - No<br>▪ Objective 17 - Yes |

**WSTP Section: Thematic Transport Strategies. WSTP Sub-Section: Active Travel Strategy**

| Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|
| *Short term (2022-27) active travel priorities*<br>▪ Active Travel Fund schemes - A24 Findon Valley and Shoreham<br>▪ West Sussex LCWIP cycle route schemes<br>▪ Major road enhancements with active travel infrastructure – including A2300, A259 Littlehampton corridor, A259 Littlehampton-Bognor Regis, A259 Chichester-Bognor Regis corridor, A284 Lyminster Bypass and A29 realignment<br>▪ Strategic Transport Investment Programme active travel infrastructure including Adur cycling corridors, Worthing north – south cycling corridors, Haywards Heath – Burgess Hill cycle route, and Burgess Hill green circle network improvements<br>▪ Priority LCWIP/active travel network improvements in Adur and Worthing, Arun, Chichester, Crawley, Horsham and Mid Sussex, and for the South Downs National Park.<br>▪ Identify priority locations for new and improved active travel crossings of main roads and railways, e.g. A27 Adur and Worthing<br>*Medium term (2027-32) active travel priorities*<br>▪ A259 Shoreham-Brighton cycle scheme<br>▪ Major road enhancements with active travel infrastructure – including A24 corridor, A264 corridor and Crawley western link road<br>▪ Delivery of a rolling programme of active travel infrastructure in line with West Sussex Walking and Cycling Strategy and LCWIP priorities<br>▪ Implementation of new active travel crossings of major roads and railways<br>*Longer term (2032-2036) active travel priorities*<br>Delivery of a rolling programme of active travel infrastructure in line with West Sussex Walking and Cycling Strategy and LCWIP priorities | ▪ All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area) are considered relevant (see Table 4.3). This includes Ashdown Forest SAC and SPA. | *Short-term*<br>▪ Active Travel Fund and West Sussex LCWIP cycle route schemes - Likely to be of benefit to local air quality. Based on details provided, the scheme are not anticipated to pass through any Habitats sites (therefore unlikely to lead to any direct effects such as habitat loss). Both schemes unlikely to result in LSE.<br>▪ Road enhancements could change the attractiveness of different travel routes. Therefore, cannot rule out LSE as a result of changes in capacity or the redistribution of traffic on the local road network. Active travel proposals reduce the potential for LSE on the basis of air quality pressures or threats.<br>▪ Strategic Transport Investment Programme active travel schemes unlikely to result in LSE. Likely to be of benefit to the Habitats sites in terms of air quality pressures or threats.<br>▪ Priority LCWIP/active travel network improvements likely to be of benefit to the Habitats sites in terms of air quality pressures or threats, however in key locations may directly impact designated sites where interventions result in physical modification or public pressure.<br>▪ Implementing priority locations for new and improved active travel crossings are unlikely to create new routes accessing Habitats sites resulting in LSE. Likely to be of benefit to the Habitats sites in terms of air quality pressures or threats.<br>*Medium-term*<br>▪ A259 Shoreham-Brighton cycle scheme improvements unlikely to result in LSE. Likely to be of benefit to the Habitats sites in terms of air quality pressures or threats and unlikely to result in physical modification.<br>▪ Road enhancements could change the attractiveness of different travel routes. Therefore, cannot rule out LSE as a result of changes in capacity or the redistribution of traffic on the local road network. Active travel proposals reduce the potential for LSE in terms of air quality.<br>▪ Delivery of a rolling programme of active travel infrastructure in line with West Sussex Walking and Cycling Strategy and LCWIP priorities unlikely to result in LSE. Likely to be of benefit to the Habitats sites in terms of air quality however in key locations may directly impact designated sites where interventions result in physical modification or public pressure.<br>▪ Implementation of new active travel crossings of major roads and railways are unlikely to create new routes accessing Habitats sites resulting in LSE.<br>*Long-term*<br>▪ Delivery of a rolling programme of active travel infrastructure in line with West Sussex Walking and Cycling Strategy and LCWIP priorities may result in beneficial air quality effects however in key locations may directly impact designated sites where interventions result in physical modification or public pressure. | ▪ Active Travel Fund schemes and West Sussex LCWIP cycle route measures are likely to reduce any 'in-combination' effects as a result of other plans and projects (including forecast growth in traffic over the LTP period).<br>▪ Where interventions result in physical modification or additional public pressure within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other plans and projects.<br>▪ Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other plans and projects. | ▪ Active Travel Fund schemes - No<br>▪ West Sussex LCWIP cycle route schemes - Yes<br>▪ Major road enhancements with active travel infrastructure - Yes<br>▪ Strategic Transport Investment Programme active travel infrastructure - No<br>▪ Priority LCWIP/active travel network improvements - Yes<br>▪ Identification of priority locations for new and improved active travel crossings – No.<br>▪ A259 Shoreham-Brighton cycle scheme - No<br>▪ Delivery of a rolling programme of active travel infrastructure in line with West Sussex Walking and Cycling Strategy and LCWIP priorities - Yes<br>▪ Implementation of new active travel crossings - No |

**WSTP Section: Thematic Transport Strategies. WSTP Sub-Section: Shared Transport Strategy**

| Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened? |
|---|---|---|---|---|
| *Short term (2022-27) shared transport priorities*<br>▪ Establish Enhanced Partnerships with bus operators<br>▪ Produce Bus Service Improvement Plans (BSIPs) and review annually<br>▪ Introduce bus priority measures as part of major road schemes for; A259 Bognor Regis to Littlehampton, A259 Chichester to Bognor Regis<br>▪ Develop on demand flexible shared transport services digital platform for rural and hard to reach areas<br>▪ Develop with partners the strategic case for improvements to the bus network<br>▪ Service coverage improvements - earlier morning/later evening services and weekend services.<br>▪ Work with bus operators, Transport for the South East and other partners to accelerate the transition to zero emission vehicles in West Sussex as part of the government's wider commitment to introduce 4,000 zero-emission buses.<br>*Medium term (2027-32) shared transport priorities*<br>▪ Review enhanced partnership arrangements<br>▪ Review Bus Service Improvement Plans<br>▪ Develop the strategic case for improvements to the bus network<br>▪ Introduce bus priority measures as part of major schemes for; A264/A22 corridor; A24 corridor<br>*Long term (2032-2036) shared transport priorities*<br>Crawley Fastway extension | All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area) are considered relevant (see Table 4.3). | ▪ Measures encouraging modal shift to public transport. Therefore, overall no LSE anticipated.<br>▪ Increasing the transition to zero emission vehicles also has benefits for local air quality.<br>▪ The bus priority measures could potentially result in a redistribution of traffic on the local road network albeit the measures encourage modal shift with associated benefits for local air quality (thereby reducing the potential for LSE). | ▪ Overall, the Shared Transport Strategy priorities are likely to reduce any 'in-combination' effects as a result of other plans and projects (including forecast growth in traffic over the LTP period). | No |

| Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened? |
|---|---|---|---|---|
| *Short term (2022-27) rail priorities*<br>▪ Work with strategic partners to agree priorities for rail investment<br>▪ Gatwick Airport Station Upgrade (under construction)<br>▪ Develop the strategic case for improvements to the speed and quality of West Coastway and Arun Valley Line services<br>▪ Support strategic partners to make the case for improvements to services between Gatwick Airport and the Thames Valley and Kent<br>▪ Promote replacement of ageing rolling stock<br>▪ Promote earlier morning/later evening services<br>▪ Support station improvement schemes already identified for example, in Crawley and Burgess Hill, and identify new schemes.<br>▪ Identify priority locations new and improved active travel crossings of railways, for example in Shoreham/Southwick, at Barnham and East Grinstead.<br>*Medium term (2027-32) rail priorities*<br>▪ Rolling stock replacement<br>▪ West Coastway infrastructure upgrades<br>▪ Implementation of new active travel crossings of railways<br>*Long term (2032-2036) rail priorities*<br>▪ West Coastway service pattern<br>▪ Brighton Main Line upgrade | ▪ All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area) are considered relevant (see Table 4.3).<br>▪ Add text on Habitats sites within refined 1km ZOI based on specific locations including:<br>➢ Gatwick Airport;<br>➢ West Coastway and Arun Valley Line services;<br>➢ Crawley Station;<br>➢ Burgess Hill Station;<br>➢ Active travel crossings in Shoreham/Southwick, at Barnham and East Grinstead.<br>➢ Brighton Mainline. | ▪ Modal shift of benefit to local air quality, potentially reducing emissions to air in the vicinity of Habitats Sites.<br>▪ Should upgrades to the speed and quality of rail provision be required in proximity to Habitats sites (including the Arun Valley Line) impacts including water pollution (identified threat) and physical modification could result. | ▪ Where interventions result in physical modification or introduction of additional pressures/threats within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other Plans and Projects. | Yes |
| Our approach to access to Gatwick Airport is to:<br>▪ Support initiatives that will increase sustainable transport mode share for passengers and employees;<br>▪ Support initiatives that will reduce kiss and fly trips;<br>▪ Manage the local road network near the Airport in ways that prioritise shared transport and manage impacts on communities;<br>▪ Use on-street parking and other traffic management techniques to discourage unauthorised drop offs and pick ups;<br>▪ Promote improvements to the coverage of rail services, including earlier morning/later evening services to Gatwick Airport, later evening and Sunday leisure services;<br>▪ Promote improvements to the speed and quality of rail services on the West Coastway, Arun Valley Line and North Downs Lines, and the capacity of services on the Brighton Main Line, to access Gatwick Airport;<br>▪ Consider with the rail industry and partners the case for potential re-orientation of rail services to better support local connectivity between towns in West Sussex and other regional economic centres if the reduction in demand for travel to London is sustained over time;<br>▪ Ensure the impacts of future growth on other users and communities are taken into account; and<br>▪ Support connectivity improvements particularly on east-west routes between Gatwick, Kent and the Thames Valley. | ZOI in relation to:<br>➢ Gatwick Airport;<br>➢ local road network near the Airport;<br>➢ West Coastway, Arun Valley Line and North Downs Lines, and the capacity of services on the Brighton Main Line, to access Gatwick Airport; | ▪ Modal shift of benefit to local air quality, potentially reducing emission to air in the vicinity of Habitats sites.<br>▪ Should upgrades to the speed and quality of rail provision be required in proximity to Habitats sites (including the Arun Valley Line) impacts including water pollution (identified threat) and physical modification could result. | ▪ Where interventions result in physical modification or introduction of additional pressures/threats within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other plans and projects | Yes |

| Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened? |
|---|---|---|---|---|
| *Short term (2022-27) road priorities*<br>▪ A22 East Grinstead junction improvements<br>▪ A27 Arundel bypass (in the Government's Roads Investment Strategy 2020-25)<br>▪ A27 Chichester improvements (not currently programmed)<br>▪ A27 Worthing & Lancing improvements (in the Government's Roads Investment Strategy 2020-25)<br>▪ A29 Realignment (development-led) (phase 1 construction due to commence in 2022)<br>▪ A259 Littlehampton corridor enhancement (under construction)<br>▪ A259 Bognor Regis to Littlehampton corridor enhancement package<br>▪ A259 Chichester to Bognor Regis corridor enhancement package<br>▪ A284 Lyminster bypass (development-led) (construction due to commence in 2022)<br>▪ A2300 corridor enhancement (under construction)<br>*Medium term (2027-2032) road priorities*<br>▪ A23 Crawley to Burgess Hill junction improvements<br>▪ A24 corridor enhancement package<br>▪ A264 corridor enhancement package<br>▪ Crawley western link road (development-led) | ▪ All Habitats sites within the 10km of ZOI (taken from the edge of West Sussex's administrative area) are considered relevant (see Table 4.3). | ▪ Cannot rule out the potential for LSE as a result of the redistribution of traffic on the local road network due to the identified road priorities, either 'alone' or 'in-combination'.<br>▪ Should road network improvements be required in proximity to Habitats sites (including Chichester and Langstone Harbours) impacts including water pollution and public access (identified threats) could result. | ▪ Where interventions result in introduction of additional pressures/threats within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other plans and projects.<br>▪ Any redistribution of traffic as a result of the proposed highways improvements has the potential for 'in-combination' effects with other plans and projects if the redistribution results in increased traffic in the vicinity of Habitats sites. | Yes |

**WSTP Section: Area Transport Strategies**

| Subsection | Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|---|
| Adur Area Transport Strategy | *Short term (2022-27) priorities for the Adur area*<br>▪ On-street electric vehicle charging infrastructure in Shoreham<br>▪ A27 Worthing and Lancing improvements (including active travel facilities)<br>▪ Upper Shoreham Road cycle route<br>▪ A259 Shoreham to Brighton cycle route<br>*Medium term (2027-32) priorities for the Adur area*<br>▪ A27 Worthing and Lancing major scheme<br>▪ Active travel crossings of A27 and West Coastway<br>▪ Lancing and Sompting cycle routes<br>▪ LCWIP priorities<br>*Long term (2032-36) priorities for the Adur area*<br>▪ LCWIP priorities<br>▪ Reconfigured West Coastway service<br>▪ Potentially, local highway capacity improvements (subject to need) | Where these Objectives are associated with a physical location, a 1km refined ZOI has been applied to further screen for the identified pressures and threats. No Habitats sites have been identified within refined ZOI.<br>Furthermore, there are no Habitats sites within 10km of Adur District Council's administrative area. | ▪ Priorities are unlikely to result in LSE. Schemes are isolated from Habitats sites. | ▪ No likely 'in-combination' effects | No |
| Arun Area Transport Strategy | Short term (2022-27) priorities for the Arun area<br>▪ A27 Arundel Bypass (including active travel facilities)<br>▪ A29 Realignment phase 1 (including active travel facilities)<br>▪ A284 Lyminster Bypass (including active travel facilities)<br>▪ A259 Littlehampton corridor enhancement (including active travel facilities)<br>▪ A259 Bognor Regis to Littlehampton corridor enhancement (including shared transport facilities)<br>▪ DDRT and other shared transport services between Chichester, Havant, Bognor Regis and Littlehampton (connecting strategic developments in Chichester and Arun Districts)<br>▪ On-street electric vehicle charging infrastructure in Bognor Regis, Littlehampton and Arundel<br>*Medium term (2027-32) priorities for the Arun area*<br>▪ A259 Chichester to Bognor Regis corridor enhancement (including shared transport and active travel facilities)<br>▪ A29 Realignment phase 2 (including active travel facilities) (development led)<br>▪ Priorities identified in the Arun Active Travel Study<br>*Long term (2032-36) priorities for the Arun area*<br>▪ Priorities identified in the Arun Active Travel Study<br>▪ Reconfigured West Coastway service<br>▪ Potentially, local highway capacity improvements (subject to need) | ▪ Habitats sites are associated with the coast and harbours (Chichester and Pagham) and with the South Downs National Park, including the Arun Valley Habitats sites.<br>▪ Other Habitats sites within the 10km ZOI for air quality extend the potential for individual Habitats sites to be affected (including Solent Maritime SAC and Chichester, Langstone Harbours Ramsar, Singleton and Cocking Tunnels SAC, Duncton to Bignor Escarpment SAC, The Mens SAC and Arun Valley SAC and Ramsar. | ▪ Cannot rule out the potential for LSE as a result of the redistribution of traffic on the local road network due to the identified road priorities, either 'alone' or 'in-combination'.<br>▪ Should active travel or road network improvements be required in proximity to Habitats sites (including Chichester and Langstone Harbours) impacts including water pollution and public access (identified threats) could result. | ▪ Where interventions result in introduction of additional pressures/threats within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other plans and projects.<br>▪ Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other plans and projects if the redistribution results in increased traffic in the vicinity of Habitats sites | Yes = Area Transport Strategy, medium – long term priorities |

| Subsection | Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|---|
| Chichester Area Transport Strategy | *Short term (2022-27) priorities for the Chichester area*<br>▪ On-street electric vehicle charging infrastructure in Chichester<br>▪ A27 junction mitigation measures<br>▪ A259 National Cycle Network Route 2/Chemroute improvements<br>▪ A259 Chichester to Bognor Regis corridor enhancement (including shared transport and active travel facilities)<br>▪ A286 Chichester City ring road improvements (including active travel facilities)<br>▪ A285 Westhampnett Road improvements (including shared transport and active travel facilities)<br>▪ DDRT and other shared transport services between Chichester, Havant, Bognor Regis and Littlehampton (connecting strategic developments in Chichester and Arun Districts)<br>*Medium term (2027-32) priorities for the Chichester area*<br>▪ A27 Chichester major scheme<br>▪ Stockbridge Link Road (including active travel facilities)<br>▪ LCWIP priorities<br>*Long term (2032-36) priorities for the Chichester area*<br>▪ LCWIP priorities<br>▪ Reconfigured West Coastway services<br>▪ Potentially, local highway capacity improvements (subject to need) | Habitats sites are associated with the coast and harbours (Chichester and Pagham) and with the South Downs National Park.<br>The following Habitats sites are located within Chichester District Council's administrative area:<br>▪ Ebernoe Common SAC;<br>▪ The Mens SAC;<br>▪ Duncton to Bignor Escarpment SAC;<br>▪ Rook Clift SAC;<br>▪ Singleton and Cocking Tunnels SAC;<br>▪ Kingley Vale SAC;<br>▪ Solent Maritime SAC;<br>▪ Chichester and Langstone Harbours SPA;<br>▪ Pagham Harbour SPA; and<br>▪ Wealden Heaths Phase II SPA. | ▪ Cannot rule out the potential for LSE as a result of the redistribution of traffic on the local road network due to the identified road priorities, either 'alone' or 'in-combination'.<br>▪ Should active travel or road network improvements be required in proximity to Habitats sites (including Chichester and Langstone Harbours and the A285) impacts including water pollution, habitat fragmentation and public access (identified threats) could result. | ▪ Where interventions result in introduction of additional pressures/threats within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other plans and projects.<br>▪ Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other Plans and Projects if the redistribution results in increased traffic in the vicinity of Habitats sites. | Yes – Area Transport Strategy, short – long term priorities |
| Crawley Area Transport Strategy | *Short term (2022-27) priorities for the Crawley area*<br>▪ Bus Priority at various signal-controlled junctions<br>▪ Crawley Rail Station upgrade<br>▪ Three Bridges Station Interchange improvements<br>▪ Gatwick Airport Station upgrade<br>▪ Horsham to Crawley cycle route<br>▪ On-street electric vehicle charging infrastructure<br>▪ A2011 Crawley Ave/Balcombe Rd Link<br>▪ A2011 Hazelwick Junction (including shared transport and active travel facilities)<br>▪ A2011 Tushmore Junction (improved shared transport and active travel facilities)<br>*Medium term (2027-32) priorities for the Crawley area*<br>▪ Crawley Western Link Road (including shared transport and active travel facilities)<br>▪ Further cycle routes identified in the LCWIP<br>*Long term (2032-36) priorities for the Crawley area*<br>▪ Potentially local highway capacity enhancements (subject to need) | ▪ No Habitats sites within refined ZOI (1km) for ecology.<br>▪ Mole Gap to Reigate Escarpment SAC and Ashdown Forest SAC and SPA towards the periphery of the 10km ZOI for air quality (taken from Crawley District Council's administrative boundary. | ▪ Priorities unlikely to result in LSE. Identified schemes are isolated from Habitats sites. | ▪ No likely 'in-combination' effects | No |

| Subsection | Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|---|
| Horsham Area Transport Strategy | *Short term (2022-27) priorities for the Horsham area*<br>▪ Bus Priority at signal-controlled junctions<br>▪ Bus and rail interchange improvements<br>▪ Flexible shared transport services / Rural Mobility<br>▪ Mobility Hubs<br>▪ Active travel infrastructure 'quick wins'<br>▪ On-street electric vehicle charging infrastructure<br>▪ Small scale 'tactical' highway improvements<br>*Medium term (2027-32) priorities for the Horsham area*<br>▪ Enhanced Bus Priority in the towns<br>▪ A24 junction improvements<br>▪ A264 study to develop integrated transport scheme<br>▪ North – south sustainable transport corridor<br>▪ Pedestrian and cycle bridges infrastructure on the A24<br>*Long term (2032-36) priorities for the Horsham area*<br>▪ Additional rail station provision on the Arun Valley Line<br>▪ Potentially local highway capacity enhancements (subject to need)<br>▪ Implement scheme for A264 from study recommendations | ▪ No Habitats sites within refined ZOI (1km) for ecology.<br>▪ Arun Valley SAC and SPA are located within Horsham District Council's administrative area. Other Habitats sites within the 10km ZOI for air quality (taken from Horsham District Council's administrative boundary) comprise:<br>➢ Duncton to Bignor Escarpment SAC;<br>➢ The Mens SAC; and<br>➢ Ebernoe Common SAC. | ▪ Priorities regarding sustainable transport are likely to be of benefit to the Habitats sites.<br>▪ Small scale 'tactical' highways improvements or infrastructure schemes could result in a redistribution in traffic on the local road network. | ▪ Sustainable transport measures are likely to reduce any 'in-combination' effects as a result of other plans and projects (including forecast growth in traffic over the LTP period).<br>▪ Any redistribution of traffic as a result of the proposed highways improvements has the potential for 'in-combination' effects with other Plans and projects. | Yes |
| Area Transport Strategy for Mid-Sussex | *Short term (2022-27) priorities for the Mid Sussex area*<br>▪ Bus Priority at signal-controlled junctions<br>▪ Bus and rail interchange improvements at Burgess Hill and Wivelsfield stations<br>▪ Flexible shared transport services / Rural Mobility<br>▪ On-street electric vehicle charging infrastructure<br>▪ Active travel infrastructure 'quick wins'<br>▪ Small scale 'tactical' highway improvements<br>*Medium term (2027-27) priorities for the Mid Sussex area*<br>▪ Enhanced Bus Priority in towns<br>▪ A23 improvements<br>▪ A22 improvements, working with Surrey County Council - including sustainable transport provision between Felbridge junction and Lingfield Road<br>▪ North – south bus priority between towns<br>▪ A264 corridor enhancement (including shared transport and active travel infrastructure)<br>▪ Active travel schemes identified in the LCWIP<br>*Long term (2032-36) priorities for the Mid Sussex area*<br>▪ Brighton main line improvements<br>▪ Potentially local highway capacity enhancements (subject to need)<br>▪ Active travel schemes identified in the LCWIP | Ashdown Forest SAC and SPA and Castle Hill SAC fall within the 10km ZOI for air quality (taken from Mid Sussex District Council's administrative boundary). | ▪ Priorities unlikely to result in LSE. Most identified schemes are isolated from Habitats sites.<br>▪ A22 improvements: A22 runs through Ashdown Forest. Depending on the nature of the improvements, the scheme may result in LSE. | ▪ Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other plans and projects if the redistribution results in increased traffic in the vicinity of Habitats sites. | Yes – Area Transport Strategy, medium – long term priorities |

| Subsection | Key Text | Habitat sites within refined ZOI | Screening of Likely Significant Effects (LSE) | In-Combination | Screened in? |
|---|---|---|---|---|---|
| South Downs National Park Area Transport Strategy | *Short term (2022-27) priorities for the South Downs National Park*<br>▪ On-street electric vehicle charging infrastructure<br>▪ Active travel infrastructure 'quick wins'<br>▪ Small scale 'tactical' highway improvements<br>▪ Supporting local services and access to services through innovation<br>▪ Working closely with the SDNPA to identify transport improvements which improve access to services and benefit visitors to the SDNP<br>▪ Worthing to Washington cycle route<br>▪ Remove A272 from Primary Route Network and associated signing<br>*Medium term (2027-32) priorities for the South Downs National Park*<br>▪ North – south sustainable transport corridor along the route of the A24<br>▪ Pedestrian and cycle access over A24<br>▪ Supporting a bus network that is affordable and takes account of accessibility issues and the need to provide social inclusion and travel choices<br>▪ A number of piloting options are being looked at for DDRT services that are likely to include areas of the national park (north west Chichester for example) with a view to rolling this out to other rural areas if these pilot schemes are successful<br>▪ Centurion Way extension north cycle route<br>*Long term (2032-36) priorities for the South Downs National Park*<br>▪ Potentially local highway capacity enhancements (subject to need)<br>▪ Creating a transport network and transport improvements that respect rural needs, the rural landscape and rural character<br>▪ Creating a safer transport network in rural areas<br>▪ Developing opportunities to improve access to, and within the National Park particularly for walking, cycling and equestrianism<br>▪ Developing opportunities to improve and protect public rights of way through the RoWIP<br>▪ Seek to close footpath level crossings where alternatives can be used<br>▪ Midhurst to Pulborough cycle route<br>▪ Active travel crossings over the Arun Valley Line | Habitats sites within the South Downs National Park Area are widely distributed but biased to the west of the County. Castle Hill SAC is present within the 10km ZOI to the east of the County boundary. | ▪ Cannot rule out the potential for LSE as a result of the redistribution of traffic on the local road network due to the identified 'tactical' road priorities, either 'alone' or 'in-combination'.<br>▪ Should active travel or road network improvements be required in proximity to Habitats sites (notably Centurion Way and Singleton and Cocking Tunnels SAC) impacts including habitat fragmentation and public access (identified threats) could result. Improving public access to the National Park in general could result in additional public access pressures and threats to Habitats sites. | ▪ Where interventions result in introduction of additional pressures/threats within or in close proximity to Habitats sites, there is the potential for 'in-combination' effects with other plans and projects.<br>▪ Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other plans and projects if the redistribution results in increased traffic in the vicinity of Habitats sites | Yes – Area Transport Strategy, short – long term priorities |
| Worthing Area Transport Strategy | *Short term (2022-27) priorities for the Worthing area*<br>▪ On-street electric vehicle charging infrastructure<br>▪ Active travel infrastructure 'quick wins'<br>▪ Small scale 'tactical' highway improvements<br>▪ Bus and rail interchange facilities<br>*Medium term (2027-32) priorities for the Worthing area*<br>▪ A27 major scheme<br>▪ East – west sustainable transport corridor<br>▪ North – south sustainable transport corridor<br>▪ Pedestrian and cycle bridges over A27 and West Coastway<br>*Long term (2032-36) priorities for the Worthing area*<br>▪ Reconfigured West Coastway service<br>▪ Potentially local highway capacity enhancements (subject to need) | ▪ No Habitats sites within refined ZOI (1km) for ecology.<br>▪ Arun Valley SAC lies towards the north western periphery of the 10km ZOI for air quality (taken from Worthing District Council's administrative boundary). | ▪ Priorities regarding sustainable transport are likely to be of benefit to the Habitats sites.<br>▪ Small scale 'tactical' highways improvements or infrastructure schemes result in a redistribution in traffic on the local road network. However, Arun Valley SAC does not lie within 200m of a road likely to be affected by these redistribution effects. | ▪ Sustainable transport measures are likely to reduce any 'in-combination' effects as a result of other plans and projects (including forecast growth in traffic over the LTP period).<br>▪ Any redistribution of traffic as a result of the proposed interventions has the potential for 'in-combination' effects with other Plans and Projects. However, as Arun Valley SAC does not lie within 200m of a road likely to be affected by these redistribution effects, no LSE are identified. | No |

# 7 CONCLUSIONS

7.1.1. This document provides guidance on the likely data sources, information requirements and the process of HRA screening and other stages of assessment if necessary. It also provides an indication of where the ecological implications of the WSTP4 will lie and which Habitats sites are vulnerable to known pressures, threats and existing air quality impacts.

7.1.2. There are a large number of Habitats sites in West Sussex and within 10km of the WSCC boundary, and there will be implications for some of these sites from the proposals and objectives in the WSTP4.

7.1.3. The WSTP4 Draft Strategy proposes an approach for addressing current and future transport issues in the County and in this document it has been subject to HRA screening for potential LSE on Habitats sites at a strategic level.

7.1.4. A number of policies, interventions and area strategies have been screened-out due to their nugatory or beneficial effects on Habitats sites, but others were screened-in for their further consideration at Stage 2 AA. These proposals are related primarily to proposed new infrastructure or improvement schemes, for which limited information is currently available.

7.1.5. Given the possibility of LSE associated with the screened-in interventions, further, detailed assessment through Appropriate Assessment is considered necessary at a project-level basis to satisfy the requirements of the Habitats Regulations. It should be noted that no further assessment is required in relation to Crawley, Worthing and Adur's Area Strategies as no potential LSE have been identified.

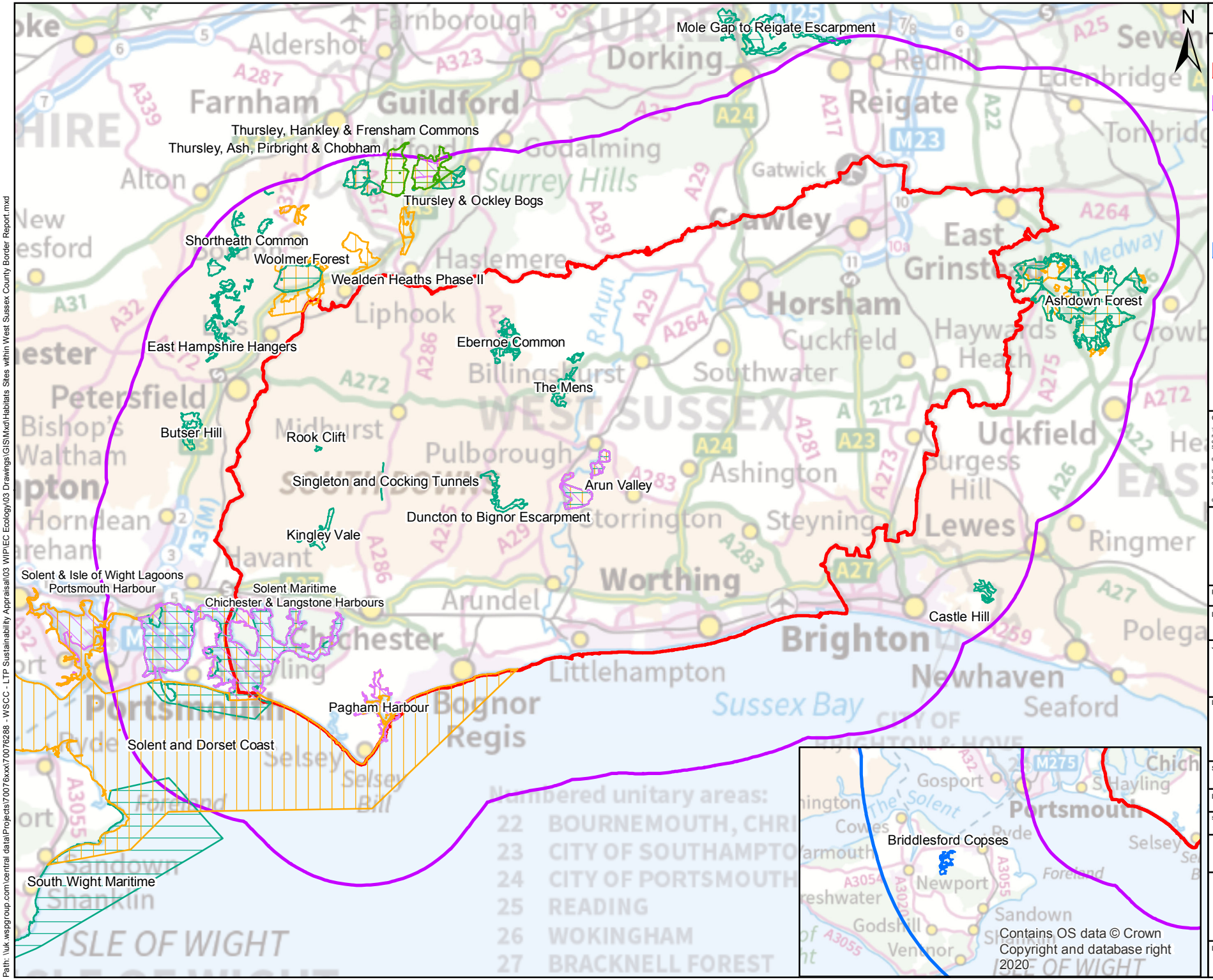
7.1.6. The following over-arching statement are recommended for incorporation within the accompanying supplementary guidance or directly within the WSTP4:

a) any transport interventions that would be likely to have a significant effect on a Habitats site, either alone or in combination with other plans or projects, will need to be subject to further assessment under part 6 of the Habitats Regulations at additional plan or project application stage. The policies or measures identified within the WSTP4 as screened out of further assessment would not require more detailed consideration unless changes to these or the baseline Habitats sites indicate otherwise at the time of implementation.

Statutory consultation forms an essential part of an HRA exercise and the conclusions and recommendations of this HRA report are subject to consultation comments and advice from Natural England.

# 8 FIGURES

**Figure 1 - Habitats sites within 10km and Habitats sites Designated for Bats within 30km**

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**Legend**

- WSCC Boundary
- 10km Zone of Influence
- Ramsar within 10km
- SACs within 10km
- SPAs within 10km
- 30km Zone of Influence for Habitats Sites Designated for Bats
- SAC Designated for Bats within 30km

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Drawing Status: FINAL

Job Title: WSCC LTP4 HRA Pre-Screening Information

Drawing Title: Habitats Sites within 10km and Habitats Sites Designated for Bats within 30km

Scale at A4: 1:400,000

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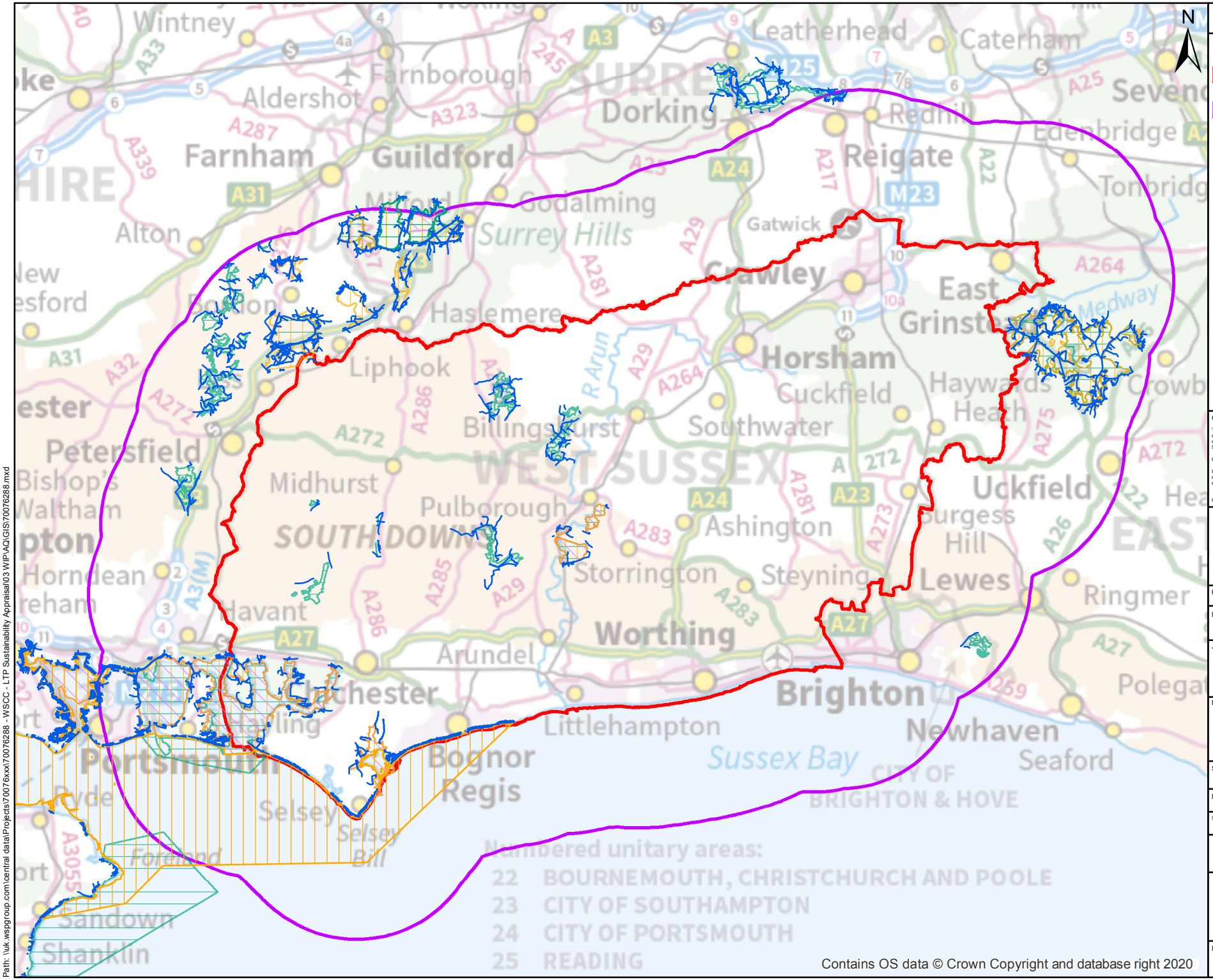
| UKRED002 | | | |
| Stage 1 check | Stage 2 check | Originated | Date |
| AH | OP | RD | 27/11/2020 |

0 5 10 Kilometers

Drawing Number: Figure 1

Path: \\uk.wspgroup.com\central data\Projects\70076xx\70076288 - WSCC - LTP Sustainability Appraisal\03 WIP\EC Ecology\03 Drawings\GIS\MxdHabitats Sites within West Sussex County Border Report.mxd

**Figure 2 - Habitats sites and Roads Within 200m**

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Drawing Status: FINAL

Job Title: WSCC LTP4 HRA Pre-Screening Information

Drawing Title: Habitats Sites and Roads Within 200m

Scale at A4: 1:400,000

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| UKRED002 | JC | JC | CO | 26/11/2020 |

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# Appendix A

## HABITATS SITES DETAILS, INCLUDING QUALIFYING FEATURES AND CONSERVATION OBJECTIVES

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **Arun Valley RAMSAR** | Within West Sussex | 528.62 | **Ramsar criterion 2**<br>▪ The site holds seven wetland invertebrate species listed in the British Red Data Book as threatened. One of these, *Pseudamnicola confusa*, is considered to be endangered. The site also supports four nationally rare and four nationally scarce plant species.<br>**Ramsar criterion 3**<br>▪ In addition to the Red Data Book invertebrate and plant species, the ditches intersecting the site have a particularly diverse and rich flora. All five British duckweed *Lemna* species, all five water-cress *Rorippa* species, and all three British water milfoils (*Myriophyllum* species), all but one of the seven British water dropworts (*Oenanthe* species), and two-thirds of the British pondweeds (*Potamogeton* species) can be found on site.<br>**Ramsar criterion 5 - Assemblages of international importance**<br>Species with peak counts in winter:<br>▪ 13774 waterfowl (5-year peak mean 1998/99-2002/2003)<br>**Species/populations identified subsequent to designation for possible future consideration under criterion 6.**<br>Species with peak counts in winter:<br>▪ Northern pintail, *Anas acuta*, NW Europe 641 individuals, representing an average of 1% of the population (5-year peak mean 1998/9-2002/3) | ▪ Water abstraction for public water supply[17] | N/A | N/A |
| **Arun Valley SAC** | Within West Sussex | 487.48 | **Annex II species that are a primary reason for selection of this site:**<br>▪ 4056 Ramshorn snail *Anisus vorticulus*<br>*Anisus vorticulus* occurs across a range of sites in southern and eastern England. The Arun valley is one of the three main population centres for this species in the UK. This proposed site includes two of its core sites in the wash lands of the Arun floodplain (Pulborough Brooks and Amberley Wild Brooks SSSIs). | ▪ J02 - Human induced changes in hydraulic conditions[18] | ▪ T – Inappropriate water levels<br>▪ T – Water pollution<br>▪ T – Inappropriate ditch management[19] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of qualifying species<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[20] |

[17] Arun Valley RAMSAR Information Sheet. (Accessed on:23/11/2020)
[18] Arun Valley SAC Natura 2000 form. (Accessed on:23/11/2020)
[19] Arun Valley SPA/ SAC Site Improvement Plan. (Accessed on:23/11/2020)
[20] Arun Valley SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **Arun Valley SPA** | Within West Sussex | 530.42 | **Article 4.1 Qualification (79/409/EEC)**<br>Over winter the area regularly supports:<br>▪ Bewicks Swan *Cygnus columbianus bewickii* – 1151 individuals representing 1.6% of GB population (5-year peak mean for 1992/93 to 1996/7)<br>**Article 4.2 Qualification (79/409/EEC): An Internationally important assemblage of birds**<br>Over winter the area regularly supports:<br>▪ 27241 waterfowl (5-year peak mean 1991/2 to 1995/6) incl. Bewicks Swan. | ▪ H02 - Pollution to groundwater (point sources and diffuse sources)<br>▪ J02 - Human induced changes in hydraulic conditions[21] | ▪ Same as above | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[22] |

[21] Arun Valley SPA Natura 2000 form. (Accessed on:23/11/2020)

[22] Arun Valley SPA Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Ashdown Forest SAC** | Within 10km of West Sussex border | 2715.88 | **Annex I habitats that are a primary reason for selection of this site:**<br>▪ 4010 Northern Atlantic wet heaths with *Erica tetralix*<br>Ashdown Forest contains one of the largest single continuous blocks of lowland heath in south-east England, with both 4030 European dry heaths and, in a larger proportion, wet heath. The M16 *Erica tetralix – Sphagnum compactum* wet heath element provides suitable conditions for several species of bog-mosses Sphagnum spp., bog asphodel *Narthecium ossifragum,* deergrass *Trichophorum cespitosum*, common cotton-grass *Eriophorum angustifolium*, marsh gentian *Gentiana pneumonanthe* and marsh clubmoss *Lycopodiella inundata*. The site supports important assemblages of beetles, dragonflies, damselflies and butterflies, including the nationally rare silver-studded blue *Plebejus argus*, and birds of European importance, such as European nightjar *Caprimulgus europaeus*, Dartford warbler *Sylvia undata* and Eurasian hobby *Falco subbuteo*.<br>▪ 4030 European dry heaths<br>The dry heath in Ashdown Forest is an extensive example of the south-eastern H2 *Calluna vulgaris – Ulex minor* community. This vegetation type is dominated by heather Calluna vulgaris, bell heather *Erica cinerea* and dwarf gorse *Ulex minor*, with transitions to other habitats. It supports important lichen assemblages, including species such as *Pycnothelia papillaria*. This site supports the most inland remaining population of hairy greenweed *Genista pilosa* in Britain.<br>**Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1166 Great crested newt *Triturus cristatus* | ▪ H04 - Air pollution, air-borne pollutants<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ A02 - Modification of cultivation practices<br>▪ G01 – Outdoor sports and leisure activities, recreational activities[23] | ▪ P – Change in land management<br>▪ P – Air pollution: impact of atmospheric nitrogen deposition<br>▪ T – Public access/ disturbance<br>▪ T – Hydrological changes[24] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[25] |

[23] Ashdown Forest SAC Natura 2000 form. (Accessed on:23/11/2020)

[24] Ashdown Forest SAC and SPA Site Improvement Plan. (Accessed on:23/11/2020)

[25] Ashdown Forest SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Ashdown Forest SPA** | Within 10km of West Sussex border | 3207.07 | **Article 4.1 Qualification (79/409/EEC)**<br>During the breeding season the area regularly supports:<br>▪ European nightjar *Caprimulgus europaeus* - 1% of the GB breeding population (Count as at 1991 and 1992)<br>▪ Dartford warbler *Sylvia undata* - 1.3% of the GB breeding population (Count as at 1994) | ▪ G01 – Outdoor sports and leisure activities, recreational activities<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ H04 - Air pollution, air-borne pollutants<br>▪ A02 - Modification of cultivation practices[26] | ▪ See Ashdown Forest SAC | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[27] |
| **Briddlesford Copses** | Within 30km of West Sussex border | 165.44 | **Annex II species that are a primary reason for selection of this site**<br>▪ 1323 Bechstein's bat *Myotis bechsteinii*<br>The Briddlesford Copse complex of woodlands represents the most varied, structurally diverse and species-rich cluster of ancient broadleaved woodland on the Isle of Wight and supports an important breeding population of the rare Bechstein's bat *Myotis bechsteinii*. The bats use holes and crevices in mature trees for roosting and the interconnecting woodlands for feeding. | ▪ A02 - Modification of cultivation practices<br>▪ M02 - Changes in biotic conditions<br>▪ H04 - Air pollution, air-borne pollutants<br>▪ B02 - Use of biocides, hormones and chemicals (forestry)[28] | ▪ P/T – Offsite habitat availability/ management<br>▪ P/T – Forestry and woodland management<br>▪ P/T – Change in land management<br>▪ P – Air Pollution: impact of atmospheric nitrogen deposition[29] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of qualifying species<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[30] |

[26] Ashdown Forest SPA Natura 2000 form. (Accessed on:23/11/2020)
[27] Ashdown Forest SPA Conservation Objectives. (Accessed on:23/11/2020)
[28] Briddlesford Copses SAC Natura 2000 form. (Accessed on:23/11/2020)
[29] Briddlesford Copses Site Improvement Plan. (Accessed on: 23/11/2020)
[30] Briddlesford Copses Conservation Objectives. (Accessed on: 23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Butser Hill SAC** | Within 10km of West Sussex border | 237.36 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)<br>Butser Hill is situated on the east Hampshire chalk which forms part of the South Downs. Much of the site consists of CG2 *Festuca ovina – Avenula pratense* grassland. The site has a varied range of slope gradients and aspects which has a strong influence on the vegetation composition. A particular feature of the site is its lower plant assemblage. It has the richest terricolous lichen flora of any chalk grassland site in England, and also supports the distinctive *Scapanietum asperae* or southern hepatic mat association of leafy liverworts and mosses on north-facing chalk slopes. This association is very rare in the UK and Butser Hill supports the largest known example. The site exhibits various transitions between semi-natural dry grassland, chalk heath, mixed scrub and 91J0 *Taxus baccata* woods.<br>▪ 91J0 *Taxus baccata* woods of the British Isles * Priority feature<br>The combes of the south-east flank of Butser Hill support dense yew *Taxus baccata* woodland in association with scrub and chalk grassland. The yew is regenerating into the grassland and shows the classic interaction of these habitats in relation to grazing pressure. | ▪ K02 - Biocenotic evolution, succession<br>▪ A04 - Grazing[31] | ▪ T – Inappropriate scrub control<br>▪ T – Undergrazing<br>▪ T – Air pollution: risk of atmospheric nitrogen deposition[32] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats<br>▪ The structure and function (including typical species) of qualifying natural habitats, and<br>▪ The supporting processes on which qualifying natural habitats rely[33] |

[31] Butser Hill SAC Natura 2000 form. (Accessed on:23/11/2020)

[32] Butser Hill Site Improvement Plan. (Accessed on:23/11/2020)

[33] Butser Hill SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Castle Hill SAC** | Within 10km of West Sussex border | 114.53 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)<br>This site hosts the priority habitat type "orchid rich sites". This chalk grassland consists of a mosaic of calcareous semi-natural dry grasslands, notably CG2 *Festuca ovina – Avenula* pratensis grassland, CG3 *Bromus erectus* grassland and CG4 *Brachypodium pinnatum* grassland. Castle Hill's important assemblage of rare and scarce species includes early spider-orchid *Ophrys sphegodes* and burnt orchid *Orchis ustulata*. The colony of early spider-orchid is one of the largest in the UK.<br>**Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1654 Early gentian *Gentianella anglica* | ▪ H04 - Air pollution, air-borne pollutants<br>▪ A04 – Grazing<br>▪ A08 – Fertilisation[34] | ▪ T – Undergrazing<br>▪ T – Fertiliser use<br>▪ P – Air pollution: impact of atmospheric nitrogen deposition[35] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of<br>▪ qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[36] |

[34] Castle Hill SAC Natura 2000 form (Accessed on:23/11/2020)
[35] Castle Hill SAC Site Improvement Plan (Accessed on:23/11/2020)
[36] Castle Hill SAC Conservation Objectives (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Chichester and Langstone Harbours RAMSAR** | Within West Sussex | 5810.03 | **Ramsar criterion 1**<br>▪ Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes.<br>**Ramsar criterion 5**<br>Assemblages of international importance:<br>Species with peak counts in winter:<br>▪ 76480 waterfowl (5 year peak mean 1998/99-2002/2003)<br>**Ramsar criterion 6 -** Species/populations occurring at levels of international importance.<br>Qualifying Species/populations (as identified at designation):<br>Species with peak counts in spring/autumn:<br>▪ Ringed plover, *Charadrius hiaticula*, Europe/Northwest Africa - 853 individuals, representing an average of 1.1% of the population (5-year peak mean 1998/9- 2002/3)<br>▪ Black-tailed godwit, *Limosa limosa islandica*, Iceland/W Europe - 906 individuals, representing an average of 2.5% of the population (5-year peak mean 1998/9- 2002/3)<br>▪ Common redshank, *Tringa totanus totanus* - 2577 individuals, representing an average of 1% of the population (5-year peak mean 1998/9- 2002/3)<br>Species with peak counts in winter:<br>▪ Dark-bellied brent goose, *Branta bernicla bernicla* -12987 individuals, representing an average of 6% of the population (5-year peak mean 1998/9-2002/3)<br>▪ Common shelduck, *Tadorna tadorna*, NW Europe - 1468 individuals, representing an average of 1.8% of the GB population (5-year peak mean 1998/9-2002/3)<br>▪ Grey plover, *Pluvialis squatarola*, E Atlantic/W Africa -wintering - 3043 individuals, representing an average of 1.2% of the population (5-year peak mean 1998/9-2002/3)<br>▪ Dunlin, *Calidris alpina alpina*, W Siberia/W Europe - 33436 individuals, representing an average of 2.5% of the population (5-year peak mean 1998/9-2002/3)<br>**Species/populations identified subsequent to designation for possible future consideration under criterion 6.**<br>Species regularly supported during the breeding season:<br>▪ Little tern, *Sterna albifrons albifrons*, W Europe - 130 apparently occupied nests, representing an average of 1.1% of the breeding population (Seabird 2000 Census) | ▪ Erosion<br>▪ Eutrophication<br>▪ Pollution – domestic sewage[37] | N/A | N/A |

[37] Chichester and Langstone Harbours RAMSAR (Accessed on:23/11/2020)

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| **Chichester and Langstone Harbours SPA** | Within West Sussex | 5810.95 | **Article 4.1 Qualification (79/409/EEC)**<br>Site regularly supports the following species:<br>during the breeding season:<br>▪ Sandwich tern *Sterna sandvicensis* - 0.2% of the GB breeding population (5-year mean, 1993-1997)<br>▪ Common tern *Sterna hirundo* - 0.3% of the GB breeding population (5-year mean, 1992-1996)<br>▪ Little tern *Sterna albifrons* - 4.2% of the GB breeding population (5-year mean, 1992-1996)<br>over winter:<br>▪ Bar-tailed godwit *Limosa lapponica* - 3.2% of the GB population (5-year peak mean 1991/92-1995/96)<br>**Article 4.2 Qualification (79/409/EEC)**<br>Site regularly supports the following species over winter:<br>▪ Dark-bellied brent goose *Branta bernicla bernicla*<br>▪ Common shelduck *Tadorna tadorna*<br>▪ Eurasian wigeon *Anas penelope*<br>▪ Eurasian teal *Anas crecca*<br>▪ Northern pintail *Anas acuta*<br>▪ Northern shoveler *Anas clypeata*<br>▪ Red-breasted merganser *Mergus serrator*<br>▪ Ringed plover *Charadrius hiaticula*<br>▪ Grey plover *Pluvialis squatarola*<br>▪ Sanderling *Calidris alba*<br>▪ Dunlin *Calidris alpina alpina*<br>▪ Eurasian curlew *Numenius arquata*<br>▪ Common redshank *Tringa totanus*<br>▪ Ruddy turnstone *Arenaria interpres*<br>**Article 4.2 Qualification (79/409/EEC)**<br>Site regularly supports an Internationally Important assemblage of birds over Winter:<br>▪ 93230 waterfowl (5-year peak mean 1991/92-1995/96) | ▪ H02 - Pollution to groundwater (point sources and diffuse sources)<br>▪ M01 - Changes in abiotic conditions<br>▪ M02 - Changes in biotic conditions<br>▪ F02 - Fishing and harvesting aquatic resources<br>▪ G01 - Outdoorports and leisure activities, recreational activities[38] | ▪ T – Public access/disturbance<br>▪ T – Coastal squeeze<br>▪ T – Fisheries: commercial marine and estuarine<br>▪ T – Water pollution<br>▪ T – Changes in species distribution<br>▪ T – Climate change<br>▪ T – Change to site conditions<br>▪ T – invasive species<br>▪ T – Direct land take from development<br>▪ T – Biological resource use<br>▪ T – Change in land management<br>▪ T – Inappropriate pest control<br>▪ P – Air pollution: impact of atmospheric nitrogen deposition<br>▪ T - Hydrological changes<br>▪ T – Direct impact from third party<br>▪ T – Extraction: non-living resources<br>▪ T – Other – consider/explore change to SAC/SPA designations to include habitats outside the existing boundaries[39] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[40] |

[38] Chichester and Langstone Harbours SPA Natura 2000 form. (Accessed on:23/11/2020)

[39] Solent (Chichester and Langstone Harbours SPA, Portsmouth Harbour SPA, Solent & Southampton Water SPA, Solent Maritime SAC) Site Improvement Plan. (Accessed on:23/11/2020)

[40] Chichester and Langstone Harbour SPA Conservation Objectives. (Accessed on:23/11/2020)

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| Duncton to Bignor Escarpment SAC | Within West Sussex | 211.84 | **Annex I habitats that are a primary reason for selection of this site:**<br>▪ 9130 *Asperulo-Fagetum* beech forests<br>*Asperulo-Fagetum* beech forests occur here on steep scarp slopes and on more gently-sloping hillsides in mosaic with ash *Fraxinus excelsior* woodland, scrub and grassland. Much of the beech woodland is high forest but with some old pollards. Rare plants present include the white helleborine *Cephalanthera damasonium*, yellow bird's nest *Monotropa hypopitys* and green hellebore *Helleborus viridis*. The woods also have a rich mollusc fauna. | ▪ No threats/pressures reported[41] | ▪ No current issues affecting the Site have been identified[42] | ▪ Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats<br>▪ The structure and function (including typical species) of qualifying natural habitats, and<br>▪ The supporting processes on which the qualifying natural habitats rely[43] |

[41] Duncton to Bignor Escarpment SAC Natura 2000 form. (Accessed on:23/11/2020)

[42] Duncton to Bignor Escarpment SAC Site Improvement Plan. (Accessed on:23/11/2020)

[43] Duncton to Bignor Escarpment Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **East Hampshire Hangers SAC** | Within 10km of West Sussex border | 561.69 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 9130 *Asperulo-Fagetum* beech forests<br>East Hampshire Hangers represents *Asperulo-Fagetum* beech forests in south-east England. The site is extremely rich in terms of vascular plants, including white helleborine *Cephalanthera damasonium*, violet helleborine *Epipactis purpurata*, green-flowered helleborine *E. phyllanthes* and Italian lords-and-ladies *Arum italicum*. The woods include areas with old pollards on former wood-pasture as well as high forest. There are also transitions to 9180 *Tilio-Acerion* forests of slopes, screes and ravines.<br>▪ 9180 *Tilio-Acerion* forests of slopes, screes and ravines *Priority feature<br>East Hampshire Hangers, with Rook Clift, represents an unusual occurrence of *Tilio-Acerion* forests in the south of England. It has areas of small-leaved lime *Tilia cordata* on the steepest parts of the Upper Greensand scarp, associated with low sandstone cliffs and scree slopes, which are locally calcareous. The bryophyte flora is richer than on the chalk examples and includes several species that are rare in the lowlands, such as *Campylostelium saxicola*, which has its strongest population in England here. The site is ecologically similar to sites selected in the Welsh Borders, despite its geographic location.<br>**Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site**<br>▪ 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)<br>▪ 91J0 *Taxus baccata* woods of the British Isles * Priority feature<br>**Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1654 Early gentian *Gentianella anglica* | ▪ I02 - Problematic native species<br>▪ H04- Air pollution, air-borne pollutants<br>▪ B02 - Forest and Plantation management & use[44] | ▪ T – Air pollution: risk of atmospheric nitrogen deposition<br>▪ P – Invasive species<br>▪ P – Forestry and woodland management[45] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[46] |

[44] East Hampshire Hangers SAC Natura 2000 form. (Accessed on:23/11/2020)
[45] East Hampshire Hangers SAC Site Improvement Plan. (Accessed on:23/11/2020)
[46] East Hampshire Hangers SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Ebernoe Common SAC** | Within West Sussex | | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)<br>Ebernoe Common has an extensive block of beech *Fagus sylvatica* high forest and former wood-pasture over dense holly *Ilex aquifolium*, and has a very rich epiphytic lichen flora, including *Agonimia octospora* and *Catillaria atropurpurea.* It represents Atlantic acidophilous beech forests in the south-eastern part of the habitat's UK range. The beech woodland is associated with other woodland types, open glades and pools, which contribute to a high overall diversity. The woods are important for a number of bat species, in particular 1323 Bechstein's bat *Myotis bechsteinii* and 1308 barbastelle *Barbastella barbastellus*.<br>**Annex II species that are a primary reason for selection of this site**<br>▪ 1308 Barbastelle *Barbastella barbastellus*<br>A maternity colony of barbastelles Barbastella barbastellus utilises a range of tree roosts in this area of 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles, which has a dense understorey of holly *Ilex aquifolium* as well as open glades and open water. Maternity roost sites are usually in dead tree stumps, but the species appears to be present throughout the year, with individuals utilising a range of roost sites in tree holes and under bark.<br>▪ 1323 Bechstein's bat *Myotis bechsteinii*<br>A maternity colony of Bechstein's bat Myotis bechsteinii is associated with this area of 91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles. Roosts are mainly in old woodpecker holes in the stems of live mature oak *Quercus petraea* trees. | ▪ M02 - Changes in biotic conditions<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ B02 - Forest and Plantation management and use<br>▪ A02 - Modification of cultivation practices<br>▪ J03- Other ecosystem modifications[47] | ▪ P/T – Forestry and woodland management<br>▪ P – Offsite habitat availability/ management<br>▪ T – Habitat fragmentation<br>▪ P/T – Change in land management<br>▪ T – Hydrological changes<br>▪ T – Air pollution: risk of atmospheric nitrogen deposition<br>▪ P/T - Public access/disturbance [48] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats  The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[49] |

[47] Ebernoe Common SAC Natura 2000 form. (Accessed on:23/11/2020)

[48] Ebernoe Common SAC Site Improvement Plan. (Accessed on:23/11/2020)

[49] Ebernoe Common SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Kingley Vale SAC** | Within West Sussex | 200.94 | **Annex I habitats that are a primary reason for selection of this site:**<br>▪ 91J0 *Taxus baccata* woods of the British Isles * Priority feature<br>Kingley Vale is one of the sites representing yew *Taxus baccata* woods on chalk, in the central southern part of its UK range. It has been selected primarily because of its size, as it is the largest area of yew woodland in Britain. It also shows excellent conservation of the full range of habitat structure and function.<br>**Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site**<br>▪ 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites) | ▪ A04 - Grazing<br>▪ I02 -- Problematic native species<br>▪ H04 - Pollution to groundwater (point sources and diffuse sources)<br>▪ A11- Other agriculture activities[50] | ▪ T- Deer<br>▪ T – Undergrazing<br>▪ T – Other Agriculture<br>▪ P – Air pollution: impact of atmospheric nitrogen deposition[51] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats<br>▪ The structure and function (including typical species) of qualifying natural habitats, and<br>▪ The supporting processes on which qualifying natural habitats rely.[52] |

[50] Kingley Vale SAC Natura 2000 form. (Accessed on:23/11/2020)

[51] Kingley Vale Site Improvement Plan (Accessed on:23/11/2020)

[52] Kingley Vale SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Mole Gap to Reigate Escarpment SAC** | Within 10km of West Sussex border | 892.3 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 5110 Stable *xerothermophilous* formations with Buxus sempervirens on rock slopes (*Berberidion p.p.)*<br>Mole Gap in south-east England supports the only area of stable box scrub in the UK, on steep chalk slopes where the River Mole has cut into the North Downs Escarpment, creating the Mole Gap. Here natural erosion maintains the open conditions required for the survival of this habitat type. The site therefore supports a stable formation and has good conservation of habitat structure and function.<br>▪ 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (* important orchid sites)<br>This site hosts the priority habitat type "orchid rich sites". This large but fragmented site on the North Downs escarpment supports a wide range of calcareous grassland types on steep slopes, including CG2 *Festuca ovina – Avenula pratensis*, CG3 *Bromus erectus*, CG4 Brachypodium pinnatum, CG5 *Brachypodium pinnatum – Bromus erectus* and CG6 *Avenula pubescens* grasslands. It exhibits a wide range of structural conditions ranging from short turf through to scrub margins, and is particularly important for rare vascular plants, including orchids. It is also significant in exhibiting transitions to scarce scrub, woodland and dry heath types, notably 5110 Stable *xerothermophilous* formations with Buxus sempervirens on rock slopes, 91J0 yew *Taxus baccata* woods, and chalk heath (4030 European dry heaths).<br>▪ 91J0 *Taxus baccata* woods of the British Isles * Priority feature<br>At Mole Gap to Reigate Escarpment yew *Taxus baccata* woodland has been formed both by invasion of chalk grassland and from development within beech Fagus sylvatica woodland following destruction of the beech overstorey. Yew occurs here in extensive stands, with, in places, an understorey of box *Buxus sempervirens* at one of its few native locations.<br>**Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site**<br>▪ 4030 European dry heaths<br>▪ 9130 *Asperulo-Fagetum* beech forests<br>**Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1166 Great crested newt *Triturus cristatus*<br>▪ 1323 Bechstein's bat *Myotis bechsteinii* | ▪ A02 - Modification of cultivation practices<br>▪ K02 - Biocenotic evolution, succession<br>▪ K04 - Interspecific floral relations<br>▪ H04 - Air pollution, air-borne pollutants[53] | ▪ P/T – Disease<br>▪ P – Inappropriate scrub control<br>▪ T – Change in land management<br>▪ T – Public access/disturbance<br>▪ T – Air pollution: risk of atmospheric nitrogen deposition[54] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that theMsite contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[55] |

[53] Mole Gap to Reigate Escarpment SAC Natura 2000 form. (Accessed on:23/11/2020)

[54] Mole Gap to Reigate Escarpment SAC Site Improvement Plan (Accessed on:23/11/2020)

[55] Mole Gap to Reigate Escarpment SAC Conservation Objectives. (Accessed on:23/11/2020)

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| **Pagham Harbour RAMSAR** | Within West Sussex | 616 | **Ramsar criterion 6 -** Species/populations occurring at levels of international importance.<br>Qualifying Species/populations (as identified at designation):<br>Species with peak counts in winter:<br>▪ Dark-bellied brent goose, *Branta bernicla Bernicla* – 2512 individuals, representing an average of 1.1% of the population (5-year peak mean 1998/9-2002/3)<br>**Species/populations identified subsequent to designation for possible future consideration under criterion 6.**<br>Species with peak counts in winter:<br>▪ Black-tailed godwit, *Limosa limosa islandica*, Iceland/W Europe - 377 individuals, representing an average of 1% of the population (5-year peak mean 1998/9- 2002/3) | ▪ No factors reported[56] | N/A | N/A |
| **Pagham Harbour SPA** | Within West Sussex | 629.01 | **Article 4.1 Qualification (79/409/EEC)**<br>During the breeding season the area regularly supports:<br>▪ Little tern *Sterna albifrons* (Eastern Atlantic - breeding) - 0.3% of the GB breeding population (5 year mean, 1992-1996)<br>▪ Common tern *Sterna hirundo* (Northern/Eastern Europe - breeding) - % of the GB breeding population (Count, as at 1996)<br>Over winter the area regularly supports:<br>▪ Ruff *Philomachus pugnax* (Western Africa - wintering) - 1.4% of the GB population (5 year mean, 1995-1999)<br>**Article 4.2 Qualification (79/409/EEC)**<br>Over winter the area regularly supports:<br>▪ Dark-bellied Brent goose *Branta bernicla bernicla* (Western Siberia/Western Europe) - 0.6% of the population (5 year peak mean 1991/92-1995/96) | ▪ H02 - Pollution to groundwater (point sources and diffuse sources)<br>▪ G02 - Sport and leisure structures<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ F02 - Fishing and harvesting aquatic resources[57] | ▪ P/T – Physical modification<br>▪ P/T – Public access/ distribution<br>▪ T – Water pollution<br>▪ T – Fisheries: commercial marine and estuarine<br>▪ T – Fisheries: recreational marine and estuarine<br>▪ T – Changes in land management[58] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[59] |

[56] Pagham Harbour RAMSAR Information Sheet. (Accessed on:23/11/2020)
[57] Pagham Harbour SPA Natura 2000 form. (Accessed on:23/11/2020)
[58] Pagham Harbour SPA Site Improvement Plan. (Accessed on:23/11/2020)
[59] Pagham Harbour SPA Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
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| **Portsmouth Harbour RAMSAR** | Within 10km of West Sussex border | 1248.77 | **Ramsar criterion 3**<br>The intertidal mudflat areas possess extensive beds of eelgrass *Zostera angustifolia* and *Zostera noltei*<br>which support the grazing dark-bellied brent geese populations. The mud-snail *Hydrobia ulvae* is found at extremely high densities, which helps to support the wading bird interest of the site. Common cord-grass *Spartina anglica* dominates large areas of the saltmarsh and there are also extensive areas of green algae *Enteromorpha spp*. and sea lettuce *Ulva lactuca*. More locally the saltmarsh is dominated by sea purslane *Halimione portulacoides* which gradates to more varied communities at the higher shore levels. The site also includes a number of saline lagoons hosting nationally important species.<br>**Ramsar criterion 6** – species/populations occurring at levels of international importance.<br>Qualifying Species/populations (as identified at designation):<br>Species with peak counts in winter:<br>▪ Dark-bellied brent goose *Branta bernicla bernicla* - 2105 individuals, representing an average of 2.1% of the GB population (5-year peak mean 1998/9-2002/3) | ▪ Eutrophication<br>▪ Unspecified development: urban use<br>▪ Coastal engineering, e.g. construction of sea defences for coastal protection[60] | N/A | N/A |
| **Portsmouth Harbour SPA** | Within 10km of West Sussex border | 1249.6 | **Article 4.2 Qualification (79/409/EEC)**<br>Over winter the area regularly supports:<br>▪ Dark-bellied brent goose *Branta bernicla bernicla* (Western Siberia/Western Europe) - 0.9% of the population (5-year peak mean 1991/92-1995/96)<br>▪ Dunlin *Calidris alpina alpina* (Northern Siberia/Europe/Western Africa) - 1% of the population in Great Britain (5-year peak mean 1991/92-1995/96)<br>▪ Black tailed godwit *Limosa limosa islandica* (Iceland - breeding) - 0.4% of the population in Great Britain (5-year peak mean 1991/92-1995/96)<br>▪ Red-breasted merganser *Mergus serrator* (North-western/Central Europe) - 0.9% of the population in Great Britain (5-year peak mean 1991/92-1995/96) | ▪ H02 - Pollution to groundwater (point sources and diffuse sources)<br>▪ M02 - Changes in biotic conditions<br>▪ M01 - Changes in abiotic conditions<br>▪ G01 - Outdoor sports and leisure activities, recreational activities<br>▪ F02 - Fishing and harvesting aquatic resources[61] | ▪ See Chichester and Langstone Harbours SPA | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[62] |

[60] Portsmouth Harbour RAMSAR Information Sheet. (Accessed on:23/11/2020)

[61] Portsmouth Harbour SPA Natura 2000 form. (Accessed on:23/11/2020)

[62] Portsmouth Harbour SPA Conservation Objectives. (Accessed on:23/11/2020)

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| **Shortheath Common SAC** | Within 10km of West Sussex border | 58.53 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 7140 Transition mires and quaking bogs<br>A valley mire forms the focal point of this site in the western Weald which also embraces a wide range of heathland habitats and woodland. The northern strip of the mire is the most mesotrophic and has much grey willow *Salix cinerea* but also a rich ground-flora with abundant sedges *Carex curta* and *C. rostrata*, soft rush *Juncus effusus*, marsh cinquefoil *Potentilla palustris* and the bog-moss *Sphagnum recurvum*. An oligotrophic area to the south is dominated by *S. recurvum* with cross-leaved heath *Erica tetralix*, common cottongrass *Eriophorum angustifolium*, purple moor-grass *Molinia caerulea* and round-leaved sundew *Drosera rotundifolia*. It is notable for its high cover of cranberry *Vaccinium oxycoccos*. Other bog-mosses such as *Sphagnum capillifolium* and *S. papillosum* are also present, and the whole forms a floating raft over much of the mire.<br>**Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site**<br>▪ 4030 European dry heaths<br>▪ 91D0 Bog woodland * Priority feature | ▪ G05 - Other human intrusions and disturbances<br>▪ K02 - Biocenotic evolution, succession<br>▪ G01 - Outdoor sports and leisure activities, recreational activities[63] | ▪ T – Inappropriate scrub control<br>▪ T – Public access/disturbance<br>▪ P/T – Direct impact from third party<br>▪ P – Air pollution: impact from atmospheric deposition[64] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of the qualifying natural habitats<br>▪ The structure and function (including typical species) of the qualifying natural habitats, and,<br>▪ The supporting processes on which the qualifying natural habitats rely[65] |
| **Singleton and Cocking Tunnels SAC** | Within West Sussex | 1.88 | **Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1308 Barbastelle *Barbastella barbastellus*<br>▪ 1323 Bechstein's bat *Myotis bechsteinii* | ▪ A02 – Modification of cultivation practices<br>▪ M02 – Changes in biotic conditions<br>▪ G01 - Outdoor sports and leisure activities, recreational activities<br>▪ J03 - Other ecosystem modifications[66] | ▪ P – Habitat connectivity<br>▪ P – Habitat fragmentation<br>▪ P/T – Public access/disturbance<br>▪ T – Air pollution: risk of atmospheric nitrogen deposition[67] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of qualifying species<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[68] |

[63] Shortheath Common SAC Natura 2000 form. (Accessed on:23/11/2020)
[64] Shortheath Common SAC Site Improvement Plan. (Accessed on:23/11/2020)
[65] Shortheath Common SAC Conservation Objectives. (Accessed on:23/11/2020)
[66] Singleton and Cocking Tunnels SAC Natura 2000 form. (Accessed on:23/11/2020)
[67] Singleton and Cocking Tunnels SAC Site Improvement Plan. (Accessed on:23/11/2020)
[68] Singleton and Cocking Tunnels SAC Conservation Objectives. (Accessed on:23/11/2020)

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| **Solent and Dorset SPA** | Within 10km of West Sussex border | 89078.26 | Article 4.1 Qualification (2009/147/EC):<br>During the breeding season the area regularly supports:<br>Sandwich tern Sterna *sandvicensis*- 4.01% of GB breeding population (5-year peak mean, 2008 - 2014)<br>Common tern *Sterna hirundo* - 4.77% of GB breeding population (5-year peak mean, 2009 - 2014)<br>Little tern *Sternula albifrons* - 3.31% of GB breeding population (5-year peak mean, 2009 - 2014)[69] | No Natura 2000 form available for this site | No threats or pressures identified as SIP is not available for this site | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[70] |
| **Solent and Isle of Wight Lagoons SAC** | Within 10km of West Sussex border | 37.93 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 1150 Coastal lagoons * Priority feature<br>The Solent on the south coast of England encompasses a series of Coastal lagoons, including percolation, isolated and sluiced lagoons. The site includes a number of lagoons in the marshes in the Keyhaven – Pennington area, at Farlington Marshes in Chichester Harbour, behind the sea-wall at Bembridge Harbour and at Gilkicker, near Gosport. The lagoons show a range of salinities and substrates, ranging from soft mud to muddy sand with a high proportion of shingle, which support a diverse fauna including large populations of three notable species: the nationally rare foxtail stonewort *Lamprothamnium papulosum*, the nationally scarce lagoon sand shrimp *Gammarus insensibilis*, and the nationally scarce starlet sea anemone *Nematostella vectensis*. The lagoons in Keyhaven – Pennington Marshes are part of a network of ditches and ponds within the saltmarsh behind a sea-wall. Farlington Marshes is an isolated lagoon in marsh pasture that, although separated from the sea by a sea-wall, receives sea water during spring tides. The lagoon holds a well-developed low-medium salinity insect-dominated fauna. Gilkicker Lagoon is a sluiced lagoon with marked seasonal salinity fluctuation and supports a high species diversity. The lagoons at Bembridge Harbour have formed in a depression behind the sea-wall and sea water enters by percolation. Species diversity in these lagoons is high and the fauna includes very high densities of *N. vectensis*. | ▪ M01 - Changes in abiotic conditions<br>▪ H04 - Air pollution, air-borne pollutants<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ I01 - Invasive non-native species<br>▪ K04 - Interspecific floral relations[71] | ▪ T – Hydrological changes<br>▪ T – Inappropriate weed control<br>▪ T – Coastal squeeze<br>▪ T – Invasive species<br>▪ T – Air pollution: risk of atmospheric deposition[72] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats<br>▪ The structure and function (including typical species) of qualifying natural habitats, and<br>▪ The supporting processes on which qualifying natural habitats rely.[73] |

[69] Solent and Dorset SPA Departmental brief. (Accessed on: 27/11/2020)
[70] Solent and Dorset SPA Conservation Objectives. (Accessed on:27/11/2020)
[71] Solent and Isle of Wight Lagoons SAC Natura 2000 form. (Accessed on:23/11/2020)
[72] Solent and Isle of Wight Lagoons SAC Site Improvement Plan. (Accessed on:23/11/2020)
[73] Solent and Isle of Wight Lagoons SAC Conservation Objectives. (Accessed on:23/11/2020)

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| **Solent Maritime SAC** | Within West Sussex | 11243.12 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 1130 Estuaries<br>The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries (Yar, Medina, King's Quay Shore, Hamble) and four bar-built estuaries (Newtown Harbour, Beaulieu, Langstone Harbour, Chichester Harbour). The site is the only one in the series to contain more than one physiographic sub-type of estuary and is the only cluster site. The Solent and its inlets are unique in Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area. Sediment habitats within the estuaries include extensive estuarine flats, often with intertidal areas supporting eelgrass *Zostera* spp. and green algae, sand and shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity in the upper reaches of the estuaries to very sheltered almost fully marine muds in Chichester and Langstone Harbours. Unusual features include the presence of very rare sponges in the Yar estuary and a sandy 'reef' of the polychaete *Sabellaria spinulosa* on the steep eastern side of the entrance to Chichester Harbour.<br>▪ 1320 Spartina swards (*Spartinion maritimae*)<br>Solent Maritime is the only site for smooth cord-grass *Spartina alterniflora* in the UK and is one of only two sites where significant amounts of small cord-grass *S. maritima* are found. It is also one of the few remaining sites for Townsend's cord-grass *S. x townsendii* and holds extensive areas of common cord-grass *Spartina anglica,* all four taxa thus occurring here in close proximity. It has additional historical and scientific interest as the site *where S. alterniflora* was first recorded in the UK (1829) and where *S. x townsendii* and, later, *S. anglica* first occurred.<br>▪ 1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)<br>The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England. Solent Maritime is a composite site composed of a large number of separate areas of saltmarsh. In contrast to the Severn estuary, the salt meadows at this site are notable as being representative of the ungrazed type and support a different range of communities dominated by sea-purslane *Atriplex portulacoides*, common sea-lavender Limonium vulgare and thrift *Armeria maritima*. As a whole the site is less truncated by man-made features than other parts of the south coast and shows rare and unusual transitions to freshwater reedswamp and alluvial woodland as well as coastal grassland. Typical Atlantic salt meadow is still widespread in this site, despite a long history of colonisation by cord-grass *Spartina* spp.<br>**Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site**<br>▪ 1110 Sandbanks which are slightly covered by sea water all the time<br>▪ 1140 Mudflats and sandflats not covered by seawater at low tide<br>▪ 1150 Coastal lagoons * Priority feature<br>▪ 1210 Annual vegetation of drift lines<br>▪ 1220 Perennial vegetation of stony banks<br>▪ 1310 Salicornia and other annuals colonizing mud and sand<br>▪ 2120 "Shifting dunes along the shoreline with *Ammophila arenaria* "white dunes"<br>**Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1016 Desmoulin's whorl snail Vertigo *moulinsiana* | ▪ H02 - Pollution to groundwater (point sources and diffuse sources)<br>▪ M01 – Changes in abiotic conditions<br>▪ F02 - Fishing and harvesting aquatic resources G02 - Sport and leisure structures<br>▪ M02 – Changes in biotic conditions<br>▪ G01 - Outdoor sports and leisure activities, recreational activities[74] | ▪ See Chichester and Langstone Harbours SPA | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[75] |

[74] Solent Maritime SAC Natura 2000 form. (Accessed on:23/11/2020)

[75] Solent Maritime SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **South Wight Maritime SAC** | Within 10km of West Sussex border | 19866.12 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 1170 Reefs<br>The southern shore of the Isle of Wight, off the coast of southern England, includes a number of subtidal reefs that extend into the intertidal zone. This site is selected on account of its variety of reef types and associated communities, including chalk, limestone and sandstone reefs. To the west and south-west some of the most important subtidal British chalk reefs occur, representing over 5% of Europe's coastal chalk exposures, including the extensive tide-swept reef off the Needles and examples at Culver Cliff and Freshwater Bay. These support a diverse range of species in both the subtidal and intertidal. Other reef habitats within the site include areas of large boulders off the coast around Ventnor. There is a large reef of harder limestone off Bembridge and Whitecliff Bay, where the horizontal and vertical faces and crevices provide a range of habitats. The bedrock is extensively bored by bivalves. Their presence, together with the holes they create, give shelter to other species, which adds further to habitat diversity. Intertidal pools support a diverse marine life, including a number of rare or unusual seaweeds, such as the shepherd's purse seaweed *Gracilaria bursa-pastoris*. A number of other species reach their eastern limit of distribution along the English Channel at the Isle of Wight.<br>▪ 1230 Vegetated sea cliffs of the Atlantic and Baltic Coasts<br>South Wight Maritime on the south coast of England represents contrasting Cretaceous hard cliffs, semi-stable soft cliffs and mobile soft cliffs. The western and eastern extremities of the site consist of high chalk cliffs with species-rich calcareous grassland vegetation, the former exposed to maritime influence and the latter comparatively sheltered. At the western end, the site adjoins the Isle of Wight Downs, providing an unusual combination of maritime and chalk grassland. The most exposed chalk cliff tops support important assemblages of nationally rare lichens, including *Fulgensia fulgens*. The longest section is composed of slumping acidic sandstones and neutral clays with an exposed south-westerly aspect. The vegetation communities are a mixture of acidic and mesotrophic grasslands with some scrub and a greater element of maritime species, such as thrift *Armeria maritima*, than is usual on soft cliffs. This section supports the Glanville fritillary butterfly *Melitaea cinxia* in its main English stronghold. A small, separate section of the site on clays has a range of successional stages, including woodland, influenced by landslips. These cliffs are minimally affected by sea defence works, which elsewhere disrupt ecological processes linked to coastal erosion, and together they form one of the longest lengths of naturally-developing soft cliffs on the UK coastline.<br>▪ 8330 Submerged or partially submerged sea caves<br>The southern shore of the Isle of Wight, off the coast of southern England, includes a number of either submerged or partially submerged sea caves. The exposure of the south coast of the island to high wave energy has allowed the erosion of the Cretaceous calcareous hard cliffs to form sea caves. Examples of this habitat can be found from the Needles along the south-west coast of the Island to Watcombe Bay, and also in Culver Cliff on the south-east coast of the Island. This site also contains the only known location of subtidal chalk caves in the UK. The large littoral caves in the chalk cliffs are of ecological importance, with many hosting rare algal species, which are restricted to this type of habitat. The fauna of these sea caves includes a range of mollusc species such as limpets *Patella spp*. and the horseshoe worm *Phoronis hippocrepia* | ▪ I01 - Invasive non-native species<br>▪ G01 - Outdoor sports and leisure activities, recreational activities<br>▪ J02 - Human induced changes in hydraulic conditions[76] | ▪ P/T – Invasive species<br>▪ P/T – Inappropriate coastal management<br>▪ P – Public access/disturbance<br>▪ T – Physical modification<br>▪ P – Inappropriate coastal management<br>▪ P – Physical modification<br>▪ P – Fisheries: commercial marine and estuarine[77] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats<br>▪ The structure and function (including typical species) of qualifying natural habitats, and<br>▪ The supporting processes on which qualifying natural habitats rely.[78] |

[76] South Wight Maritime SAC Natura 2000 form. (Accessed on:23/11/2020)

[77] South Wight Maritime SAC Site Improvement Plan. (Accessed on:23/11/2020)

[78] South Wight Maritime SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **The Mens SAC** | Within West Sussex | 204.69 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 9120 Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)<br>The Mens is an extensive area of mature beech Fagus sylvatica woodland rich in lichens, bryophytes, fungi and saproxylic invertebrates, and is one of the largest tracts of Atlantic acidophilous beech forests in the south-eastern part of the habitat's UK range. It is developing a near-natural high forest structure, in response to only limited silvicultural intervention over the 20th century, combined with the effects of natural events such as the 1987 great storm.<br>**Annex II species present as a qualifying feature, but not a primary reason for site selection**<br>▪ 1308 Barbastelle *Barbastella barbastellus* | ▪ B02 – Forest and plantation management and use<br>▪ A02 – Modification of cultivation practices<br>▪ M02 - Changes in biotic conditions<br>▪ J03 - Other ecosystem modifications[79] | ▪ P/T – Forestry and woodland management<br>▪ P/T – Habitat connectivity<br>▪ T – Invasive species<br>▪ P/T – Change in land management<br>▪ T – Air pollution: risk of atmospheric nitrogen deposition<br>▪ P/T – Public access/disturbance[80] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats and habitats of qualifying species<br>▪ The structure and function (including typical species) of qualifying natural habitats<br>▪ The structure and function of the habitats of qualifying species<br>▪ The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely<br>▪ The populations of qualifying species, and,<br>▪ The distribution of qualifying species within the site.[81] |
| **Thursley and Ockley Bogs RAMSAR** | Within 10km of West Sussex border | 265.24 | **Ramsar criterion 2**<br>▪ Supports a community of rare wetland invertebrate species including notable numbers of breeding dragonflies.<br>**Ramsar criterion 3**<br>▪ It is one of few sites in Britain to support all six native reptile species. The site also supports nationally important breeding populations of European nightjar *Caprimulgus europaeus* and woodlark *Lullula arborea*. | ▪ No factors reported[82] | N/A | N/A |

[79] The Mens SAC Natura 2000 form. (Accessed on:23/11/2020)
[80] The Mens SAC Site Improvement Plan. (Accessed on:23/11/2020)
[81] The Mens SAC Conservation Objectives. (Accessed on:23/11/2020)
[82] Thursley and Ockley Bogs RAMSAR Information Sheet. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **Thursley, Ash, Pirbright and Chobham SAC** | Within 10km of West Sussex border | 5154.5 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 4010 Northern Atlantic wet heaths with *Erica tetralix*<br>This site represents lowland northern Atlantic wet heaths in south-east England. The wet heath at Thursley is NVC type M16 *Erica tetralix* – Sphagnum compactum and contains several rare plants, including great sundew *Drosera anglica*, bog hair-grass *Deschampsia setacea*, bog orchid *Hammarbya paludosa* and brown beak-sedge *Rhynchospora fusca*. There are transitions to valley bog and dry heath. Thursley Common is an important site for invertebrates, including the nationally rare white-faced darter *Leuccorhinia dubia*.<br>▪ 4030 European dry heaths<br>This south-east England site contains a series of large fragments of once-continuous heathland. It is selected as a key representative of NVC type H2 *Calluna vulgaris – Ulex minor* dry heathland. This heath type has a marked south-eastern and southern distribution. There are transitions to wet heath and valley mire, scrub, woodland and acid grassland, including types rich in annual plants. The European dry heaths support an important assemblage of animal species, including numerous rare and local invertebrate species, European nightjar *Caprimulgus europaeus*, Dartford warbler *Sylvia undata*, sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*.<br>▪ 7150 Depressions on peat substrates of the *Rhynchosporion*<br>This site contains examples of Depressions on peat substrates of the *Rhynchosporion* in south-east England, where it occurs as part of a mosaic associated with valley bog and wet heath. The vegetation is found in natural bog pools of patterned valley mire and in disturbed peat of trackways and former peat-cuttings. | ▪ G05 - Other human intrusions and disturbances<br>▪ A04 - Grazing<br>▪ H04 - Air pollution, air-borne pollutants<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ K02 - Biocenotic evolution, succession[83] | ▪ P/T – Public access/ disturbance<br>▪ P – Undergrazing<br>▪ P – Forestry and woodland management<br>▪ T- Hydrological changes<br>▪ P - Inappropriate scrub control<br>▪ P/T – Invasive species<br>▪ P – Wildlife/ arson<br>▪ P/T – Air pollution: Impact of atmospheric nitrogen deposition<br>▪ T – Feature location/ extent/ condition unknown<br>▪ T -Military<br>▪ P – Habitat fragmentation[84] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of qualifying natural habitats<br>▪ The structure and function (including typical species) of qualifying natural habitats, and<br>▪ The supporting processes on which qualifying natural habitats rely. [85] |

[83] Thursley, Ash, Pirbright and Chobham SAC Natura 2000 form. (Accessed on:23/11/2020)

[84] Thames Basin (Thames Basin Heaths SPA, Thursley, Ash, Pirbright & Chobham SAC, Thursley, Hankley & Frensham Commons SPA) Site Improvement Plan. (Accessed on:23/11/2020)

[85] Thursley, Ash, Pirbright and Chobham SAC Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **Thursley, Hankley and Frensham Commons SPA** | Within 10km of West Sussex border | 1879.83 | **Article 4.1 Qualification (79/409/EEC)**<br>During the breeding season the area regularly supports:<br>▪ European nightjar *Caprimulgus europaeus* - 0.6% of the GB breeding population (5 year mean, 1985-1990)<br>▪ Woodlark *Lullula arborea* - 1.8% of the GB breeding population (Count as at 1994)<br>▪ Dartford warbler *Sylvia undata* at least 1.3% of the GB breeding population (<br>▪ Count as at 1984) | ▪ H04- Air pollution, air-borne pollutants<br>▪ G01 - Outdoor sports and leisure activities, recreational activities<br>▪ K02- Biocenotic evolution, succession<br>▪ G05 - Other human intrusions and disturbances[86] | ▪ See Thursley, Ash, Pirbright and Chobham SAC | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[87] |
| **Wealden Heaths Phase II SPA** | Within West Sussex | 2056.5 | **Article 4.1 Qualification (79/409/EEC)**<br>During the breeding season the area regularly supports:<br>▪ European nightjar *Caprimulgus europaeus* - 1.3% of the GB breeding population (5-year mean, 1989-1993)<br>▪ Woodlark *Lullula arborea* - 2.5% of the GB breeding population (Count as at 1997)<br>▪ Dartford warbler *Sylvia undata* - 1% of the GB breeding population (Count as at 1994) | ▪ U - Unknown threat or pressure<br>▪ G01 - Outdoor sports and leisure activities, recreational activities<br>▪ I01 - Invasive non-native species<br>▪ A02 - Modification of cultivation practices<br>▪ J02 - Human induced changes in hydraulic conditions[88] | ▪ T – Change in management<br>▪ P – Invasive species<br>▪ P – Hydrological changes<br>▪ P – Feature location/extent/condition unknown<br>▪ T – Public access/distribution<br>▪ P – Military<br>▪ P – Air pollution: impact of atmospheric nitrogen deposition<br>▪ P/T – Wildfire/arson[89] | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;<br>▪ The extent and distribution of the habitats of the qualifying features<br>▪ The structure and function of the habitats of the qualifying features<br>▪ The supporting processes on which the habitats of the qualifying features rely<br>▪ The population of each of the qualifying features, and,<br>▪ The distribution of the qualifying features within the site.[90] |

[86] Thursley, Hankley and Frensham Commons SPA Natura 2000 form. (Accessed on:23/11/2020)
[87] Thursley, Hankley and Frensham Commons SPA Conservation Objectives. (Accessed on:23/11/2020)
[88] Wealden Heaths Phase II SPA Natura 2000 form. (Accessed on:23/11/2020)
[89] Wealden Heaths Phase II SPA and Woolmer Forest SAC Joint Site Improvement Plan. (Accessed on:23/11/2020)
[90] Wealden Heaths Phase II SPA Conservation Objectives. (Accessed on:23/11/2020)

| Site Name | Distance | Site Size (Ha) | Summary of reasons for designation summarised on Natura 2000 Standard Data Form or Ramsar Information Sheet | Activities with greatest effect upon the site, as listed on Natura 2000 standard data forms and Information Sheets for Ramsar Wetlands | Pressures and threats listed within the Site Improvement Plan (NE, undated) (T=Threat, P=Pressure) | Conservation Objectives |
|---|---|---|---|---|---|---|
| **Woolmer Forest SAC** | Within 10km of West Sussex border | 670.15 | **Annex I habitats that are a primary reason for selection of this site**<br>▪ 3160 Natural dystrophic lakes and ponds<br>Within Woolmer Forest, Cranmer Pond is a southern example of a dystrophic pond in an area of 4010 Northern Atlantic wet heaths with *Erica tetralix* and 7150 Depressions on peat substrates of the *Rhynchosporion*. The 8ha pond is thought to originate from peat-cutting, and has an average depth of 1 m. The aquatic flora is comprised of bulbous rush *Juncus bulbosus var. fluitans*, which grows submerged and forms dense mats at the margins, and bog-mosses *Sphagnum spp*. which grow in shallower areas. To the north and south of Cranmer Pond are areas of 7140 Transition mires and quaking bogs.<br>▪ 4030 European dry heaths<br>Woolmer Forest contains the largest and most diverse area of lowland heathland in Hampshire, outside the New Forest, representing a transition between this and the Surrey heaths. Dry heaths in Woolmer Forest include examples of NVC type H1b *Calluna vulgaris – Festuca ovina* heath, *Hypogymnia physodes – Cladonia impexa* sub-community, dominated by heather *Calluna vulgaris* and *Cladonia* lichens. Most of the dry heath is H2 *Calluna vulgaris – Ulex minor*, characterised by dwarf gorse Ulex minor. Woolmer Forest is the only site in Britain that supports all six native reptiles (including the Annex IV species sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*) and all six native amphibians (including 1166 great crested newt *Triturus cristatus*). It also supports an outstanding invertebrate fauna and bird assemblage, including European nightjar *Caprimulgus europaeus*, wood lark *Lullula arborea*, Dartford warbler *Sylvia undata*, Eurasian hobby *Falco subbuteo*, hen harrier *Circus cyaneus* and merlin *Falco columbarius*.<br>▪ 7150 Depressions on peat substrates of the *Rhynchosporion*<br>In this west Wealden site, seepage mires and other waterlogged areas are a minor feature amongst predominantly wet heath habitat. Seepages are fed from a mix of acidic and calcareous sources and give rise to a series of pool and hummock structures within the mire. The *Rhynchospora alba* occurs within NVC type M21 *Narthecium ossifragum – Sphagnum papillosum* mire. It includes a range of bog-mosses *Sphagnum spp*., cottongrasses *Eriophorum angustifolium* and *E. vaginatum*, bog asphodel *Narthecium ossifragum*, cranberry *Vaccinium oxycoccos* and the rare marsh clubmoss *Lycopodiella inundata.*<br>**Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site**<br>▪ 4010 Northern Atlantic wet heaths with *Erica tetralix*<br>▪ 7140 Transition mires and quaking bogs | ▪ I01 - Fire and fire suppression<br>▪ U - Unknown threat or pressure<br>▪ A02 - Modification of cultivation practices<br>▪ J02 - Human induced changes in hydraulic conditions<br>▪ G01 - Outdoor sports and leisure activities, recreational activities[91] | ▪ See Wealden Heaths Phase II SPA | Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;<br>▪ The extent and distribution of the qualifying natural habitats<br>▪ The structure and function (including typical species) of the qualifying natural habitats, and,<br>▪ The supporting processes on which the qualifying natural habitats rely[92] |

[91] Woolmer Forest SAC Natura 2000 form. (Accessed on:23/11/2020)

[92] Woolmer Forest SAC Conservation Objectives. (Accessed on:23/11/2020)

# Appendix B

## APIS INFORMATION FOR SPAS

| Designated Site | Habitat | Relevant CL Habitat | EUNIS Code | CL Range | Recommended Assessment CL | Max NDep (kgN/ha/yr) Value | Ammonia Critical Level | Max $NH_3$ Concentration ($\mu g/m^3$) |
|---|---|---|---|---|---|---|---|---|
| **Arun Valley SPA** | Cygnus *columbianus bewickii* (Western Siberia/North-eastern & North-western Europe) - Tundra Swan | Arable and horticulture | | Not Sensitive | - | - | Not Sensitive | - |
| | | Improved Grassland | | Not Sensitive | - | - | Not Sensitive | - |
| | | Standing open water and canals | - | No CL assigned | Site Specific | 14.2 | 3 | 1.5 |
| **Ashdown Forest SPA** | *Caprimulgus europaeus* - European nightjar<br>*Sylvia undata* - Dartford warbler | Coniferous Woodland | G3 | 5-15 | 10 | 23.3 | 3 | 0.99 |
| | | Dwarf Shrub Heath | F4.2 | 10-20 | 10 | 14.6 | 3 | 0.99 |
| **Chichester and Langstone Harbours SPA** | *Sterna sandvicensis* (Western Europe/Western Africa) - Sandwich Tern<br>*Sterna hirundo* (Northern/Eastern Europe - breeding) - Common tern<br>*Sterna albifrons* (Eastern Atlantic - breeding) - Little Tern<br>*Tadorna tadorna* (north-western Europe) - Common shelduck<br>*Anas penelope* (Western Siberia/North-western/North-eastern Europe) - Eurasian wigeon<br>*Anas crecca* (North-western Europe) - Eurasian teal<br>*Anas acuta* (North-western Europe) - Northern pintail<br>*Mergus serrator* (North-western Europe) - Red-breasted merganser<br>*Charadrius hiaticula* (European/Northern Africa - wintering) - Ringed plover<br>*Pluvialis squatarola* (Eastern Atlantic - wintering) - Grey Plover<br>*Calidris alba* (Eastern Atlantic/Western & Southern Africa - wintering) - Sanderling<br>*Limosa lapponica* (Western Paleartic - wintering) - Bar-tailed godwit<br>*Numenius arquata* (Europe - breeding) - Eurasian curlew<br>*Tringa totanus* (Eastern Atlantic - wintering) - Common redshank<br>*Arenaria interpres* (Western Paleartic - wintering) - Ruddy turnstone<br>*Branta bernicla bernicla* - Dark-bellied brent goose<br>*Anas clypeata* (North-western/Central Europe) - Northern shovler | Supralittoral sediment (acidic type) (Coastal stable dune grasslands - acid type) | B1.4 - acid | 8-10 | 8 | 14.9 | 3 | 1.48 |
| | | Supralittoral sediment (calcareous type) (Coastal stable dune grasslands - calcareous type) | B1.4 - calcareous | 10-15 | 10 | 14.9 | 3 | 1.48 |
| | | Supralittoral sediment (Shifting Coastal dunes) | B1.3 | 10-20 | 10 | 14.9 | 3 | 1.48 |
| | | Standing open water and canals | - | No CL assigned | Site Specific | 12.5 | 3 | 1.48 |
| | | Littoral sediment (Pioneer low-mid, mid-upper saltmarshes) | A2.54, A2.55, A2.53 | 20-30 | A2.53:20<br>A2.54, A2.55:30 | 14.9 | 3 | 1.48 |
| | | Neutral grassland (Low and medium altitude hay meadows) | E2.2 | 20-30 | 20 | 14.9 | 3 | 1.48 |
| | | Littoral rock | A2.54, A2.55, A2.53 | 20-30 | A2.53:20<br>A2.54, A2.55:30 | 14.9 | 3 | 1.48 |

| Designated Site | Habitat | Relevant CL Habitat | EUNIS Code | CL Range | Recommended Assessment CL | Max NDep (kgN/ha/yr) Value | Ammonia Critical Level | Max $NH_3$ Concentration ($\mu g/m^3$) |
|---|---|---|---|---|---|---|---|---|
| **Pagham Harbour SPA** | *Sterna hirundo* (Northern/Eastern Europe - breeding) - Common tern<br>*Sterna albifrons* (Eastern Atlantic - breeding) - Little tern<br>*Philomachus pugnax* (Western Africa - wintering) – Ruff<br>*Branta bernicla bernicla* - Dark-bellied brent goose | Supralittoral sediment (acidic type) (Coastal stable dune grasslands - acid type) | B1.4 - acid | 8-10 | 8 | 12.3 | 3 | 1.24 |
| | | Supralittoral sediment (calcareous type) (Coastal stable dune grasslands - calcareous type) | B1.4 - calcareous | 10-15 | 10 | 12.3 | 3 | 1.24 |
| | | Supralittoral sediment (shifting coastal dunes) | B1.3 | 10-20 | 10 | 12.3 | 3 | 1.24 |
| | | Standing open water and canals | | No CL assigned | Site Specific | 8.4 | 3 | 1.74 |
| | | Neutral grassland (Low and medium altitude hay meadows) | E2.2 | 20-30 | 20 | 12.3 | 3 | 1.24 |
| | | Littoral sediment (Pioneer, low-mid mid-upper saltmarshes) | A2.54; A2.55, A2.53 | 20-30 | A2.53:20<br>A2.54, A2.55:30 | 12.3 | 3 | 1.24 |
| | | Arable and horticulture | - | Not Sensitive | - | - | Not Sensitive | - |
| | | Improved grassland | - | Not Sensitive | - | - | Not Sensitive | - |
| **Thursley, Hankley and Frensham Commons SPA** | *Caprimulgus europaeus* - European nightjar<br>*Lullula arborea* - Wood lark<br>*Sylvia undata* - Dartford warbler | Coniferous woodland | G3 | 5-15 | 10 | 24 | 3 | 1.11 |
| | | Dwarf shrub heath | F4.2 | 10-20 | 10 | 15.1 | 3 | 1.11 |
| **Wealden Heaths Phase II SPA** | *Caprimulgus europaeus* - European nightjar<br>*Lullula arborea* - Wood lark<br>*Sylvia undata* - Dartford warbler | Coniferous woodland | G3 | 5-15 | 10 | 24.6 | 3 | 1.11 |
| | | Dwarf shrub heath | F4.2 | 10-20 | 10 | 15.8 | 3 | 1.11 |

# Appendix C

## APIS INFORMATION FOR SACS

| Designated Site | Habitat | Relevant CL Habitat | EUNIS Code | CL Range | Recommended Assessment CL | Max NDep (kgN/ha/yr) Value | Ammonia Critical Level | Max $NH_3$ Concentration (µg/m3) |
|---|---|---|---|---|---|---|---|---|
| **Arun Valley SAC** | *Anisus vorticulus* - Ramshorn snail | Rivers and Streams | - | No CL assigned | Site Specific | 14.2 | 3 | 1.5 |
| **Ashdown Forest SAC** | Northern Atlantic wet heaths with *Erica tetralix*<br>European dry heaths<br>*Triturus cristatus* - Great crested newt | Northern wet heath: *Erica tetralix* dominated wet heath | F4.11 | 10-20 | 10 | 14.6 | 1 | 0.99 |
| | | Dry heaths | F4.2 | 10-20 | 10 | 14.6 | 1 | 0.99 |
| **Butser Hill SAC** | *Taxus baccata* woods of the British Isles<br>Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) | Coniferous Woodland | G3 | 5-15 | 10 | 28 | 3 | 1.35 |
| | | Sub-atlantic semi-dry calcareous grassland | E1.26 | 15-25 | 15 | 17.9 | 1 | 1.35 |
| **Castle Hill SAC** | Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)<br>*Gentianella anglica* - Early gentian | Sub-atlantic semi-dry calcareous grassland | E1.26 | 15-25 | 15 | 14.7 | 1 | 1.21 |
| **Duncton to Bignor Escarpment SAC** | *Asperulo-Fagetum* beech forests | Fagus woodland | G1.6 | 10-20 | 15 | 23.2 | Site Specific | 0.97 |
| **East Hampshire Hangers SAC** | *Taxus baccata* woods of the British Isles<br>*Asperulo-Fagetum* beech forests<br>*Tilio-Acerion* forests of slopes, screes and ravines<br>Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)<br>*Genrianella anglica* - Early gentian | Coniferous woodland | G3 | 5-15 | 10 | 28.9 | 3 | 1.33 |
| | | Fagus woodland | G1.6 | 10-20 | 15 | 28.9 | Site Specific | 1.33 |
| | | Meso- and eutrophic Quercus woodland | G1.A | 15-20 | 15 | 28.9 | 3 | 1.33 |
| | | Sub-atlantic semi-dry calcareous grassland | E1.26 | 15-25 | 15 | 18.3 | 1 | 1.33 |
| **Ebernoe Common SAC** | Atlantic acidophilious beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)<br>*Barbastella barbastellus* - Barbastelle<br>*Myotis bechsteini* - Bechstein's bat | Fagus woodland | G1.6 | 10-20 | 15 | 22 | Site Specific | 0.98 |
| | | Broadleaves, mixed and yew woodland | G1 | 10-20 | 10 | 22 | 3 | 0.98 |
| | | Broadleaved deciduous woodland | G1 | 10-20 | 10 | 22 | 3 | 0.98 |

| Designated Site | Habitat | Relevant CL Habitat | EUNIS Code | CL Range | Recommended Assessment CL | Max NDep (kgN/ha/yr) Value | Ammonia Critical Level | Max $NH_3$ Concentration (µg/m3) |
|---|---|---|---|---|---|---|---|---|
| **Mole Gap to Reigate Escarpment SAC** | *Taxus baccata* woods of the British Isles<br>European dry heaths<br>*Asperulo-Fagetum* beech forests<br>Stable *xerothermophilous* formations with *Buxus sempervirens* on rock slopes (*Berberidion pp*)<br>Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*)<br>*Myotis bechsteini* - Bechstein's bat<br>*Triturus cristatus* - Great crested newt | Coniferous woodland | G3 | 5-15 | 10 | 28.9 | 3 | 1.49 |
| | | Dry heaths | F4.2 | 10-20 | 10 | 17.3 | 1 | 1.49 |
| | | Fagus woodland | G1.6 | 10-20 | 15 | 28.9 | Site Specific | 1.49 |
| | | Sub-atlantic semi-dry calcareous grassland | E1.26 | 15-25 | 15 | 28.9 | Site Specific | 1.49 |
| | | Broadleaved deciduous woodland | G1 | 10-20 | 10 | 28.9 | 3 | 1.49 |
| | | Standing open water and canals | - | No CL assigned | Site Specific | 13.2 | 3 | 1.49 |
| **Shortheath Common SAC** | Bog woodland<br>Transition mires and quaking bogs<br>European dry heaths | Raised and blanket bogs | D1 | 5-10 | 5 | 24.6 | Site specific | 1.11 |
| | | Valley mires, poor fens and transition mires | D2 | 10-15 | 10 | 15.6 | 1 | 1.11 |
| | | Dry heaths | F4.2 | 10-20 | 10 | 15.6 | 1 | 1.11 |
| **Singleton and Cocking Tunnels SAC** | *Barbastella barbastellus* - Barbastelle<br>*Myotis bechsteini* - Bechstein's bat | Broadleaved, mixed and yew woodland | G1 | 10-20 | 10 | 23.5 | 3 | 0.96 |
| **Solent and Isle of Wight Lagoons SAC** | Coastal lagoons | Pioneer, low-mid, mid-upper saltmarshes | A2.54; A2.55, A2.53 | 20-30 | A2.53:20<br>A2.54, A2.55:30 | 10.8 | Site specific | 1.04 |

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|---|---|---|---|---|---|---|---|---|
| **Solent Maritime SAC** | Perennial vegetation of stony banks<br>Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes")<br>Estuaries<br>Coastal lagoons<br>Salicornia and other annuals colonizing mud and sand<br>Spartina swards (*Spartinion maritimae*)<br>Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)<br>Sandbanks which are slightly covered by sea water all the time<br>Mudflats and sandflats not covered by seawater at low tide<br>Annual vegeation of drift lines<br>*Vertigo moulinsiana* - Desmoulin's whorl snail | Coastal stable dune grasslands | B1.4 | 8-15 | Acid Dunes:8<br>Calcareous Dunes: 10 | 18.4 | Site Specific | 1.62 |
| | | Shifting coastal dunes | B1.3 | 10-20 | 10 | 18.4 | Site Specific | 1.62 |
| | | Pioneer, low-mid, mid-upper saltmarshes | A2.54; A2.55, A2.53 | 20-30 | A2.53:20<br>A2.54, A2.55:30 | 18.4 | Site Specific | 1.62 |
| | | Rivers and streams | | No CL assigned | Site Specific | 15.0 | 3 | 1.62 |
| **South Wight Maritime SAC** | Reefs | - | - | - | Not Sensitive | - | Not Sensitive | - |
| | Vegetated sea cliffs of the Atlantic and Baltic Coasts | - | - | No CL assigned | Site Specific | 11.8 | Site Specific | 0.92 |
| | Submerged or partially submerged sea caves | - | - | - | Not Sensitive | 10.2 | Not Sensitive | - |
| **The Mens SAC** | Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*<br>*Barbastella barbastellus* - Barbastelle | Fagus Woodland | G1.6 | 10-20 | 15 | 26.9 | Site Specific | 1.55 |
| | | Broadleaved, mixed and yew woodland | G1 | 10-20 | 10 | 26.9 | 3 | 1.55 |
| **Thursley, Ash, Pirbright and Chobham SAC** | Depressions on peat substrates of the *Rhynchosporion*<br>Northern Atlantic wet heaths with *Erica tetralix*<br>European dry heaths | Valley mires, poor fens and transition mires | D2 | 10-15 | 10 | 15.7 | 1 | 1.46 |
| | | Northern wet heath: *Erica tetralix* dominated wet health | F4.11 | 10-20 | 10 | 15.7 | 1 | 1.46 |
| | | Dry heaths | F4.2 | 10-20 | 10 | 15.7 | 1 | 1.46 |

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|---|---|---|---|---|---|---|---|---|
| **Woolmer Forest SAC** | Natural dystrophic lakes and pondsTransition mires and and quaking bogs<br>Depressions on peat substrates of the *Rhynchosporion*<br>Northern Atlantic wet heaths with *Erica tetralix*<br>European dry heaths | Permanent dystrophic lakes, ponds and pools | C1.4 | 3-10 | Site Specific | 14 | Site Specific | 1.03 |
| | | Valley mires, poor fens and transition mires | D2 | 10-15 | 10 | 15.7 | 1 | 1.03 |
| | | Northern wet heath: *Erica tetralix* dominated wet health | F4.11 | 10-20 | 10 | 15.7 | 1 | 1.03 |
| | | Dry heaths | F4.2 | 10-20 | 10 | 15.7 | 1 | 1.03 |

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