

# Habitats Regulations Assessment of the Regulation 15 Farnham Neighbourhood Plan

## **Screening Document**

July 2016



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## Screening Report

<b>LC-235</b>	<b>Document Control Box</b>
Client	Farnham Town Council
Report Title	Habitats Regulations Assessment of the Farnham Neighbourhood Plan: Screening Report
Number	3
Status	Final
Filename	LC-235 Farnham_NDP_HRA_In-depth_Screening_3_110716SS.docx
Date	July 2016
Author	SBS
Reviewed	FG
Approved	NJD

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## Acronyms

<b>AA</b>	Appropriate Assessment
<b>AADT</b>	Annual Average Daily Trips
<b>DEFRA</b>	Department for Environment, Food, and Rural Affairs
<b>DMRB</b>	Design Manual for Roads and Bridges
<b>FTC</b>	Farnham Town Council
<b>HRA</b>	Habitats Regulations Assessment / Appraisal
<b>IPENS</b>	Improvement Programme for England's Natura 2000 sites
<b>JNCC</b>	Joint Nature Conservation Committee
<b>LPA</b>	Local Planning Authority
<b>LSE</b>	Likely Significant Effect
<b>NDP</b>	Neighbourhood Development Plan
<b>NE</b>	Natural England
<b>NPPF</b>	National Planning Policy Framework
<b>SAC</b>	Special Area of Conservation
<b>SANG</b>	Suitable Accessible Natural Greenspace
<b>SIP</b>	Site Improvement Plan

<b>SNH</b>	Scottish Natural Heritage
<b>SPA</b>	Special Protection Area
<b>SSSI</b>	Site of Special Scientific Interest

# Executive Summary

- E1** This HRA report has carefully considered the conservation objectives of European sites that might be associated with development as part of the Regulation 15 Farnham Neighbourhood Plan.
- E2** There are nine sites of European importance within the Farnham area. No further sites have been identified from a 20km area of search, or included through hydrological pathways that lie beyond this search zone.
- E3** The following nine sites are included in this HRA report:
- Thames Basin Heaths SPA;
  - Thursley, Ash, Pirbright & Chobham SAC;
  - Thursley, Hankley & Frensham Commons (Wealden Heaths Phase I) SPA;
  - Shortheath Common SAC;
  - Wealden Heaths Phase II SPA;
  - Woolmer Forest SAC;
  - East Hampshire Hangers SAC;
  - Ebernoe Common SAC; and
  - Thursley & Ockley Bogs Ramsar.
- E4** A number of threats and pressures facing these sites were explored during the assessment, including: recreational pressure, air quality and hydrological changes. Of particular concern were potential increases in air pollution at the following sites:
- Thames Basin Heaths SPA;
  - Thursley, Ash, Pirbright & Chobham SAC; and
  - Thursley, Hankley & Frensham Commons SPA.
- E5** Further examination of air pollution issues determined that no likely significant effects were expected to arise as a result of the Regulation 15 Farnham Neighbourhood Plan. As a result, it is recommended that the Regulation 15 Farnham Neighbourhood Plan be screened out of the HRA process.

# 1 Introduction

## 1.1 Background

1.1.1 Lepus Consulting has prepared this Habitats Regulations Assessment (HRA) report of the Regulation 15 Farnham Neighbourhood Plan (NDP, Plan) on behalf of Farnham Town Council (FTC). This is a requirement of Regulation 102 of the Conservation of Habitats and Species Regulations 2010<sup>1</sup> (the Habitats Regulations).

1.1.2 The following European sites were identified using a 20km area of search around Farnham, as well as including sites which are potentially connected (e.g. hydrologically) beyond this distance:

- Thames Basin Heaths SPA;
- Thursley, Ash, Pirbright & Chobham SAC;
- Thursley, Hankley & Frensham Commons (Wealden Heaths Phase I) SPA;
- Shortheath Common SAC;
- Wealden Heaths Phase II SPA;
- Woolmer Forest SAC;
- East Hampshire Hangers SAC;
- Ebernoe Common SAC; and
- Thursley & Ockley Bogs Ramsar.

1.1.3 Whilst Ramsar sites are not European sites, NPPF paragraph 118 states that Ramsar sites should be given the same protection as European sites. For the purpose of this report, the phrase 'European site' includes Ramsar sites, along with Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) unless otherwise stated.

1.1.4 The nature of, conservation objectives of, and pressures and threats facing each site have been explored in this report.

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<sup>1</sup> UK Government, (2010), The Conservation of Habitats and Species Regulations 2010



## 1.2 Approach to report preparation

1.2.1 The outputs of this report include information in relation to:

- The HRA process;
- Methodology for HRA;
- Evidence gathering in relation to European sites;
- Conservation objectives of sites;
- Understanding threats and pressures relevant to each site; and
- Conclusions and recommendations.

1.2.2 This report comprises a screening and scoping assessment under the Habitats Regulations, which is the first step in assessing any likely significant effects of development proposals in the Regulation 15 Farnham NDP. This report sets the baseline with regards to European sites and determines whether the Plan is likely to have any significant effects on these sites.

## 1.3 The HRA process

1.3.1 The application of HRA to land-use plans is a requirement of the Conservation of Habitats and Species Regulations 2010, the UK's transposition of European Directive 92/43/EEC *on the conservation of natural habitats and of wild fauna and flora* (the Habitats Directive). HRA applies to plans and projects, including all Local Development Documents in England and Wales.

1.3.2 The HRA process assesses the potential effects of a plan or project against the conservation objectives of any European sites designated for their importance to nature conservation. These sites form a system of internationally important sites throughout Europe and are known collectively as the 'Natura 2000 network'.

1.3.3 European sites provide valuable ecological infrastructure for the protection of rare, endangered or vulnerable natural habitats and species of exceptional importance within the EU. These sites consist of SACs, designated under the Habitats Directive and SPAs, designated under European Directive 2009/147/EC *on the conservation of wild birds* (the Birds Directive). Additionally, Government policy requires that sites designated under the Ramsar Convention (The Convention on Wetlands of International Importance, especially as Waterfowl Habitat) are to be treated as if they are fully designated European sites for the purpose of considering development proposals that may affect them.

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- 1.3.4 Under Regulation 102 of the Habitats Regulations, the assessment must determine whether or not a plan will adversely affect the integrity of the European sites concerned. The process is characterised by the precautionary principle. The European Commission describes the precautionary principle as follows:
- 1.3.5 “If a preliminary scientific evaluation shows that there are reasonable grounds for concern that a particular activity might lead to damaging effects on the environment, or on human, animal or plant health, which would be inconsistent with protection normally afforded to these within the European Community, the **Precautionary Principle** is triggered.”
- 1.3.6 Decision-makers then have to determine what action/s to take. They should take account of the potential consequences of no action, the uncertainties inherent in scientific evaluation, and should consult interested parties on the possible ways of managing the risk. Measures should be proportionate to the level of risk, and to the desired level of protection. They should be provisional in nature pending the availability of more reliable scientific data.
- 1.3.7 Action is then undertaken to obtain further information, enabling a more objective assessment of the risk. The measures taken to manage the risk should be maintained so long as scientific information remains inconclusive and the risk is unacceptable.
- 1.3.8 The hierarchy of intervention is important: where significant effects are likely or uncertain, plan makers must firstly seek to avoid the effect through, for example, a change of policy. If this is not possible, mitigation measures should be explored to remove or reduce the significant effect. If neither avoidance, nor subsequently, mitigation is possible, alternatives to the plan should be considered. Such alternatives should explore ways of achieving the plan’s objectives that do not adversely affect European sites.
- 1.3.9 If no suitable alternatives exist, plan-makers must demonstrate under the conditions of Regulation 103 of the Habitats Regulations, that there are Imperative Reasons of Overriding Public Interest (IROPI) in order to continue with the proposal.
- 1.4 About the Regulation 15 Farnham Neighbourhood Plan**
- 1.4.1 Farnham is a town and civil parish located in Waverley, Surrey. Farnham Town Council is preparing a neighbourhood development plan (NDP), which will guide development in the area covered by FTC (see **Figure 4.1**). The plan making process began in February 2013, when Waverley Borough Council designated the area as a Neighbourhood Plan Area.
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- 1.4.2 This document focuses on assessment of the Farnham Neighbourhood Plan, Regulation 15 (July 2016). This has been developed taking account of the outcomes of a series of consultation exercises with the local community. The Plan considers how best to achieve high quality development that is in keeping with the location, protecting open space and promoting local businesses, among other issues.
- 1.4.3 The NDP presents policies according to the following themes:
- Environment;
  - Housing;
  - Business;
  - Farnham Town Centre and Local Centres;
  - Leisure and Wellbeing; and
  - Local Infrastructure.
- 1.4.4 Policies contained in the NDP are presented in **Table 1.1**.

**Table 1.1:** Policies contained in the Regulation 15 Farnham Neighbourhood Plan

Environment	
<b>FNP1</b>	Design of New Development and Conservation
<b>FNP2</b>	Farnham Town Centre Conservation Area and its setting
<b>FNP3</b>	Shop Fronts within Farnham Conservation Area and its setting
<b>FNP4</b>	Advertisements within Farnham Conservation Area and its setting
<b>FNP5</b>	Great Austins Conservation Area and its setting
<b>FNP6</b>	Wrecclesham Conservation Area and its setting
<b>FNP7</b>	Old Church Lane Conservation Area and its setting
<b>FNP8</b>	South Farnham Arcadian Areas
<b>FNP9</b>	Buildings and Structures of Character
<b>FNP10</b>	Protect and Enhance the Countryside
<b>FNP11</b>	Preventing Coalescence between Farnham and Aldershot; Badshot Lea and Weybourne; Rowledge and Wrecclesham and Rowledge and Frensham
<b>FNP12</b>	Thames Basin Heaths Special Protection Area (SPA)
<b>FNP13</b>	Protect and Enhance Biodiversity
Housing	
<b>FNP14</b>	Housing Site Allocations
<b>FNP15</b>	Small Scale Dwellings

<b>FNP16</b>	Building Extensions Within and Outside the Built Up Area Boundary
<b>Business</b>	
<b>FNP17</b>	Land for Business
<b>FNP18</b>	Business Site Option
<b>FNP19</b>	Enterprise and Incubation Hub at the University of the Creative Arts
<b>FNP20</b>	Rural Buildings for Business and Tourist Uses
<b>Farnham Town Centre and Neighbourhood Centres</b>	
<b>FNP21</b>	East Street, South Street and Dogflud Way
<b>FNP22</b>	The Woolmead
<b>FNP23</b>	Farnham Town Centre
<b>FNP24</b>	Neighbourhood Centres
<b>FNP25</b>	Public Houses
<b>Leisure and Wellbeing</b>	
<b>FNP26</b>	Sports Pitches
<b>FNP27</b>	Public Open Space
<b>FNP28</b>	Indoor Sports Facilities
<b>FNP29</b>	Cultural Facilities
<b>Infrastructure</b>	
<b>FNP30</b>	Transport Impact of Development
<b>FNP31</b>	Water and Sewerage Infrastructure Capacity
<b>FNP32</b>	Securing Infrastructure

## 1.5 HRA process to date

- 1.5.1 The HRA process is iterative and assesses different stages of the plan making process. The HRA process of this report draws on the updated methodology prepared by David Tyldesley Associates for Scottish Natural Heritage (2015), as explained in **Section 2.1**. This methodology sets out 13 stages of the HRA process, shown in **Table 2.1**.
- 1.5.2 FTC has determined the need for HRA and has commissioned Lepus Consulting to undertake the scoping and screening stages for the NDP. This report constitutes a screening report, which includes the completion of stages 1-7 (**Table 2.1**).

## 2 Methodology

### 2.1 Guidance and best practice

- 2.1.1 Guidance on HRA has been published in draft form by the Government (DCLG, 2006) and Natural England in conjunction with David Tyldesley Associates (Local Development Plan Documents under the Provisions of the Habitats Regulations, 2009); both draw, in part, on European Union guidance (European Commission, 2001) regarding the methodology for undertaking appropriate assessment (AA) of plans.
- 2.1.2 All guidance recognises that there is no statutory method for undertaking HRA and that the adopted method must be appropriate to its purpose under the Habitats Directive and Regulations; this concept is one of the reasons why HRA is often referred to as appropriate assessment.
- 2.1.3 In the absence of finalised guidance from the Government, Natural England has suggested that the updated guidance on HRA published by Scottish Natural Heritage (SNH, 2015) can be used to assess land use plans<sup>2</sup>.
- 2.1.4 For the purposes of this report Habitats Regulations Appraisal and Habitats Regulations Assessment are synonymous.
- 2.1.5 Paragraph 1.3 of the SNH guidance states that “the procedure referred to in this guidance is that of ‘Habitats Regulations Appraisal’ (HRA) which encompasses the requirements of Article 6(3) of the Habitats Directive...The procedure is sometimes referred to as an ‘appropriate assessment’, but this can be confusing because an appropriate assessment is only one particular stage in the process of Habitats Regulations Appraisal. Not all plans undergoing Habitats Regulations Appraisal will reach the stage of appropriate assessment, because some plans would not be likely to have a significant effect on a European site”.
- 2.1.6 The term ‘Habitats Regulations Appraisal’ is used here to encompass the decision on whether the plan should be subject to appraisal, the ‘screening’ process for determining whether an ‘appropriate assessment’ is required, as well as any ‘appropriate assessment’ that may be required. It is important to remember that an appropriate assessment is only required where the plan-making body determines that the plan is likely to have a significant effect on a European site in Great Britain, or a European Offshore Marine Site, either alone or in combination with other plans or projects, and the plan is not directly connected with or necessary to the management of the site.

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<sup>2</sup> pers. comm.

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## 2.2 Habitats Regulations Assessment methodology

- 2.2.1 This HRA follows the methodology prepared by David Tyldesley Associates for Scottish Natural Heritage (SNH, 2015). A step-by-step methodology is outlined in the guidance (see **Appendix B**) and has been summarised in **Table 2.1**. Stages 1 to 7 are relevant to this report.

## 2.3 Dealing with uncertainty

- 2.3.1 The assessment of effects can be affected by uncertainty in a number of ways; some of these are addressed below.

- 2.3.2 **Regulatory Uncertainty:** Some plans will include references to proposals that are planned and implemented through other planning and regulatory regimes, for example, trunk road or motorway improvements. These will be included because they have important implications for spatial planning, but they are not proposals of the Local Planning Authority (LPA), nor are they proposals brought forward by the plan itself. Their potential effects will be assessed through other procedures. The LPA may not be able to assess the effects of these proposals. Indeed, it may be inappropriate for them to do so, and would also result in unnecessary duplication.

- 2.3.3 There is a need to focus the Habitats Regulations Assessment on the proposals directly promoted by the plan, and not all and every proposal for development and change, especially where these are planned and regulated through other statutory procedures, which will be subject to HRA.

- 2.3.4 **Planning Hierarchy Uncertainty:** The higher the level of a plan in the hierarchy the more general and strategic its provisions will be and therefore the more uncertain its effects will be. The protective regime of the Directive is intended to operate at differing levels. In some circumstances assessment 'down the line' will be more effective in assessing the potential effects of a proposal on a particular site and protecting its integrity. However, three tests should be applied.

- 2.3.5 It will be appropriate to consider relying on the HRA of lower tier plans, in order for an LPA to ascertain a higher tier plan would not have an adverse effect on the integrity of a European site, only where:

A] The higher tier plan assessment cannot reasonably assess the effects on a European site in a meaningful way; whereas

B] The HRA of the lower tier plan, which will identify more precisely the nature, scale or location of development, and thus its potential effects, will be able to change the proposal if an adverse effect on site integrity cannot be ruled out, because the lower tier plan is free to change the nature and/or scale and/or location of the proposal in order to avoid adverse effects on the integrity of any European site (e.g. it is not constrained by location specific policies in a higher tier plan); and

C] The HRA of the plan or project at the lower tier is required as a matter of law or Government policy.

2.3.6 It may be helpful for the HRA of the higher tier plan to indicate what further assessment may be necessary in the lower tier plan.

2.3.7 **Implementation Uncertainty:** In order to clarify the approach where there is uncertainty because effects depend on how the plan is implemented, and to ensure compliance with the Regulations, it may be appropriate to impose a caveat in relevant policies, or introduce a free-standing policy, which says that any development project that could have an adverse effect on the integrity of a European site will not be in accordance with the plan.

2.3.8 This would help to enable the assessors to reasonably conclude, on the basis of objective information, that even where there are different ways of implementing a plan, and even applying the precautionary principle, no element of the plan can argue that it draws support from the plan, if it could adversely affect the integrity of a European site.

## 2.4 Likely significant effect

2.4.1 The plan and its component policies are assessed to determine and identify any potential for **'likely significant effect'** (LSE) upon European sites. The guidance (SNH, 2015) provides the following interpretation.

2.4.2 "A likely effect is one that cannot be ruled out on the basis of objective information. The test is a 'likelihood' of effects rather than a 'certainty' of effects. Although some dictionary definitions define 'likely' as 'probable' or 'well might happen', in the Waddenzee case the European Court of Justice ruled that a project should be subject to appropriate assessment "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site, either individually or in combination with other plans and projects". Therefore, 'likely', in this context, should not simply be interpreted as 'probable' or 'more likely than not', but rather whether a significant effect can objectively be ruled out".

**Table 2.1:** Synoptic version of the flow chart in **Appendix B** identifying screening and appropriate assessment stages within the HRA process

Group		HRA Stage
Determination of Need and Compilation of Evidence Base	Stage 1	Determination of need
	Stage 2	Identification of European sites that should be considered in the appraisal
	Stage 3	Gathering information on European sites
	Stage 4	Discretionary discussions on the method and scope of the appraisal
Screen all aspects of plan (Screening)	Stage 5	Screening the plan
	Stage 6	Applying mitigation measures at screening stage to avoid likely significant effects
	Stage 7	Rescreen the plan and decide on the need for appropriate assessment
Appropriate Assessment	Stage 8	The appropriate assessment – site integrity, conservation objectives and the precautionary principle
	Stage 9	Amending the plan until there would be no adverse effects on site integrity
Consultation of Draft	Stage 10	Preparing a draft of HRA
	Stage 11	Consultation
	Stage 12	Proposed modifications
	Stage 13	Modifying and completing HRA

## 2.5 Limitations

- 2.5.1 This report has been prepared using the best available data. References are cited in the text where appropriate. Lepus Consulting has collected no primary data in the preparation of this report.



## 3 European Sites

### 3.1 About European sites

- 3.1.1 Each site of European importance has its own intrinsic qualities, besides the habitats or species for which it has been designated, that enables the site to support the ecosystems that it does. An important aspect of this is that the ecological integrity of each site can be vulnerable to change from natural and human induced activities in the surrounding environment (pressures and threats). For example, sites can be affected by land use plans in a number of different ways, including the direct land take of new development, the type of use the land will be put to (for example, an extractive or noise-emitting use), the pollution a development generates and the resources used (during construction and operation for instance).
- 3.1.2 An intrinsic quality of any European site is its functionality at the landscape ecology scale. This refers to how the site interacts with the zone of influence of its immediate surroundings, as well as the wider area. This is particularly the case where there is potential for developments resulting from the plan to generate water or air-borne pollutants, use water resources or otherwise affect water levels. Adverse effects may also occur via impacts to mobile species occurring outside of a designated site but which are qualifying features of the site. For example, there may be effects on protected birds that use land outside the designated site for foraging, feeding, roosting or other activities.
- 3.1.3 During the screening process, as a starting point to explore and identify which European sites might be affected by the Farnham NDP, a 20km area of search was applied. The guidance (SNH, 2015) specifies no specific size of search area. The inclusion of a specific search area was to facilitate the use of the following list of criteria for identification of European sites. Other sites beyond this zone were also reviewed on the basis that they may be connected physiographically.

### 3.2 Ecological information

- 3.2.1 **Table 3.1** presents information about the criteria used for the identification of European sites in the HRA process. **Appendix A** identifies the qualifying features of each site and presents details of conservation objectives for each of the nine sites identified as potentially being affected by the Farnham NDP. The information is drawn from the Joint Nature Conservancy Council (JNCC) and Natural England (NE).

**Table 3.1:** Criteria for identification of European sites (SNH, 2015)

Selection of European sites	
Criteria	European sites to check
All plans	Sites within the plan area, including those for the criteria listed below
For plans that could affect the aquatic environment	Sites upstream or downstream of the plan area in the case of a river or estuary
	Peatland and other wetland sites with relevant hydrological links to land within the plan area, irrespective of distance from the plan area
For plans that could affect mobile species	Sites which have significant ecological links with land in the plan area, for example, land in the plan area may be used by migratory birds, which also use a SPA, outside the plan area, at different times of year
For plans that could increase recreational pressure on European sites potentially vulnerable to such pressure	European sites in the plan area
	European sites within a reasonable travel distance of the plan area boundaries that may be affected by local recreational or other visitor pressure within the plan area (the appropriate distance in each case will need to be considered on its merits, in light of any available evidence)
	European sites within a longer travel distance of the plan area, which are major (regional or national) visitor attractions such as European sites which are National Nature Reserves where public visiting is promoted, sites in National or Regional Parks, coastal sites and sites in other major tourist or visitor destinations (the appropriate distance in each case will need to be considered on its merits, in light of any available evidence)
For plans that would increase the amount of development	Sites that are used for, or could be affected by, water abstraction in or close to the plan area
	Sites used for, or which could be affected by, discharge or effluent from waste water treatment works or other waste management streams serving land in the plan area, irrespective of distance from the plan area
	Sites that could be affected by transport or other infrastructure (e.g. by noise or visual disturbance)
	Sites that could be affected by increased deposition of air pollutants arising from the proposals, including emissions from significant increases in traffic
For plans that could affect the coast	Sites in the same coastal 'cell', or part of the same coastal ecosystem, or where there are interrelationships with or between different physical coastal processes

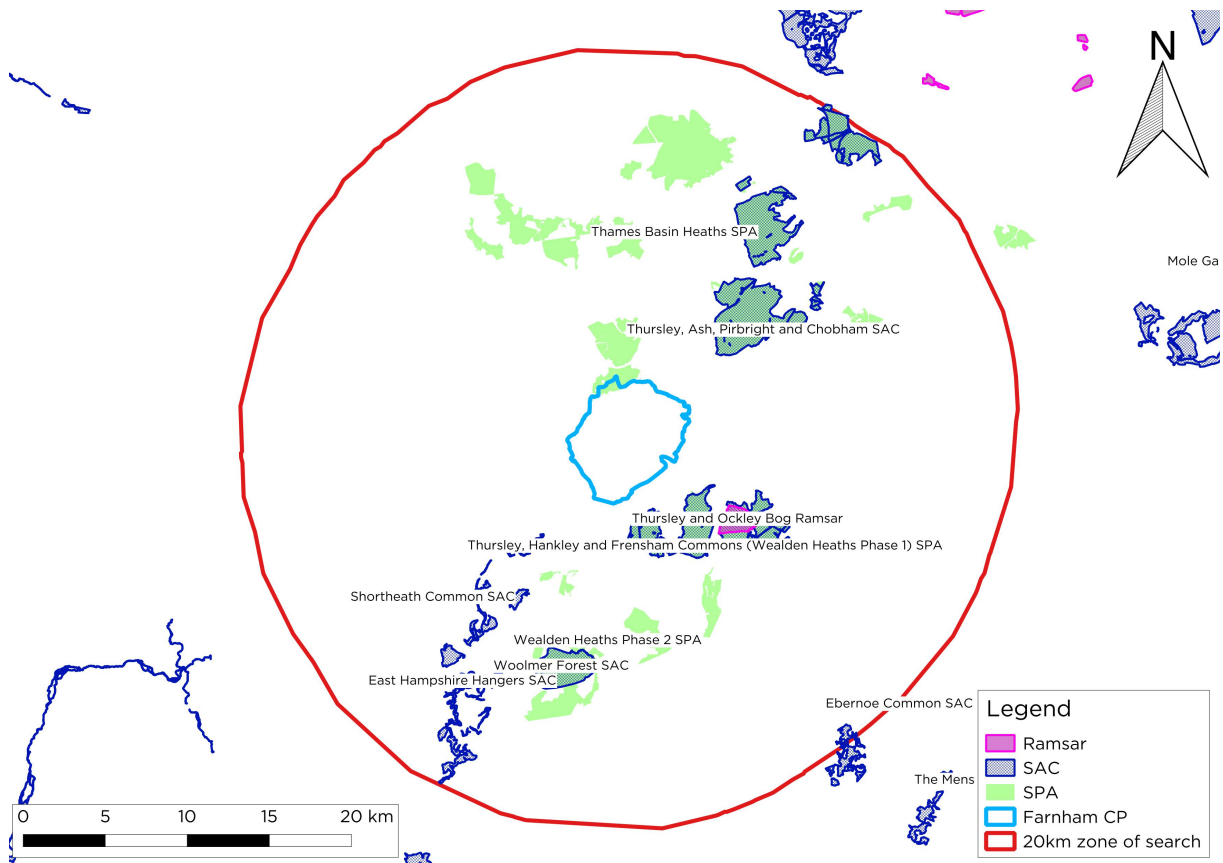
## 4 Potential Effects

### 4.1 Introduction

4.1.1 Baseline research identified nine sites for assessment:

- Thames Basin Heaths SPA;
- Thursley, Ash, Pirbright & Chobham SAC;
- Thursley, Hankley & Frensham Commons (Wealden Heaths Phase I) SPA;
- Shortheath Common SAC;
- Wealden Heaths Phase II SPA;
- Woolmer Forest SAC;
- East Hampshire Hangers SAC;
- Ebernoe Common SAC; and
- Thursley & Ockley Bogs Ramsar.

4.1.2 The locations of these European Sites are illustrated in **Figure 4.1**.



**Figure 4.1:** Map illustrating location of European Sites (SPAs, SACs and Ramsar sites) and a 20km buffer around Farnham

## 4.2 Conservation objectives

4.2.1 The Waddenzee case<sup>3</sup> demonstrates that the effect of a plan or project on a European site cannot be considered to be significant if it '*is not likely to undermine its conservation objectives*'. The conservation objectives and qualifying features of each European site are presented in **Appendix A**. To help determine whether these conservation objectives will be undermined, this report considers whether any existing pressures on or threats to the site will be exacerbated.

<sup>3</sup> European Commission Case C-127/02 Reference for a Preliminary Ruling 'Waddenzee' 07/9/2004 (para 45)

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## 4.3 Site pressures and threats

- 4.3.1 Site pressures and threats have been derived from data held by the JNCC and Natural England. SAC and SPA information is held on Natura 2000 Data Forms, including threats and pressures that would have a negative impact on the SAC and activities and management that would have a positive effect on each site. Site Improvement Plans (SIPs) have been developed for each European site as part of the Improvement Programme for England's Natura 2000 sites (IPENS). These set out an overview of current and predicted issues at the site. Information regarding pressures and threats from Natura 2000 Data Forms and SIPs are summarised in **Table 4.1** and discussed in the following sections.
- 4.3.2 The Ramsar Information Sheet for Thursley and Ockley Bogs<sup>4</sup> states that there are no factors adversely affecting the site's ecological character. The Ramsar Information Sheet was prepared in 2008 and more recent data may have come to light since this time. Thursley & Ockley Bogs Ramsar site lies wholly within Thursley, Hankley & Frensham Commons SPA and two of the features fulfilling Ramsar Criterion 3 (see **Appendix A**) are the same as two of the qualifying features for the SPA (European nightjar and woodlark). The SIP for Thursley, Hankley & Frensham Commons SPA states that there are a number of threats and pressures at the site affecting European nightjar and woodlark. This report has assumed that such threats and pressures are also relevant to Thursley and Ockley Bogs Ramsar site.

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<sup>4</sup> JNCC (2008) Information Sheet on Ramsar Wetlands (RIS): Thursley and Ockley Bog, [online] Available at: <https://rsis.ramsar.org/RISapp/files/RISrep/GB647RIS.pdf>

**Table 4.1:** Threats and pressures for each European site identified as potentially being affected by Farnham NDP

Threats and pressures	Thames Basin Heaths SPA	Thursley, Ash, Pirbright & Chobham SAC	Thursley, Hankley & Frensham Commons SPA	Shortheath Common SAC	Wealden Heaths Phase II SPA	Woolmer Forest SAC	East Hampshire Hangers SAC	Ebernoe Common SAC
Air pollution	✓ <sup>ab</sup> All qualifying features	✓ <sup>ab</sup> All qualifying features	✓ <sup>ab</sup> All qualifying features	✓ <sup>b</sup> All qualifying features		✓ <sup>b</sup> All qualifying features	✓ <sup>ab</sup> All qualifying features	✓ <sup>b</sup> All qualifying features
Other human intrusions and 3 <sup>rd</sup> party impacts				✓ <sup>b</sup> European dry heaths				
Biocenotic evolution, succession	✓ <sup>a</sup>	✓ <sup>a</sup>	✓ <sup>a</sup>	✓ <sup>a</sup>				
Forestry and woodland/plantation management	✓ <sup>a*b</sup> All qualifying features	✓ <sup>b</sup> Wet heathland with cross-leaved heath European dry heath	✓ <sup>b</sup> All qualifying features				✓ <sup>a*b</sup> Mixed woodland on base-rich soils associated with rocky slopes	✓ <sup>a*b</sup> All qualifying features
Public access and sports / recreational activities	✓ <sup>ab</sup> All qualifying features		✓ <sup>ab</sup> All qualifying features	✓ <sup>ab</sup> All qualifying features	✓ <sup>ab</sup> All qualifying features	✓ <sup>a</sup>		✓ <sup>b</sup> Bechstein's bat
Hydrological changes	✓ <sup>b</sup> All qualifying features	✓ <sup>ab</sup> Wet heathland with cross-leaved heath Depressions on peat	✓ <sup>b</sup> All qualifying features		✓ <sup>a</sup>	✓ <sup>ab</sup> Wet heathland with cross-leaved heath Very wet mires often		✓ <sup>ab</sup> Bechstein's bat

		substrates				identified by an unstable 'quaking' surface Depressions on peat surfaces		
Grazing regime	✓ <sup>b</sup> All qualifying features	✓ <sup>a+b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features					
Wildfire / arson	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features		✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> Wet heathland with cross-leaved heath European dry heaths Very wet mires often identified by an unstable 'quaking' surface		
Habitat fragmentation	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features					✓ <sup>b</sup> Barbastelle bat Bechstein's bat
Invasive species		✓ <sup>b</sup> Wet heathland with cross-leaved heath European dry heath			✓ <sup>a</sup>	✓ <sup>ab</sup> Acid peat-stained lakes and ponds	✓ <sup>ab</sup> Mixed woodland on base-rich soils associated with rocky slopes	
Military activities	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> All qualifying features		✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> Acid peat-stained lakes and ponds Wet heathland with cross-leaved heath		

						European dry heaths Very wet mires often identified by an unstable 'quaking' surface		
Feature location / extent / condition unknown	✓ <sup>b</sup> All qualifying features		✓ <sup>b</sup> All qualifying features		✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> Acid peat-stained lakes and ponds Wet heathland with cross-leaved heath European dry heaths Very wet mires often identified by an unstable 'quaking' surface		
Inappropriate scrub control	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> Wet heathland with cross-leaved heath European dry heath	✓ <sup>b</sup> All qualifying features	✓ <sup>b</sup> European dry heaths Very wet mires often identified by an unstable 'quaking' surface				
Change in cultivation practices / land management					✓ <sup>ab*</sup> All qualifying features	✓ <sup>ab*</sup> Wet heathland with cross-leaved heath European dry heaths Very wet mires often identified by an unstable 'quaking' surface Depressions on peat		✓ <sup>ab</sup> Barbastelle bat



						surfaces		
Changes in biotic conditions (climate change)								✓ <sup>a</sup>
Other ecosystem modifications								✓ <sup>a</sup>
Offsite habitat availability / management								✓ <sup>b</sup> Barbastelle bat Bechstein's bat
Unknown threat or pressure					✓ <sup>a</sup>	✓ <sup>a</sup>		

<sup>a</sup> Indicates that this is highlighted as a threat / pressure in the relevant Natura 2000 Data Form

<sup>b</sup> Indicates that this is highlighted as a threat in the relevant Site Improvement Plan

\* Indicates that this threat / pressure is also identified as a potentially positive impact on the relevant Natura 2000 Data Form

## 4.4 Scoping out pressures and threats

4.4.1 The following threats and pressures identified in **Table 4.1** have been scoped out of further discussion as they are beyond the influence of the NDP:

- Forestry and woodland / plantation management;
- Grazing regime;
- Military activities;
- Inappropriate scrub control;
- Changes in cultivation practices / land management;
- Changes in biotic conditions (climate change); and
- Biocenotic evolution, succession.

4.4.2 The following threats and pressures identified in **Table 4.1** have been scoped out of further discussion as they are too vague to enable a meaningful assessment:

- Feature location / extent / condition unknown; and
- Unknown threat or pressure.

4.4.3 It is recommended that more data be collected on these issues. If additional data becomes available, this HRA should be revisited.

## 4.5 Air pollution

4.5.1 Air pollution, in particular, atmospheric nitrogen deposition, is a pressure relevant to all European sites considered in this HRA, with the exception of Wealden Heaths Phase II SPA. There is an Air Quality Management Area in Farnham, along the A325 through the town centre, which has been designated due to high levels of nitrogen oxide.

4.5.2 As 87.8% of households in Farnham have at least one car or van, it is assumed that the majority of new households, including those associated with housing development proposed in the Plan, will have at least one car or van. This will lead to a greater number of cars on the road in Farnham and the surrounding area. The Design Manual for Roads and Bridges (DMRB) suggests that air quality impacts from vehicles are most likely to occur within 200m of a road<sup>5</sup>.

4.5.3 Heading northwest from Farnham town, the A287 runs along the boundary of Thames Basin Heaths SPA and provides a link to the M3 and Basingstoke. The A325 also passes within 200m of Thames Basin Heaths SPA, providing a link to Farnborough. Outside of Farnham, the A287 passes south through Thursley, Hankley & Frensham Commons SPA and Thursley, Ash, Pirbright & Chobham SAC, providing a link to the A3, Chichester and the south coast. These sites are most likely to be affected by air pollution resulting from increased traffic generated by the Farnham NDP. This is explored further in **Chapter 5**.

## 4.6 Other human intrusions and 3<sup>rd</sup> party impacts

4.6.1 This pressure / threat refers to encroachment by householders onto Shortheath Common SAC. As Shortheath Common SAC lies outside of Farnham and this threat / pressure is concerned only with householders local to the SAC, it is not anticipated that the Farnham NDP will have an impact on this threat / pressure.

## 4.7 Public access and sports / recreational activities

4.7.1 Public access and sports / recreational activities has been identified as a pressure / threat against the following European sites:

- Thames Basin Heaths SPA;
- Thursley, Hankley & Frensham Commons SPA;
- Shortheath Common SAC;
- Wealden Heaths Phase II SPA;
- Woolmer Forest SAC;
- Ebernoe Common SAC; and
- Thursley & Ockley Bogs.

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<sup>5</sup> The Highways Agency, Transport Scotland, Welsh Assembly Government, The Department for Regional Development Northern Ireland (2007) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 1: Air Quality

- 4.7.2 The HRA of Housing Scenarios for Waverley Local Plan<sup>6</sup> collated visitor information on European sites within the Borough. This found that 75% of dog walkers and 54% of visitors came from within 5km of Wealden Heaths SPA and visits outside of 5km correlated with the A3 corridor. As Farnham is approximately 5km from Wealden Heaths SPA at its nearest point and does not lie along the A3 corridor, the effects of the NDP on Wealden Heaths Phase II SPA, and the coincident Woolmer Forest SAC, are likely to be negligible.
- 4.7.3 Some 70% of visitors to Shortheath Common SAC come from within 600m, which suggests few visitors from Farnham would utilise this site<sup>7</sup>.
- 4.7.4 There is limited publically accessible visitor information for Ebernoe Common SAC. Given that visitors from Farnham are more likely to utilise Thames Basin Heaths than Thursley, Hankley and Frensham Commons SPA, it is considered unlikely that many visitors to Ebernoe Common come from Farnham, as it is further still from Farnham.
- 4.7.5 Some 70% of visitors to Thursley, Hankley and Frensham Commons SPA, with which Thursley & Ockley Bogs is partially coincident, come from within 9km of the site. Whilst Farnham is within 9km of these sites, a previous visitor survey suggested that visitors from Farnham are more likely to utilise Thames Basin Heaths SPA, due to its closer proximity<sup>8</sup>.
- 4.7.6 The primary recreational impacts of the Plan are expected to be in relation to Thames Basin Heaths SPA. Policy FNP12 of the NDP aims to avoid impacts of the plan on Thames Basin Heaths SPA. This policy echoes the retained South East Plan Policy NRM6, which states that there should be no development within 400m of the SPA, as adverse effects are unlikely to be able to be mitigated within this distance. Any development within 400m – 5km should provide appropriate mitigation, which includes the majority of Farnham. Mitigation includes provision of Suitable Alternative Natural Greenspace (SANG) at 8 hectares per 1000 population, to be agreed with Natural England.

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<sup>6</sup> URS (2014) Waverley Local Plan Habitats Regulations Assessment Analysis of Housing Scenarios

<sup>7</sup> EPR (2012) Whitehill & Bordon Eco-town, Visitor Survey Report

<sup>8</sup> Ibid

- 4.7.7 There is currently one designated SANG in Farnham, at Farnham Park. The Thames Basin Heaths Special Protection Area Avoidance Strategy<sup>9</sup> was reviewed in 2016. This review established that Farnham Park has capacity to serve as SANG for an additional 1,403 dwellings, which is sufficient to accommodate the 1,288 dwellings proposed in the NDP (housing allocations and windfall capacity).
- 4.7.8 Policy FNP12 requires developments with potential effects on the SPA to contribute towards SANG provision at Farnham Park and to make a financial contribution towards wider Strategic Access Management and Monitoring. This policy sets out additional guidance regarding SANG contributions, by ensuring SANG is accessible from developments of over 10 dwellings and that mitigation measures are agreed with Natural England, provided prior to occupation and provided in perpetuity.
- 4.7.9 Policy FNP12 is considered sufficient to reduce recreational impacts of the NDP on Thames Basin Heaths to a negligible level.

## 4.8 Hydrological changes

- 4.8.1 Hydrological changes have been identified as a pressure / threat against the following European sites:
- Thames Basin Heaths SPA;
  - Thursley, Ash, Pirbright & Chobham SAC;
  - Thursley, Hankley & Frensham Commons SPA;
  - Wealden Heaths Phase II SPA;
  - Woolmer Forest SAC;
  - Ebernoe Common SAC; and
  - Thursley & Ockley Bogs.
- 4.8.2 South East Water supplies water in Farnham. South East Water's Water Resource Management Plan (WRMP) states that 75% of the water supply comes from groundwater. As such, the increased water demand associated with development proposed in the Plan is expected to come primarily from groundwater sources, which will not affect any of the European sites.

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<sup>9</sup> Waverley Borough Council (2009, Updated 2013) Thames Basin Heaths Special Protection Area Avoidance Strategy

4.8.3 None of the sites allocated by the plan are expected to change the flooding regime of any European sites, due to a combination of site size and location. As such, the NDP is not expected to lead to hydrological changes at any European sites in the area.

4.8.4 The HRA of South East Water's WRMP concluded that, of the sites considered in this assessment, the WRMP would have an affect on Thames Basin Heaths SPA at Surrey Hills, due to a potential extension of the water service reservoir, needed to serve increasing demand. This was explored though an appropriate assessment, which concluded that significant adverse effects were capable of being mitigated<sup>10</sup>.

## 4.9 Wildfire / arson

4.9.1 Wildfire / arson has been identified as a pressure / threat against the following European sites:

- Thames Basin Heaths SPA;
- Thursley, Ash, Pirbright & Chobham SAC;
- Thursley, Hankley & Frensham Commons SPA;
- Wealden Heaths Phase II SPA;
- Woolmer Forest SAC; and
- Thursley & Ockley Bogs Ramsar.

4.9.2 The NDP is not expected to affect the frequency or nature of wildfires, as this is dependent on the existing site management regime and climatic factors. Any increase in the risk of arson arising from the NDP is deemed to be negligible.

## 4.10 Habitat fragmentation

4.10.1 Habitat fragmentation has been identified as a pressure / threat against the following European sites:

- Thames Basin Heaths;
- Thursley, Ash, Pirbright and Chobham SAC;
- Thursley, Hankley & Frensham Commons SPA;
- Ebernoe Common SAC; and
- Thursley & Ockley Bogs Ramsar.

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<sup>10</sup> South East Water (2014) WRMP14, 2014 Water Resources Management Plan Habitats Regulations Assessment Screening Report and Appropriate Assessment

- 4.10.2 The NDP does not promote development within any European sites. As such, the NDP is not expected to lead to any direct habitat loss or fragmentation of European sites.

## 4.11 Invasive species

- 4.11.1 Invasive species have been identified as a pressure / threat against the following European sites:

- Thursley, Ash, Pirbright & Chobham SAC;
- Wealden Heaths Phase II SPA;
- Woolmer Forest SAC; and
- East Hampshire Hangers SAC.

- 4.11.2 SIPs for these sites indicate that each site has issues with a specific invasive species. Thursley, Ash, Pirbright & Chobham SAC is threatened by *Rhododendron* and *Gaultheria*; Wealden Heaths Phase II SPA and Woolmer Forest SAC are threatened by *Crassula helmsii*; and East Hampshire Hangers SAC is threatened by a non-native hybrid ivy. The NDP is not expected to affect the vitality or spread of any of these plant species and will therefore not increase the pressure / threat of invasive species at these sites.

## 4.12 Other ecosystem modifications

- 4.12.1 This pressure / threat has been identified in relation to Ebernoe Common SAC. The Data Dictionary from the European Environment Agency<sup>11</sup> indicates that this category of pressures / threats includes the following:

- Reduction or loss in specific habitat features;
- Anthropogenic reduction of habitat connectivity;
- Reduction, lack or prevention of erosion; and
- Applied (industrial) destructive research.

- 4.12.2 As discussed in **Section 4.10**, the NDP is not expected to lead to any direct loss of habitat nor is it expected to reduce habitat connectivity. The NDP is not expected to lead to any destructive research in Ebernoe Common SAC.

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<sup>11</sup> European Environment Agency (2013) EIONET Data Dictionary [online], available at: <http://dd.eionet.europa.eu>, accessed: 29/04/16

- 4.12.3 Erosion from the NDP would most likely be caused by residents visiting the site. As explained in **Section 4.7**, Farnham is unlikely to generate significant numbers of visitors to Ebernoe Common SAC. As such the NDP is not expected to contribute to the pressure / threat of other ecosystem modifications.

#### 4.13 Offsite habitat availability / management

- 4.13.1 Offsite habitat availability / management has been identified as a pressure for Ebernoe Common SAC. This pressure affects Barbastelle bats (*Barbastella barbastellus*) and Bechstein's bats (*Myotis bechsteinii*) in particular.
- 4.13.2 A study of Barbastelle bats in southern England found home ranges to be between 1km and 20km, but recommended conservation efforts should target conservation and enhancement of habitats within 7km of roost sites<sup>12</sup>. The Bat Conservation Trust advises that Bechstein's bats tend to forage in woodland within a kilometre or two of their roosts<sup>13</sup>.
- 4.13.3 Development in Farnham is unlikely to affect this pressure, as it is expected to be largely beyond the likely range of Barbastelle and Bechstein's bats from Ebernoe Common SAC.

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<sup>12</sup> Zeale, M. R. K., Davidson-Watts, I., Jones, G., (2012) Home range use and habitat selection by barbastelle bats (*Barbastella barbastellus*): implications for conservation

<sup>13</sup> Bat Conservation Trust (2010) Bechstein's bat factsheet, available at: [http://www.bats.org.uk/data/files/Species\\_Info\\_sheets/bechsteins.pdf](http://www.bats.org.uk/data/files/Species_Info_sheets/bechsteins.pdf), accessed: 29/04/2016



## 5 Air Pollution

### 5.1 Introduction and definitions

- 5.1.1 **Section 4.5** identified air pollution as a pressure that has potential to be exacerbated by the Farnham NDP. This chapter looks at this in more detail to determine whether further work is needed with regards to the effects of air pollution.
- 5.1.2 The critical levels of pollutants are defined as “concentrations of pollutants in the atmosphere above which direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge”<sup>14</sup>.
- 5.1.3 The critical loads of pollutants are defined as “quantitative estimate of exposure to one or more pollutants below which significant harmful effects on specified sensitive elements of the environment do not occur according to present knowledge”<sup>15</sup>.

### 5.2 Current baseline: Thames Basin Heaths SPA

- 5.2.1 The area of Thames Basin Heaths SPA with potential to be affected includes Bourley and Long Valley SSSI unit 3 (Bourley and Long Valley 3) and Heath Brow SSSI unit 1 (Heath Brow 1). The condition of Heath Brow 1 is favourable with no identified threat to this condition. The condition of Bourley and Long Valley 3 is unfavourable recovering, with medium risk to the condition.
- 5.2.2 Bourley and Long Valley 3 consists of dwarf shrub heath. Heath Brow 1 is designated for its geological significance. Aerial photography suggests the general habitat of Heath Brow 1 is similar to Bourley and Long Valley 3.
- 5.2.3 The critical levels and loads of pollutants associated with vehicle transport on dwarf shrub heath, and current atmospheric concentrations of these at the site, are presented in **Table 4.2**. This information is provided by the Air Pollution Information System (APIS). Concentrations of pollutants represent a three-year average (2012 – 2014) at a resolution of 5km.

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<sup>14</sup> UNECE (date unavailable) ICP Modelling and Mapping Critical loads and levels approach, available at: <http://www.unece.org/env/Irtap/WorkingGroups/wge/definitions.html>, accessed 29/06/16

<sup>15</sup> Ibid

**Table 5.1:** Critical loads of pollutants associated with vehicle transport<sup>16</sup>

Pollutant		Critical level / load	Thames Basin Heaths SPA	Thursley SPA and SAC
			Current concentration / deposition	Current concentration / deposition
Ammonia		1.0 – 3.0 µg m <sup>3</sup>	1.18 µg m <sup>3</sup>	0.9 µg m <sup>3</sup>
Nitrogen deposition		10 – 20 kg N/ha/year	16.8 kg N/ha/year	15.68 kg N/ha/year
Nitrogen Oxides (NO <sub>x</sub> )		30 µg NO <sub>x</sub> (as NO <sub>2</sub> ) m <sup>3</sup>	16.52 µg NO <sub>x</sub> (as NO <sub>2</sub> ) m <sup>3</sup>	14 µg NO <sub>x</sub> (as NO <sub>2</sub> ) m <sup>3</sup>
Acid deposition	Min N <sup>a</sup>	1.39 keq/ha/year	1.2 keq/ha/year	1.12 keq/ha/year
	Max N <sup>b</sup>	1.7 keq/ha/year		

<sup>a</sup> Deposition of acidity solely due to nitrogen removal processes in the soil

<sup>b</sup> Acidity assuming only nitrogen contributes to acidification, but allowing for nitrogen removal processes

5.2.4 Critical loads for both Ammonia concentrations and Nitrogen deposition are expressed as ranges. With regards to ammonia, a critical level of 1.0 µg m<sup>3</sup> applies to lichens and bryophytes, whilst a critical level of 3.0 µg m<sup>3</sup> applies to higher plants. As the qualifying features of the site are expected to be more reliant on higher plants than bryophytes and lichen, the value of 3.0 µg m<sup>3</sup> has been used. APIS recommends using the lower value, 10 Kg N/ha/year for nitrogen deposition at the screening stage.

5.2.5 The cells shaded in red in **Table 4.2** indicate that the current levels of nitrogen deposition are in exceedance of the critical load. Nitrogen deposition at Thames Basin Heaths SPA is currently 68%. APIS indicates that this exceedance is likely to affect all qualifying features due to habitat transition from heather to grass dominance, decline in lichens, changes in plant biochemistry and increased sensitivity to abiotic stress.

### 5.3 Current baseline: Thursley, Hankley and Frensham Commons SPA and Thursley, Ash, Pirbright and Chobham SAC

5.3.1 Thursley, Hankley and Frensham Commons SPA and Thursley, Ash, Pirbright and Chobham SAC include the same area of land and are referred to collectively in this report as the 'Thursley SPA and SAC'. The area of these sites with potential to be affected coincides with Thursley, Hankley and Frensham Commons SSSI units 3, 45 and 46. The condition of all of these units is favourable with no identified threat.

<sup>16</sup> APIS (2016) Query by Location: Habitat: Dwarf Shrub Heath, Grid reference: SU822491, available at: <http://www.apis.ac.uk/query/LocationCheckbox-result?gridRef=SU822491&gridType=landranger&dropDownHabitat=Dwarf+Shrub+Heath&pollutants%5B%5D=Acid&pollutants%5B%5D=Amm&pollutants%5B%5D=NDep&pollutants%5B%5D=NO&agreement=agree&submit=See+the+results>, accessed 29/06/16

5.3.2 Thursley, Hankley and Frensham Commons SSSI units 3 and 45 consist of dwarf shrub heath. The critical levels and loads of pollutants associated with vehicle transport on dwarf shrub heath, and current atmospheric concentrations of these at the site, are presented in **Table 4.2**<sup>17</sup>. Nitrogen deposition at Thursley SPA and SAC is currently 56.8% greater than the critical load. APIS indicates that this exceedence is likely to affect all qualifying features due to habitat transition from heather to grass dominance, decline in lichens, changes in plant biochemistry and increased sensitivity to abiotic stress.

5.3.3 Thursley, Hankley and Frensham Commons SSSI unit 46 consists of an area of standing open water, known as Frensham Great Pond. APIS does not give site-specific information on critical loads and levels for aquatic habitats, as quantitative relationships between biology and nitrogen concentrations are poorly understood. Frensham Great Pond is not a key component of the habitat for target species of either the Thursley SPA or SAC, therefore air pollution has not been considered further in this regard.

## 5.4 Estimated change in vehicle movements

5.4.1 Surrey County Council have provided Lepus Consulting with data from the traffic model used to inform the Draft Strategic Highway Assessment Report (SHA) to support the Waverley Borough Council Local Plan<sup>18</sup>. The scenarios modelled are explained below:

- **2031 Scenario 1 (Do-Minimum)** - includes all commercial and residential developments with planning permission (including completions and extent permissions) within the borough of Waverley along with all residential planning permissions and the most likely strategic development sites identified by Guildford Borough Council in their proposed Local Plan.
- **2031 Scenario 2 (Do-Something)** - includes all of scenario 1 (do-minimum) plus the most likely strategic development sites identified by Waverley Borough Council in their proposed Local Plan.
- **2031 Scenario 3 (Do-Something)** - continuation of scenario 2 (do-something) plus local mitigation schemes to the local road network in both Waverley and Guildford boroughs.

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<sup>17</sup> APIS search centred on grid reference: SU849404

<sup>18</sup> Surrey County Council (2016) Waverley Borough Council Local Plan Strategic Highway Assessment Report (Draft)

- 5.4.2 The following information is based on 'Scenario 2' of the SHA. This scenario is based on background growth, plus commitments and completions, plus Local Plan most likely strategic development sites. This includes development of approximately 2330 dwellings in Farnham within the plan period, including commitments<sup>19</sup>. The neighbourhood plan is prepared on the basis of provision of an additional 2248 dwellings in Farnham within the plan period. For the purposes of this assessment, the difference between the Local Plan housing figure for Farnham and the NDP figure is considered to be negligible. This section considers likely effects of development on the primary roads of concern: A287 Odiham Road; A287 Frensham Road and A325 Farnborough Road.
- 5.4.3 The DMRB<sup>20</sup> suggests that local air quality will be affected for roads that meet any of the following criteria:
- Road alignment will change by 5m or more;
  - Daily traffic flows will change by 1000 average annual daily trips (AADT) or more;
  - Heavy Duty Vehicle flows will change by 200 AADT or more;
  - Daily average speed will change by 10 km/hr or more; or
  - Peak hour speed will change by 20km/hr or more<sup>21</sup>.
- 5.4.4 The NDP will not result in a change to road alignment. Expected changes in traffic flow along the roads of concern are presented in **Table 4.3**.

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<sup>19</sup> Confirmed by Waverley Borough Council (pers. comm., 2016)

<sup>20</sup> The Highways Agency, Transport Scotland, Welsh Assembly Government, The Department for Regional Development Northern Ireland (2007) Design Manual for Roads and Bridges, Volume 11, Section 3, Part 1: Air Quality

<sup>21</sup> Natural England have suggested these are appropriate measures to use (pers. comm., 2016)

**Table 5.2:** Changes in traffic flow in Scenario 2, when compared to Scenario 1 (do-minimum)

Road	Direction	Average AM Peak Hour (0700 - 1000)				Average PM Peak Hour (1600 - 1900)			
		Total Flow AM (vehicles)	HGV AM	HGV %	Average Speed AM (Km/hr)	Total Flow PM (vehicles)	HGV PM	HGV %	Average Speed PM (Km/hr)
A325 Farnborough Road	Southbound	-143	-15	0	0	20	1	0	0
A325 Farnborough Road	Northbound	-223	-13	0	0	20	-1	0	0
A287 Odiham Road	Eastbound	-122	-12	0	0	37	1	0	-1
A287 Odiham Road	Westbound	-113	-2	0	0	-1	-1	0	0
A287 Frensham Road	Southbound	-59	-3	0	0	0	0	0	0
A287 Frensham Road	Northbound	-82	-1	0	-1	7	1	0	0

5.4.5 **Table 4.3** demonstrates that overall levels of traffic are expected to decrease at AM peak hours. This may be due to factors such as changes in behaviour and changes in the routes drivers are expected to take. All roads considered are likely to experience an increase in traffic flow at PM peak hours, with the largest increases in traffic flow at the A325 Farnborough Road in both directions and the A287 Odiham Road eastbound. As the total flow of PM peak traffic is expected to increase by 40 vehicles on the A325 Farnham Road and by 36 vehicles on the A287 Odiham Road, it is considered highly unlikely that total changes in traffic flow will be 1000 AADT or more. **Table 4.3** shows that changes in HGV flows will be limited and are therefore considered negligible.

5.4.6 Changes in peak hour speeds are expected to be negligible. Lepus Consulting have not been supplied with data regarding changes in daily average speed. Due to the limited levels of change in peak hours, daily average speed is not expected to change by 10km/hr or more.

5.4.7 Due to the fact that these roads lie within Farnham, it is likely that a large proportion of the traffic on these routes is generated within Farnham, although the figures drawn from the Surrey County Council traffic model consider traffic generated across the borough of Waverley. As effects of development on traffic flow are expected to be small, and number of vehicles on the road in the AM peak is expected to decrease, impacts of changes in atmospheric pollution as a result of the NDP on European sites are expected to be negligible.

## 5.5 Avoidance and Mitigation

5.5.1 Whilst it is considered that the NDP is unlikely to have significant adverse effects on nearby European sites, there are a number of measures that could further reduce increases in air pollution within proximity of European sites.

5.5.2 Policy FNP30 of the NDP requires proposals for residential development to ensure sustainable transport links to principal facilities and the town centre. This policy also requires proposals for non-residential uses located outside the town centre to ensure sustainable transport links to surrounding residential areas, the nearest bus stop, the town centre and nearest local centre are provided. The policy requires development proposals to maintain or enhance existing local footpath and cycle networks. The policy could be improved by specifying the quality of these links. In particular, by specifying the frequency and capacity of public transport services and ensuring any walking and cycling routes are safe and attractive to users. Users are likely to prefer routes that are well-lit, less isolated (e.g. overlooked) and separated from road traffic.

- 5.5.3 Policy FNP30 will only allow development proposals that do not significantly add to traffic congestion in the town and that contribute to, or are in areas of, poor air quality. Measures discussed in **paragraph 5.5.2** should help contribute to this. Increases in traffic and air pollution may be reduced through schemes to promote use of sustainable transport links, including requiring developers to produce green travel plans.
- 5.5.4 Additional mitigation measures that could be built into the NDP include encouraging working from home. This could be done through including policies to promote home working, including development of live / work units and promoting high speed broadband.
- 5.5.5 Roadside tree planting may help to absorb some of the air pollutants that would otherwise affect European protected sites. Trees currently line the stretch of the A287 that passes adjacent to Thames Basin Heaths SPA. Tree planting could help to reduce the levels of atmospheric air pollution reaching the dwarf shrub heath habitat of the Thursley SPA and SAC. Tree species should be carefully selected and any planting should be monitored to ensure the planting of trees does not disturb the habitat of European sites, for example, by seeding and replacing the shrub heath habitat to a wooded habitat.
- 5.5.6 Grazing near to the road may help manage seeding trees. Grazing has been used as a nitrogen deposition management method in its own right, although Natural Resources Wales suggests that this could lead to changes in species composition and may lead to redistribution, of, rather than removal of nutrients<sup>22</sup>. Natural Resources Wales has reviewed a number of management techniques to reduce atmospheric nitrogen deposition<sup>23</sup> and suggests cutting vegetation may be a way of removing nitrogen without redistributing it. These methods constitute changes of management to the sites, which could be discussed with Natural England but are outside the remit of the Neighbourhood Plan.

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<sup>22</sup> Natural Resources Wales (2013) Review of the effectiveness of on-site habitat management to reduce atmospheric nitrogen deposition impacts on terrestrial habitats

<sup>23</sup> Ibid

# 6 Conclusions and Recommendations

## 6.1 Assessment findings

- 6.1.1 There are eight Natura 2000 sites and one Ramsar site within 20km of Farnham.
- 6.1.2 This HRA report has outlined the threats and pressures that have the potential to undermine the conservation objectives of each European site and Ramsar site considered.
- 6.1.3 It is recommended that the Regulation 15 Farnham NDP is not screened into the HRA process. No likely significant effects are expected as a result of the Farnham Neighbourhood Plan.

## 6.2 Next steps

- 6.2.1 This report will be subject to consultation with Natural England. If Natural England concur with the conclusions of this HRA screening, the process will be complete.
- 6.2.2 If the Farnham Neighbourhood Plan policies are changed from the Regulation 15 version of the plan assessed in this document, the HRA screening process should be revisited.



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# APPENDIX A

## European site: Conservation Objectives (where available from Natural England).

\* Denotes a priority natural habitat or species

### Thames Basin Heaths SPA

#### Conservation objectives:

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

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and
- The distribution of the qualifying features within the site.

#### Qualifying Features:

- A224 *Caprimulgus europaeus*; European nightjar (breeding)
- A246 *Lullula arborea*; Woodlark (breeding)
- A302 *Sylvia undata*; Dartford warbler (breeding).

Natural England has released Draft Supplementary Advice on Conserving and Restoring Site Features (2016) for Thames Basin Heaths SPA. This provides the following table as a general guide to months in which significant numbers of each qualifying feature is most likely to be present at the SPA i.e. the breeding season of each qualifying feature:

Feature	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dartford Warbler												
European Nightjar												
Woodlark												

### Thursley, Ash, Pirbright & Chobham SAC

#### Conservation objectives:

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

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

#### Qualifying Features:

- H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath
- H4030. European dry heaths

- H7150. Depressions on peat substrates of the *Rhynchosporion*.

### Thursley, Hankley & Frensham Commons (Wealden Heaths Phase I) SPA

#### Conservation objectives:

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

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and
- The distribution of the qualifying features within the site.

#### Qualifying Features:

- A224 *Caprimulgus europaeus*; European nightjar (breeding)
- A246 *Lullula arborea*; Woodlark (breeding)
- A302 *Sylvia undata*; Dartford warbler (breeding).

### Shortheath Common SAC

#### Conservation objectives:

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

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

#### Qualifying Features:

- H4030. European dry heaths
- H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable 'quaking' surface
- H91D0. Bog woodland\*

## Wealden Heaths Phase II SPA

### Conservation objectives:

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

- The extent and distribution of the habitats of the qualifying features;
- The structure and function of the habitats of the qualifying features;
- The supporting processes on which the habitats of the qualifying features rely;
- The population of each of the qualifying features; and
- The distribution of the qualifying features within the site.

### Qualifying Features:

- A224 *Caprimulgus europaeus*; European nightjar (breeding)
- A246 *Lullula arborea*; Woodlark (breeding)
- A302 *Sylvia undata*; Dartford warbler (breeding).

## Woolmer Forest SAC

### Conservation objectives:

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

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

### Qualifying Features:

- H3160. Natural dystrophic lakes and ponds; Acid peat-stained lakes and ponds
- H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath
- H4030. European dry heaths
- H7140. Transition mires and quaking bogs; Very wet mires often identified by an unstable 'quaking' surface
- H7150. Depressions on peat substrates of the *Rhynchosporion*.

## East Hampshire Hangers SAC

### Conservation objectives:

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

- The extent and distribution of the 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.

### Qualifying Features:

- H6210. Semi-natural grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*) (important orchid sites); Dry grasslands and scrublands on chalk or limestone (important orchid sites)\*
- H9130. *Asperulo-Fagetum* beech forests; Beech forests on neutral to rich soils
- H9180. *Tilio-Acerion* forests of slopes, screes and ravines; Mixed woodland on base-rich soils associated with rocky slopes\*
- H91J0. *Taxus baccata* woods of the British Isles; Yew-dominated woodland\*
- S1654. *Gentianella anglica*; Early gentian

## Ebernoe Common SAC

### Conservation objectives:

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

- The extent and distribution of the 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.

### Qualifying Features:

- H9120. Atlantic acidophilous beech forests with *Ilex* and sometimes *Taxus* in the shrub layer (*Quercion robori-petraeae* or *Illici-*

*Fagenion*); Beech forests on acid soils

- S1308. *Barbastella barbastellus*; Barbastelle bat
- S1323. *Myotis bechsteinii*; Bechstein's bat

### Thursley & Ockley Bogs Ramsar

Ramsar sites do not have Conservation Objectives in the same way as SPAs and SACs. The site overview given on the Information Sheet on Ramsar Wetlands (RIS) is as follows:

*Thursley and Ockley Bogs is a valley mire complex and lies within Thursley, Hankley & Frensham Commons SSSI. The mire occurs within a matrix of heathland, where drainage is impeded, and a deep layer of peat has built up from the remains of bog-moss *Sphagnum* spp. which forms much of the vegetation. Several areas of open water also contribute significantly to the overall diversity of the site, ranging from acidic boggy pools and ditches to large ponds.*

#### Ramsar Criteria:

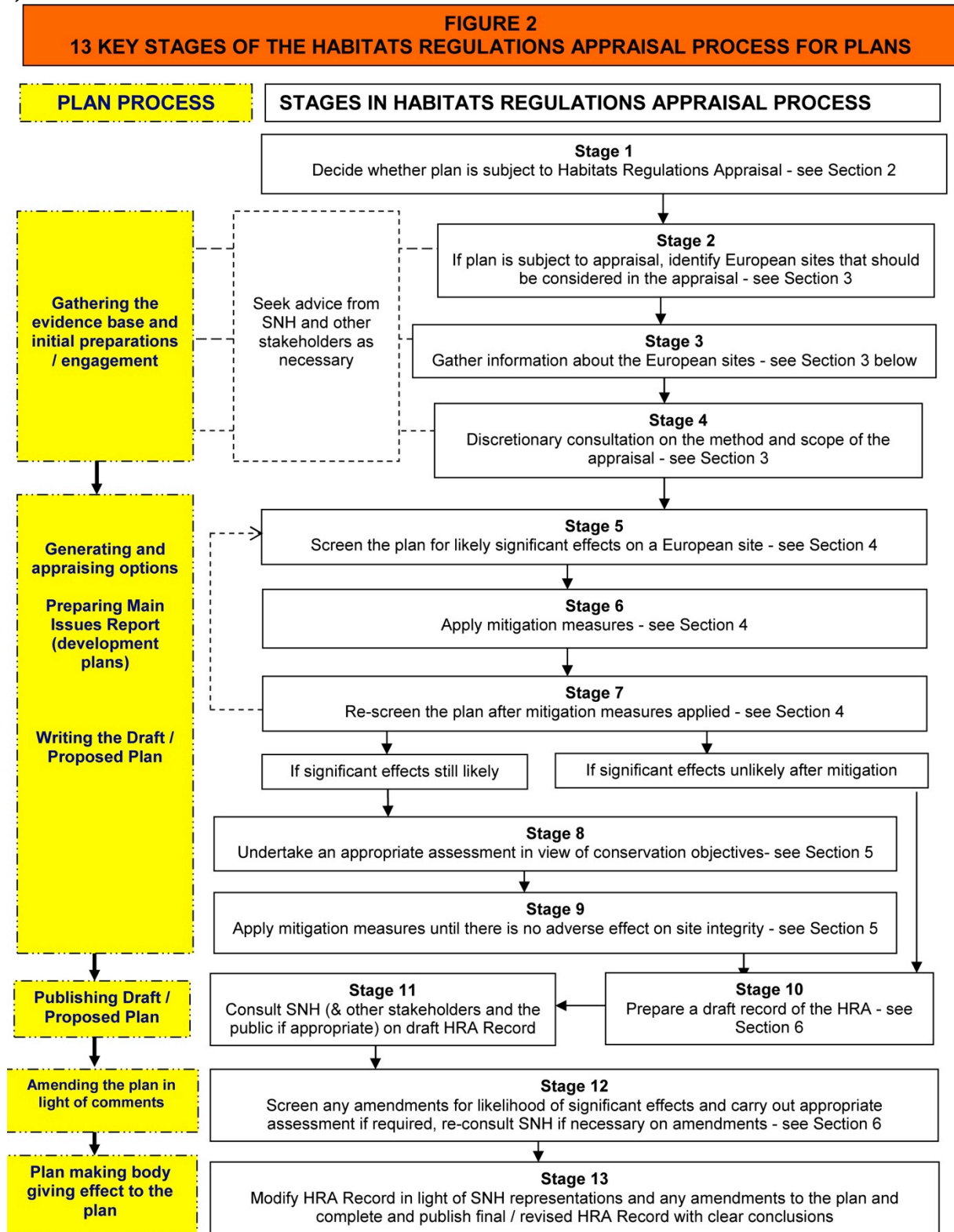
Ramsar Criteria are the criteria for identifying Wetlands of International Importance. The relevant criteria and ways in which this site meets the criteria are presented in the table below.

Ramsar Criterion	Description of Ramsar Criterion	Relevant feature of Thursley & Ockley Bogs
2	A wetland should be considered internationally important if it supports vulnerable, endangered, or critically endangered species or threatened ecological communities.	Supports a community of rare wetland invertebrate species including notable numbers of breeding dragonflies.
3	A wetland should be considered internationally important if it supports plant and/or animal species at a critical stage in their life cycles, or provides refuge during adverse conditions.	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 <i>Caprimulgus europaeus</i> and woodlark <i>Lullula arborea</i> .

# APPENDIX B

## Flow chart of HRA process.

The 13 Key Stages of the Habitats Regulations Appraisal Process (reproduced from SNH, 2012)





# APPENDIX C

## Policy Screening Categories

In accordance with the SNH (2015) Guidance, each element of the plan was subject to an initial screening to determine whether it needed consideration as part of the HRA. Lepus considered each policy of the NDP in turn and assigned one or more of the following categories:

1. General policy statements or policies that are too general for a meaningful assessment until more detail is known;
2. Projects referred to in, but not proposed by, the plan;
3. No likely significant effects:
  - a. Policies to protect the natural or built environment;
  - b. Policies that will not lead to change (e.g. design policies);
  - c. Policies that make provision for change but which could have no conceivable effect; and
4. Policies that cannot be screened out at this stage.

Further information on these categories can be found in the SNH (2015) Guidance. The results of this initial screening are presented in **Table C.1**. Those policies highlighted in light blue are those that could not be screened out on the basis of the categories given above.

**Table C.1:** Results of initial screening of policies

Environment		Screening category
<b>FNP1</b>	Design of New Development and Conservation	1
<b>FNP2</b>	Farnham Town Centre Conservation Area and its setting	3a
<b>FNP3</b>	Shop Fronts within Farnham Conservation Area and its setting	3a
<b>FNP4</b>	Advertisements within Farnham Conservation Area and its setting	3a
<b>FNP5</b>	Great Austins Conservation Area and its setting	3a
<b>FNP6</b>	Wrecclesham Conservation Area and its setting	3a
<b>FNP7</b>	Old Church Lane Conservation Area and its setting	3a
<b>FNP8</b>	South Farnham Arcadian Areas	3a
<b>FNP9</b>	Buildings and Structures of Character	3a
<b>FNP10</b>	Protect and Enhance the Countryside	3a
<b>FNP11</b>	Preventing Coalescence between Farnham and Aldershot; Badshot Lea and Weybourne; Rowledge and Wrecclesham and Rowledge and Frensham	3a

<b>FNP12</b>	Thames Basin Heaths Special Protection Area (SPA)	3a
<b>FNP13</b>	Protect and Enhance Biodiversity	3a
<b>Housing</b>		
<b>FNP14</b>	Housing Site Allocations	4
<b>FNP15</b>	Small Scale Dwellings	4
<b>FNP16</b>	Building Extensions Within and Outside the Built Up Area Boundary	3c
<b>Business</b>		
<b>FNP17</b>	Land for Business	4
<b>FNP18</b>	Business Site Option	4
<b>FNP19</b>	Enterprise and Incubation Hub at the University of the Creative Arts	1
<b>FNP20</b>	Rural Buildings for Business and Tourist Uses	1
<b>Farnham Town Centre and Neighbourhood Centres</b>		
<b>FNP21</b>	East Street, South Street and Dogflud Way	4
<b>FNP22</b>	The Woolmead	4
<b>FNP23</b>	Farnham Town Centre	3c
<b>FNP24</b>	Neighbourhood Centres	3c
<b>FNP25</b>	Public Houses	3b
<b>Leisure and Wellbeing</b>		
<b>FNP26</b>	Sports Pitches	3c
<b>FNP27</b>	Public Open Space	3b
<b>FNP28</b>	Indoor Sports Facilities	3b, 3c
<b>FNP29</b>	Cultural Facilities	3b
<b>Infrastructure</b>		
<b>FNP30</b>	Transport Impact of Development	3b
<b>FNP31</b>	Water and Sewerage Infrastructure Capacity	3c
<b>FNP32</b>	Securing Infrastructure	1



© Lepus Consulting Ltd

1 Bath Street Cheltenham GL50 1YE

T: 01242 525222

E: [enquiries@lepusconsulting.com](mailto:enquiries@lepusconsulting.com)

[www.lepusconsulting.com](http://www.lepusconsulting.com)

**CHEL TENHAM**



Lepus Consulting  
1 Bath Street  
Cheltenham  
Gloucestershire GL50 1YE

t: 01242 525222  
w: [www.lepusconsulting.com](http://www.lepusconsulting.com)  
e: [enquiries@lepusconsulting.com](mailto:enquiries@lepusconsulting.com)