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South Oxfordshire Local Plan

Habitats Regulations Assessment Report

HRA Report
Prepared by LUC
March 2017

Project Title: Habitats Regulations Assessment for South Oxfordshire
Local Plan

Client: South Oxfordshire District Council

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Planning & EIA
Design
Landscape Planning
Landscape Management
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LUC BRISTOL
12th Floor Colston Tower
Colston Street Bristol
BS1 4XE
T +44 (0)117 929 1997
bristol@landuse.co.uk

Offices also in:
London
Glasgow
Edinburgh



Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD
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1 Introduction

- 1.1 LUC has been commissioned by South Oxfordshire District Council to carry out a Habitats Regulations Assessment (HRA) of its Local Plan. This report presents the methodology and findings of the HRA.

Background to the preparation of the new Local Plan

- 1.2 South Oxfordshire District Council (SODC) is producing a new Local Plan for the district, which will replace its Local Plan 2011 and Core Strategy. Once adopted, the Local Plan will set out policies and guidance for development of the district over the next 15 years (2018 to 2033, once published). This HRA is based on the current draft version of the Local Plan.
- 1.3 SODC adopted its Local Plan 2011 in 2006, and then adopted its Core Strategy in December 2012; the Core Strategy included some 'saved' policies from the Local Plan 2011. The Core Strategy set out the Council's approach to development in the district up to 2027 and provided for the development of 5,214 new homes and 14.7 ha of employment land over the Plan period¹. At the time that the Core Strategy was adopted the Council was intending to produce a number of other Development Plan Documents (DPDs), which together with the Core Strategy would comprise the Local Plan for the district.
- 1.4 In April 2014 a Strategic Housing Market Assessment (SHMA) for Oxfordshire was published, setting out levels of housing need across the county up to 2031. The SHMA showed that up to 5,900 more homes would be required in South Oxfordshire than were provided for in the adopted Core Strategy. The Council therefore decided to review the existing plan and extend it to cover the period up to 2031; this was subsequently amended to 2033. Work on a Sites and General Policies DPD had commenced but was halted once the decision was made to review the Core Strategy. The intended content of that DPD has instead been incorporated into the second Preferred Options consultation for the emerging Local Plan.
- 1.5 The Council has rolled forward the strategic allocations and many of the policies from the adopted Core Strategy into the Local Plan. The main areas of change involve addressing how to distribute the additional housing required and planning for the associated infrastructure.
- 1.6 In June 2014 the Council consulted on an Issues and Scope document for the Local Plan 2031. This explained the background to the preparation of the new Local Plan and presented a number of broad options for the distribution of the additional housing required in South Oxfordshire. Consultation questions were also put forward relating to issues such as transport infrastructure and Traveller sites.
- 1.7 The Council then consulted on a refined options document in February 2015. The refined options document was supported by a published, early, HRA¹ that was also produced by LUC and specifically commented on by Natural England and the Environment Agency. Later, in June 2016 the council published its first preferred options. This consultation focused on the headline issues for the local plan with the intention to add the detail later through a second preferred options consultation.
- 1.8 The Local Plan includes a vision for South Oxfordshire in 2033, objectives and a strategy for how these will be met, distribution of sites for development, and policies which will be used to assess planning proposals and applications. The Local Plan provides the broad strategic framework for growth; however much of the detail, such as the specific sites to be allocated for housing, will be finalised at the local level through Neighbourhood Development Plans (NDP).

¹ <http://www.southoxon.gov.uk/sites/default/files/HRA%20phase%201%20report.pdf>

The requirement to undertake Habitats Regulations Assessment of Development Plans

- 1.9 The requirement to undertake HRA of development plans was confirmed by the amendments to the Habitats Regulations published for England and Wales in July 2007 and updated in 2010² and again in 2012³. Therefore when preparing the new Local Plan, SODC is required by law to carry out a Habitats Regulations Assessment although consultants can undertake the HRA on its behalf. The requirement for authorities to comply with the Habitats Regulations when preparing a Local Plan is explained in the outline National Planning Practice Guidance (NPPG).
- 1.10 The HRA refers to the assessment of the potential effects of a development plan on one or more European Sites, including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs):
- SPAs are classified under the European Council Directive 'on the conservation of wild birds' (79/409/EEC; 'Birds Directive') for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex 1 of the Birds Directive, and migratory species); and
 - SACs are designated under the Habitats Directive and target particular habitats (Annex 1) and/or species (Annex II) identified as being of European importance.
- 1.11 Potential SPAs (pSPAs)⁴, candidate SACs (cSACs)⁵, Sites of Community Importance (SCIs)⁶ and Ramsar sites should also be included in the assessment.
- Ramsar sites support internationally important wetland habitats and are listed under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention, 1971).
- 1.12 For ease of reference during HRA, these designations are collectively referred to as European sites⁷ despite Ramsar designations being at the international level.
- 1.13 The overall purpose of the HRA is to conclude whether or not a proposal or policy, or whole development plan, would adversely affect the integrity of the site in question either alone or in combination with other plans. This is judged in terms of the implications of the plan for a site's 'qualifying features' (i.e. those Annex I habitats, Annex II species, and Annex I bird populations for which it has been designated). Significantly, HRA is based on the precautionary principle meaning that where uncertainty or doubt remains, an adverse impact should be assumed.

Stages of the Habitats Regulations Assessment

- 1.14 **Table 1.1** below summarises the stages involved in carrying out a full HRA, based on various guidance documents^{8,9}.

Table 1.1 Stages in HRA

Stage	Task	Outcome
Stage 1: Screening (the 'Significance Test')	Description of the plan. Identification of potential effects on	Where effects are unlikely, prepare a 'finding of no significant effect report'.

² The Conservation (Natural Habitats, &c.) (Amendment) Regulations 2007. HMSO Statutory Instrument 2007 No. 1843. From 1 April 2010, these were consolidated and replaced by the Conservation of Habitats and Species Regulations 2010 (SI No. 2010/490). Note that no substantive changes to existing policies or procedures have been made in the new version.

³ The Conservation of Habitats and Species (Amendment) Regulations 2012. Statutory Instrument 2012 No. 1927.

⁴ Potential SPAs are sites that have been approved by Government and are currently in the process of being classified as SPAs.

⁵ Candidate SACs are sites that have been submitted to the European Commission, but not yet formally adopted.

⁶ SCIs are sites that have been adopted by the European Commission but not yet formally designated as SACs by the Government.

⁷ Often referred to as European sites, elsewhere; the two terms are used interchangeably.

⁸ *Planning for the Protection of European Sites. Guidance for Regional Spatial Strategies and Local Development Documents.* Department for Communities and Local Government (DCLG), August 2006.

⁹ *The HRA Handbook.* David Tyldesley & Associates, a subscription based online guidance document: <https://www.dtapublications.co.uk/handbook/>

Stage	Task	Outcome
	European Sites. Assessing the effects on European Sites (taking into account potential mitigation provided by other policies in the plan).	Where effects judged likely, or lack of information to prove otherwise, proceed to Stage 2.
Stage 2: Appropriate Assessment (the 'Integrity Test')	Gather information (plan and European Sites). Impact prediction. Evaluation of impacts in view of conservation objectives. Where impacts considered to affect qualifying features, identify alternative options. Assess alternative options. If no alternatives exist, define and evaluate mitigation measures where necessary.	Appropriate Assessment report describing the plan, European site baseline conditions, the adverse effects of the plan on the European site, how these effects will be avoided through, firstly, avoidance, and secondly, mitigation including the mechanisms and timescale for these mitigation measures. If effects remain after all alternatives and mitigation measures have been considered proceed to Stage 3.
Stage 3: Assessment where no alternatives exist and adverse impacts remain taking into account mitigation	Identify and demonstrate 'imperative reasons of overriding public interest' (IROPI). Demonstrate no alternatives exist. Identify potential compensatory measures.	This stage should be avoided if at all possible. The test of IROPI and the requirements for compensation are extremely onerous.

- 1.15 In assessing the effects of the Publication Local Plan in accordance with Regulation 102 of the Conservation of Habitats and Species Regulations 2010, there are potentially two tests to be applied by the competent authority: a 'Significance Test', followed if necessary by an Appropriate Assessment which will inform the 'Integrity Test'. The relevant sequence of questions is as follows:
- Step 1: Under Reg. 102(1)(b), consider whether the plan is directly connected with or necessary to the management of the sites. If not –
 - Step 2: Under Reg. 102(1)(a) consider whether the plan is likely to have a significant effect on the site, either alone or in combination with other plans or projects (the 'Significance Test'). [These two steps are undertaken as part of Stage 1: Screening shown in Table 1.1 above.] If Yes –
 - Step 3: Under Reg. 102(1), make an Appropriate Assessment of the implications for the site in view of its current conservation objectives (the 'Integrity Test'). In so doing, it is mandatory under Reg. 102(2) to consult Natural England, and optional under Reg. 102(3) to take the opinion of the general public. [This step is undertaken during Stage 2: Appropriate Assessment shown in Table 1.1 above.]
 - Step 4: In accordance with Reg.102(4), but subject to Reg.103, give effect to the land use plan only after having ascertained that the plan will not adversely affect the integrity of the European site.
- 1.16 It is normally anticipated that an emphasis on Stages 1 and 2 of this process will, through a series of iterations, help ensure that potential adverse effects are identified and eliminated through the inclusion of mitigation measures designed to avoid, reduce or abate effects. The need to consider alternatives could imply more onerous changes to a plan document. It is generally understood that so called 'imperative reasons of overriding public interest' (IROPI) are likely to be justified only very occasionally and would involve engagement with both the Government and European Commission.
- 1.17 The HRA should be undertaken by the 'competent authority' - in this case SODC, and LUC has been commissioned to do this on its behalf. The HRA also requires close working with Natural

England as the statutory nature conservation body¹⁰ in order to obtain the necessary information and agree the process, outcomes and any mitigation proposals. The Environment Agency, while not a statutory consultee for the HRA, is also in a strong position to provide advice and information throughout the process.

Previous HRA work

- 1.18 The South Oxfordshire Core Strategy was subject to HRA throughout its preparation and while the HRA of the Local Plan is being undertaken as a separate exercise, there is a significant body of relatively recent HRA work and supporting evidence which can be drawn from. The HRA for the Core Strategy¹¹ assessed the potential for impacts on the following six European sites that all fall within 17 km of the four main towns in South Oxfordshire (Didcot, Thame, Wallingford and Henley):
- Aston Rowant SAC;
 - Chilterns Beechwoods SAC;
 - Cothill Fen SAC;
 - Hartslock Wood SAC;
 - Little Wittenham SAC; and
 - Oxford Meadows SAC.
- 1.19 Likely significant effects were not able to be ruled out during the screening stage of the HRA; therefore Appropriate Assessment was undertaken in relation to the following potential significant effects:
- Effects on Aston Rowant SAC, Chilterns Beechwoods SAC and Hartslock Wood SAC¹² as a result of increased air pollution from vehicle traffic linked to population growth at Henley, Thame and Wallingford;
 - Effects on Cothill Fen SAC in relation to reduced groundwater levels as a result of increased water demand from new development and water quality issues arising from wastewater discharges¹³;
 - Effects on Little Wittenham SAC in relation to increased visitor pressure arising from the expected population growth at Didcot and Wallingford; and
 - Effects on Oxford Meadows SAC in relation to increased traffic volume on the A34, direct land take from the SAC to facilitate improvements to the A34¹⁴ and increased demand for water¹².
- 1.20 As a result of the work carried out during the Appropriate Assessment stage it was concluded that none of the above European sites would be significantly affected by the proposals in the Core Strategy either alone or in combination with other plans and policies. However, it was noted that the HRA would need to be updated as further policies within the Local Development Framework (LDF) were defined, particularly those associated with the allocation of housing developments within the larger villages. This recommendation is superseded by the requirement for HRA of the Local Plan which will replace the further LDF documents referred to in the HRA of the Core Strategy. The Local Plan includes policies for the distribution of the new housing requirement and these are assessed in full in this HRA.
- 1.21 The Council has already undertaken some initial HRA work in relation to the Local Plan 2031 Issues and Scope document, which was presented in Appendix 3 of the Sustainability Appraisal

¹⁰ Regulation 5 of *The Conservation of Habitats and Species Regulations 2010*. HMSO Statutory Instrument 2010 No. 490.

¹¹ http://www.southoxon.gov.uk/sites/default/files/Appropriate%20Assessment_2.pdf

¹² The Core Strategy HRA only considered sites within 17km of the main towns and did not consider proximity to major roads until the Appropriate Assessment stage. The European sites screened in therefore differs from this HRA.

¹³ Since the Core Strategy HRA was written, the district's Water Cycle Strategy has progressed; the additional information has informed the screening of this HRA.

¹⁴ Not included in the South Oxfordshire Local Plan and covered by Vale of White Horse District Council's Core Policy 34

(SA) Scoping Report¹⁵. For each of the 12 European sites within 17 km of the district boundary, information was provided on the qualifying features, conservation objectives and potential implications for the Local Plan 2031 (as it was at the time). Consideration was also given to the potential impacts of other plans, such as Local Plans produced by neighbouring authorities. Because the Local Plan was at such an early stage it was not possible to begin assessing the likelihood of policies and proposals in the Plan having significant effects on the integrity of the European sites. However, the information set out in the document represents important evidence on which the HRA work for the Local Plan can be based and has been drawn on during the preparation of this report.

- 1.22 LUC was appointed by SODC to carry out an HRA of the spatial distribution of housing for the level of growth identified in the former Core Strategy and four growth scenarios for the Local Plan 2031 (now 2033)¹⁶. Those growth scenarios and the spatial distribution have evolved into what is now the Local Plan.
- 1.23 The HRA of the spatial distribution strategy concluded that there would be no likely significant effects on European sites; however the HRA screening of the four growth scenarios identified uncertainty regarding whether there would be likely significant effects in relation to increased air pollution, increased recreation pressure and increased demand for water abstraction and treatment.
- 1.24 The report advised that at that stage in the assessment and plan making process, it was not possible to determine a scale of growth above which housing scenarios would be likely to have significant effects on European sites, although it was noted that higher levels of growth were more likely to result in likely significant effects. Therefore, in order to reach more certain conclusions during later stages of the HRA work for the Local Plan, it was advised that the following data would be required:
 - Traffic data showing likely increases in Average Annual Daily Traffic (AADT) as a result of the Local Plan 2031 along the stretches of 'A' roads which lie within 200 m of Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, Kennet and Lambourn Floodplain SAC, Oxford Meadows SAC, River Lambourn SAC and Windsor Forest and Great Park SAC. Air quality modelling may also be required should these traffic projections reveal significant traffic increases in the vicinity of the European sites;
 - Information about levels of headroom at the sewage treatment works that serve the four main towns and 12 villages at which housing development is to be provided and about water availability in the relevant abstraction zones, in order to assess whether adverse effects could occur on the integrity of Burnham Beeches SAC, Cothill Fen SAC, Kennet and Lambourn Floodplain SAC, Little Wittenham SAC, Oxford Meadows SAC, River Lambourn SAC, Thames Basin Heaths SPA, and Windsor Forest and Great Park SAC; and
 - Depending on the outcome of consultation with Natural England, it was identified that it may also be necessary to obtain data about recreational use of European sites, for example via visitor surveys, although specific data requirements cannot be identified at this early stage.
- 1.25 This HRA now assesses the Local Plan, which includes the policies that will be used to determine planning applications. Where additional data is now available, this has been taken into account.

Structure of the HRA Report

- 1.26 This chapter (**Chapter 1**) has introduced the requirement to undertake HRA of the Local Plan. The remainder of the report is structured as follows:
 - **Chapter 2: The Local Plan** summarises the content of the Draft version of the Local Plan, which is the subject of this report;

¹⁵ <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy/evidence-studies/sustainability-appraisal->

¹⁶ LUC (January 2015) *Habitats Regulations Assessment for South Oxfordshire District Council* - <http://www.southoxon.gov.uk/sites/default/files/HRA%20phase%201%20report.pdf>

- **Chapter 3: Screening Methodology** sets out the approach used and the specific tasks undertaken during the screening stage of the HRA;
- **Chapter 4: Screening Findings** describes the findings of the screening stage of the HRA;
- **Chapter 5: Appropriate Assessment** sets out the methodology and findings of the Appropriate Assessment stage of the HRA; and
- **Chapter 6: Conclusions** summarises the HRA conclusions for the draft version of the Local Plan and describes the next steps to be undertaken.

2 The Local Plan

- 2.1 The Draft South Oxfordshire Local Plan sets out the overall vision for South Oxfordshire, objectives and a strategy for how these will be met, distribution of sites for development, and policies which will be used to assess planning proposals and applications. These are summarised below.

Summary of the Local Plan

Local Plan vision

- 2.2 The strategic vision for South Oxfordshire District in 2033 presented in the Local Plan is as follows:

Our Vision for 2033

South Oxfordshire will remain a beautiful and prosperous place to live, for existing and future residents and it will be an attractive place for people to work and spend their leisure time.

By meeting our housing and employment need and the creation of new, sustainable and vibrant places, we will have provided enough homes and jobs for those wishing to live and work here. By planning for housing in our four towns of Didcot, Henley-on-Thames, Thame and Wallingford and in our villages, we will have ensured that all our communities thrive and that everyone has access to services within a short distance. New development meets the highest standards of design with necessary associated infrastructure.

We will continue to direct development to the towns and larger villages. We will also strengthen the heart of the district by allocating new development at three strategic locations. This growth will support employment opportunities and deliver regeneration and infrastructure.

Science Vale¹⁷ will have continued to grow as a world-renowned science, research and innovation led hub that attracts business and creates job opportunities, and delivers housing growth. Didcot will be a flourishing Garden Town, being both the gateway to and the heart of Science Vale. Roads and rail links will have been improved and pedestrian and cycle networks will have made it easier for people to get around, in particular to major employment sites.

Through careful management of the Oxford Green Belt we will have protected the important setting of Oxford whilst also making appropriate provision for housing, business growth and urban and rural regeneration. The North Wessex Downs and Chilterns Areas of Outstanding Natural Beauty will be protected and enhanced, whilst also allowing for appropriate and sustainable growth in places. Our rich and varied history is celebrated, protected and enhanced for the benefit of residents and visitors.

We will plan for new development at three strategic locations; Chalgrove, Culham and Berinsfield.

We will exceed people's high expectations in terms of healthy living, sustainable travel and the design of buildings, homes and public spaces. Everyone will have access to high quality leisure, retail and cultural facilities which will also attract visitors. South Oxfordshire will be a top tourist destination, helping our towns and villages to remain vibrant and prosperous. Communities will thrive, and through Neighbourhood Planning and community engagement, they will have their say on how their local area is shaped.

¹⁷ Science Vale is an area in Southern Oxfordshire, crossing the border of South Oxfordshire and the Vale of White Horse. It is one of the most successful science clusters in the UK. This activity is concentrated around the three centres for science at Harwell Campus, Culham Science Centre, and Milton Park, but is supported by a number of important settlements including Didcot, Wantage and Grove.

Strategic objectives

- 2.3 The Local Plan sets out eight Strategic objectives, which will need to be achieved to deliver the plan's strategic vision. The objectives also set out how the key sustainability issues facing the district will be addressed.

Objective 1 - Settlements

- OBJ 1.1: Support the settlement hierarchy, the growth and development of Didcot Garden Town, the delivery of new development in the heart of the district, the growth of our market towns and the vitality of our villages;
- OBJ 1.2: Support rural communities and 'their way of life', recognising that this is what attracts people to the district;
- OBJ 1.3: Meet identified housing needs by delivering high-quality, sustainable, attractive places for people to live and work; and
- OBJ 1.4: Focus growth in Science Vale through delivering homes and jobs, retail and leisure facilities and enhanced transport infrastructure.

Objective 2 - Housing

- OBJ 2.1: Deliver a wide range of housing options to cater for the housing needs of our community (self-build, older person's accommodation);
- OBJ 2.2: Support the regeneration of housing and facilities to strengthen communities, and address identified poverty and social exclusion; and
- OBJ 2.3: Support meeting the economic and housing needs of the county as a whole, reflecting the special character of South Oxfordshire

Objective 3 - Economy

- OBJ 3.1: Improve employment opportunities and employment land provision, providing high quality local jobs to help retain more of its skilled residents in the local workforce;
- OBJ 3.2: Support business growth, especially in locations close to existing business areas, transport connections and broadband provision and which provide the opportunity to reduce commuting distances;
- OBJ 3.3: Ensure economic and housing growth are balanced, to support sustainable journeys to work;
- OBJ 3.4: Support the retail and service sectors as well as low and high-tech industries;
- OBJ 3.5: Create the conditions whereby world-renowned and cutting edge industries choose to locate and grow their businesses here, contributing to a strong and successful economy, in line with the Strategic Economic Plan for Oxfordshire;
- OBJ 3.6: Inspire the next generation of workers by planning for high quality education facilities; and
- OBJ 3.7: Encourage tourism by protecting our built and natural assets, such as the Thames, and providing services and facilities for visitors.

Objective 4 - Infrastructure

- OBJ 4.1: Ensure that essential infrastructure is delivered to support our existing residents and services as well as growth; and
- OBJ 4.2: Make sustainable transport an attractive and viable choice for people, whilst recognising that car travel and parking provision will continue to be important in this rural district.

Objective 5 - Design

- OBJ 5.1: Deliver high quality, innovative, well designed and locally distinctive developments in sustainable locations; and

- OBJ 5.2: Support development that respects the scale and character of our towns and villages, enhancing the special character of our historic settlements and the surrounding countryside.

Objective 6 - Community

- OBJ 6.1: Champion neighbourhood planning, empowering local communities to direct development within their area and provide support to ensure neighbourhood plans are deliverable, achievable and sustainable;
- OBJ 6.2: Provide access to high quality leisure, recreation, cultural, community and health facilities; and
- OBJ 6.3: Ensure all communities have access to the services and facilities they value, supporting the health and wellbeing of everyone.

Objective 7 - Natural and built environment

- OBJ 7.1: Protect and enhance the natural environment, including biodiversity, the landscape, green infrastructure and our waterways, placing particular importance on the value of the Oxford Green Belt, our two Areas of Outstanding Natural Beauty and the River Thames; and
- OBJ 7.2: Conserve and enhance our rich and varied historic assets and their settings, celebrating these as some of our strongest attributes.

Objective 8 - Climate change

- OBJ 8.2: Minimise carbon emissions and other pollution such as water, air, noise and light, and increase our resilience to the likely impact of climate change, especially flooding.

Spatial strategy

- 2.4 The preferred strategy of SODC, as set out in the Local Plan, supports the delivery of new housing and economic growth and translates the Local Plan vision and objectives under inter-related spatial themes to:
- Support a strong network of vibrant settlements including the regeneration of town centres, making the whole district more sustainable, recognising the rural nature of South Oxfordshire and the impact of nearby major centres;
 - Support a movement strategy that strengthens connections to key places and enables initiatives to prosper, allows a choice of transport modes and manages traffic to improve environmental quality;
 - Create a thriving economy in urban and rural areas with a range of work opportunities including more high value jobs and enable the up-skilling of our workforce to support existing and new firms;
 - Deliver sufficient new homes to meet the needs of our communities and economy supported by appropriate infrastructure, services and facilities; and
 - Maintain and enhance the built and natural environment and ensure good quality developments and change.
- 2.5 The Local Plan seeks to build upon the existing settlement hierarchy and actively create a pattern of development central to the area. It identifies strategic levels of growth at three locations connecting through this central area of the District at Culham, Chalgrove and Berinsfield. This corridor of development is aligned to the Council's preferred strategic route for transport from the south of Abingdon through the district to connect to the M40.
- 2.6 SODC has identified the need for between 20,800 and 21,900 homes during the plan period, to meet the district's own need and to help meet some of Oxford City's unmet housing need. The Local Plan intends to provide 23,398 homes over the plan period, as summarised in **Table 2.1**.

Table 2.1 Supply of homes to come forward 2011-2033

Source of new homes	Net number of units
Completions 2011-2016	2,647
Commitments as of 21 March 2016 ¹⁸	9,369
New strategic allocations (Culham, Berinsfield, Chalgrove Airfield and Wheatley Campus)	8,475
New market town (Henley, Thame and Wallingford) allocations	1,355
New allocations in the larger villages (Benson, Berinsfield, Chalgrove, Cholsey, Chinnor, Crowmarsh Gifford, Goring, Nettlebed, Sonning Common, Watlington, Wheatley and Woodcote)	1,122
Sites in the smaller villages (neighbourhood plans and infill sites) and windfall sites	500
Total	23,468

- 2.7 For employment land, the Local Plan sets a target for an additional 30 hectares of B-class employment land to be provided over the plan period from 2011-2033, however indicates that this target may change following further review of employment land requirements prior to the next stage of the Local Plan.

Policies

- 2.8 Policies in the Local Plan are presented within the following sections:
- Delivering new homes;
 - Employment and economy;
 - Infrastructure;
 - Communications;
 - Natural and historic environment;
 - Built environment;
 - Town centres and retailing; and
 - Community and recreational facilities.
- 2.9 The final section of the document sets out the Monitoring and Review Plan for the Local Plan.

Elements of the Local Plan assessed in this HRA

- 2.10 The quantum of development proposed in the Local Plan includes completed and committed development, ie development that already has planning permission. The policies that enabled those developments to be permitted have already been subject to HRA as part of the Core Strategy. The focus of this HRA is therefore the development that would be granted permitted under the new Local Plan policies. The overall quantum of development proposed by the plan also needs to be considered, however; so completed and committed developments have been taken into consideration in terms of their potential to have in-combination effects with the 'new' development quantum.
- 2.11 For clarity, **Table 2.2** sets out the quantum of development that has been taken into account in the main HRA assessment and that which has been considered only in terms of in-combination effects. The location of the proposed development is shown on **Figure 2.1**.

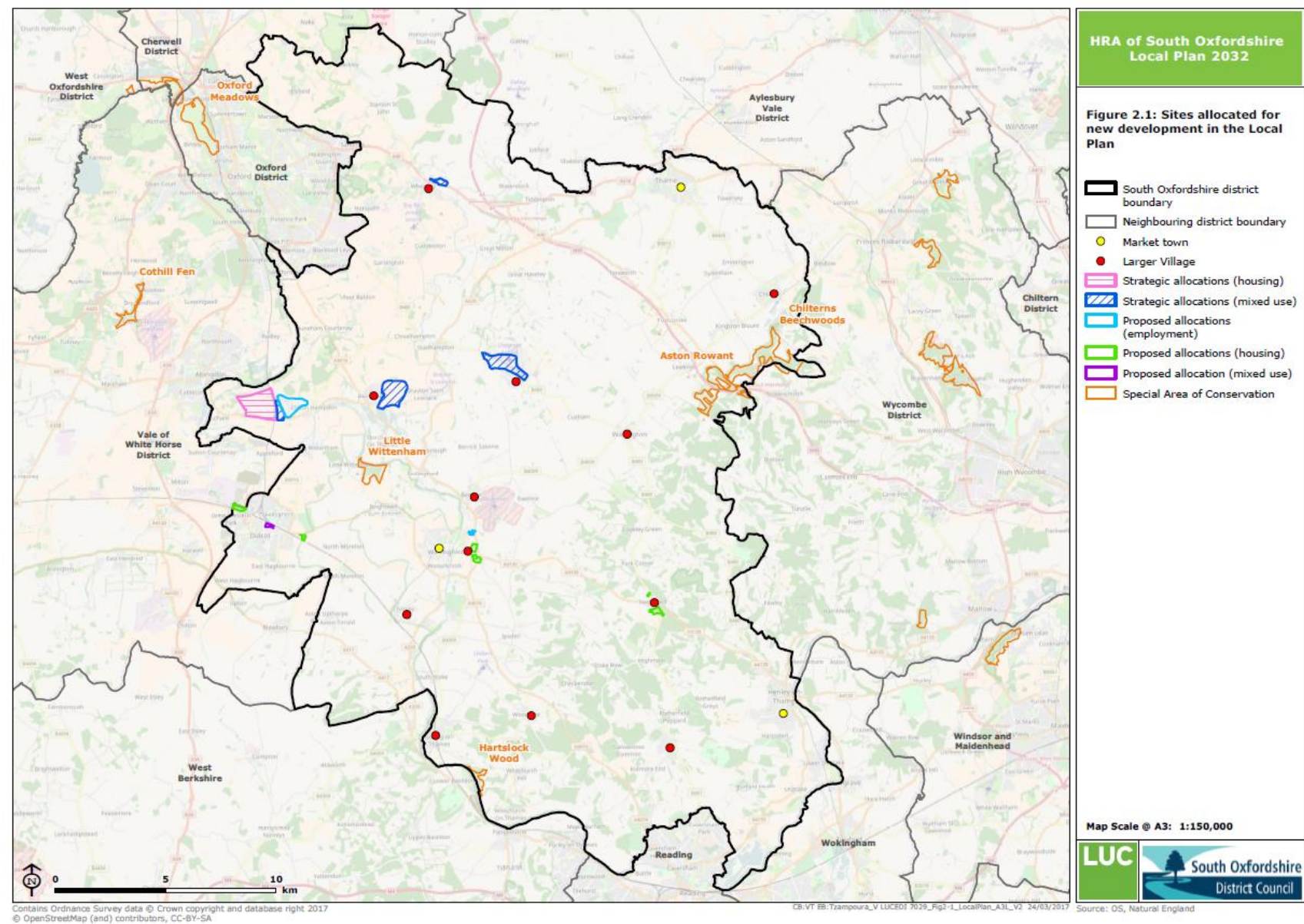
¹⁸ Sites under construction, with planning permission or resolution to grant planning permission and allocations carried forward from the Core Strategy

Table 2.2 Development quantum assessed in this HRA

Type of development	Quantum assessed
<i>Development that would be granted permission under new Local Plan policies (assessed throughout HRA)</i>	
Residential development:	11,452 homes
• New strategic allocations	8,474
• New market town allocations	1,355
• New allocations in the larger villages	1,122
• Sites in smaller villages and windfall sites	500
Gypsy, Traveller and Travelling Showpeople sites:	≥ 24 pitches/plots
• Gypsy and Traveller pitches	19
• Travelling Showpeople plots	5
• Extensions to / replacements of existing sites	not specified
Employment development:	> 17.85 ha
• Henley	1 ha
• Thame	2 ha
• Wallingford	3.1 ha
• Crowmarsh Gifford	2.5 ha
• Culham	2 ha
• Chalgrove	7.25 ha
• Berinsfield	tbc
• Additional development at these sites or other locations	not specified
Retail development	20,000 m²
• Food store (convenience goods)	3,700 m ²
• Non-food store (comparison goods)	16,300 m ²
<i>Development granted permission under previous policies (assessed for in-combination effects only)</i>	
Residential development:	12,016 homes
• Completions 2011-2016	2,647
• Commitments as of 21 March 2016	9,369
Employment development:	11.16 ha
• Didcot (safeguarded sites) ¹⁹	3.04 ha
• Wallingford (safeguarded sites)	2.82 ha
• Culham (safeguarded sites)	5.3 ha

¹⁹ Note that 6.5ha of employment land in Didcot is considered to contribute South Oxfordshire's need, but is provided for by Vale of White Horse District Council's Core Strategy Policy 6 and has therefore been excluded from this table.

Figure 2.1 Sites allocated for new development in the Local Plan



Potential impacts of the Local Plan on European sites

- 2.12 **Table 2.3** below sets out the range of potential impacts that development of the type to be included in the Local Plan and related activities may have on European sites. This table has been prepared by LUC for use in informing HRA judgements, drawing on our experience of HRA and comments previously provided by Natural England relating to the potential impacts and activities that could affect European sites.

Table 2.3 Potential impacts and activities arising from implementation of the Local Plan that could adversely affect European sites

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
Physical loss <ul style="list-style-type: none"> Removal (including offsite effects, e.g. foraging habitat) Smothering Habitat degradation 	Development (e.g. housing, employment, infrastructure, tourism) Structural alterations to buildings (bat roosts) Afforestation Tipping Cessation of or inappropriate management for nature conservation
Physical damage <ul style="list-style-type: none"> Direct mortality Sedimentation / silting Prevention of natural processes Habitat degradation Erosion Trampling Fragmentation Severance / barrier effect Edge effects Fire 	Flood defences Dredging Recreation (e.g. motor cycling, cycling, walking, horse riding, water sports, caving) Development (e.g. infrastructure, tourism, adjacent housing etc.) Vandalism Arson Cessation of or inappropriate management for nature conservation
Non-physical disturbance <ul style="list-style-type: none"> Noise Vibration Visual presence Human presence Light pollution 	Development (e.g. housing, industrial) Recreation (e.g. dog walking, water sports) Industrial activity Vehicular traffic Artificial lighting (e.g. street lighting)
Water table/availability <ul style="list-style-type: none"> Drying Flooding / stormwater Water level and stability Water flow (e.g. reduction in velocity of surface water) Barrier effect (on migratory species) 	Water abstraction Drainage interception (e.g. reservoir, dam, infrastructure and other development) Increased discharge (e.g. drainage, runoff)
Toxic contamination <ul style="list-style-type: none"> Water pollution Soil contamination Air pollution 	Oil / chemical spills Tipping Vehicular traffic Industrial waste / emissions
Non-toxic contamination <ul style="list-style-type: none"> Nutrient enrichment (e.g. of soils and water) Algal blooms Changes in salinity Changes in thermal regime Changes in turbidity Air pollution (dust) 	Sewage discharge Water abstraction Industrial activity Flood defences Construction

Broad categories and examples of potential impacts on European sites	Examples of activities responsible for impacts
<p>Biological disturbance</p> <ul style="list-style-type: none"> • Direct mortality • Out-competition by non-native species • Selective extraction of species • Introduction of disease • Rapid population fluctuations • Natural succession 	<p>Development (e.g. housing areas with domestic and public gardens)</p> <p>Predation by domestic pets</p> <p>Introduction of non-native species (e.g. from gardens)</p> <p>Fishing</p> <p>Hunting</p> <p>Changes in management practices (e.g. grazing regimes, access controls, cutting / clearing)</p>

3 HRA Screening Methodology

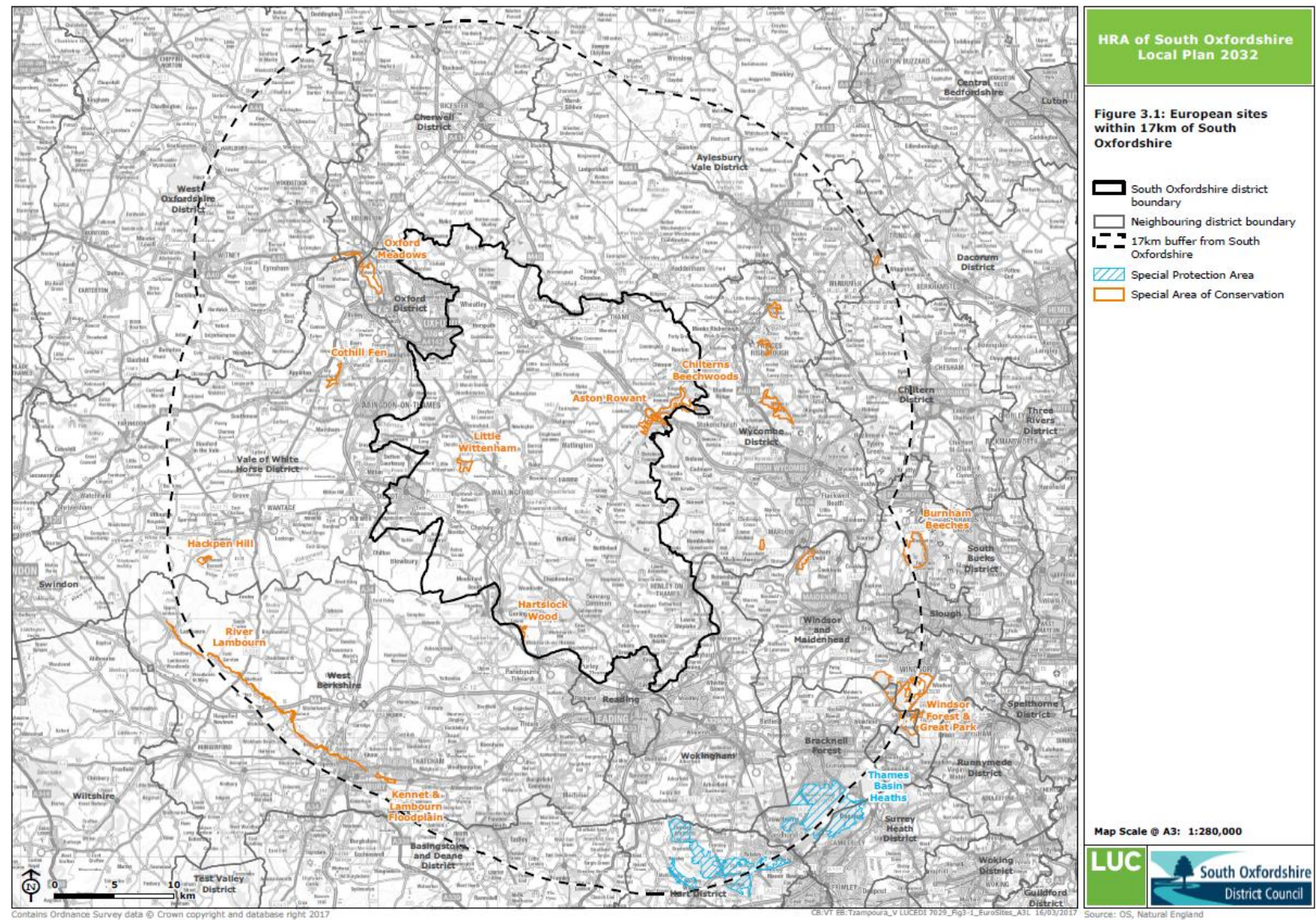
- 3.1 HRA Screening of the Local Plan has been undertaken in line with current available guidance and seeks to meet the requirements of the Habitats Regulations. The tasks that have been undertaken during the screening stage of the HRA are described in detail below.

European sites which may be affected by the Local Plan

- 3.2 The HRA of the Core Strategy took into account the six European sites that lie within 17 km of the four main towns in South Oxfordshire (Didcot, Thame, Wallingford and Henley). This buffer area was identified as appropriate at the time because the main growth areas in South Oxfordshire would be concentrated around the four main towns and, while smaller allocations would be made at the larger villages, detailed consideration of these would only be possible when allocations were made. The 17 km buffer distance, which was subject to consultation with Natural England, reflected the average travel to work distance in the district and recognised the fact that the effects of development within South Oxfordshire may be transmitted to European sites outside of the district boundary.
- 3.3 The information set out in the June 2014 Sustainability Assessment Scoping Report²⁰ about the qualifying features and sensitivities of European sites covered the 12 European sites which lie within 17 km of the district boundary rather than within 17 km of the four main towns. This larger buffer area reflects the fact that development across the district as a whole is being considered during the preparation of the Local Plan 2033.
- 3.4 The same, larger buffer area has been used during this current stage of HRA work and all of the 12 European sites within 17 km of the district boundary have been included in the assessment. Using a 17 km buffer around the four main towns only (as was the case with the HRA of the Core Strategy) would not be appropriate as development outside of those areas is being assessed in this HRA. The buffer area of 17 km around the whole district is larger (and therefore more precautionary) than that used during the HRA of the Core Strategy and is considered appropriate for ensuring that all European sites that could potentially be significantly affected by development are identified and included in the assessment.
- 3.5 The following European sites fall within 17 km of South Oxfordshire District and have been included in the HRA:
- Aston Rowant SAC;
 - Burnham Beeches SAC;
 - Chilterns Beechwoods SAC;
 - Cothill Fen SAC;
 - Hackpen Hills SAC;
 - Hartslock Wood SAC;
 - Kennet and Lambourn Floodplain SAC;
 - Little Wittenham SAC;
 - Oxford Meadows SAC;
 - River Lambourn SAC;
 - Thames Basin Heaths SPA; and
 - Windsor Forest and Great Park SAC.
- 3.6 Detailed information about the location, qualifying features and vulnerabilities of the European sites included in the assessment is presented in **Appendix 1**. The locations of the European sites are mapped in **Figure 3.1**.

²⁰ <http://www.southoxon.gov.uk/services-and-advice/planning-and-building/planning-policy/evidence-studies/sustainability-appraisal->

Figure 3.1 European sites within 17km of South Oxfordshire



Assessment of 'likely significant effects' of the Local Plan

- 3.7 As required under Regulation 102 of the Conservation of Habitats and Species Regulations 2010²¹ (the 'Habitats Regulations'), an assessment has been undertaken of the 'likely significant effects' of the Local Plan. A screening matrix has been prepared in order to identify which site allocations would be likely to have a significant effect on European sites in and around South Oxfordshire, without taking mitigation into account. Within the matrix, consideration has been given to the potential for the development proposed at each site to result in significant effects associated with:
- Physical loss of/damage to habitat;
 - Non-physical disturbance e.g. noise/vibration or light pollution;
 - Air pollution;
 - Increased recreation pressure; and
 - Changes to hydrological regimes.
- 3.8 The detailed screening matrix can be found in **Appendix 3** of this report and the findings are described in more detail in **Chapter 4**, where the potential to mitigate the possible significant effects identified is also explained.
- 3.9 This approach allowed for consideration to be given to the cumulative impacts of the site allocations as well as simply focussing on each site individually.
- 3.10 A risk-based approach involving the application of the precautionary principle has been adopted in the assessment, such that a conclusion of 'no significant effect' has only been reached where it is considered very unlikely, based on current knowledge and the information available, that a proposal in the Local Plan would have a significant effect on the integrity of a European site.
- 3.11 A 'traffic light' approach has been used in the screening matrix to record the likely impacts of the policies and site allocations on European sites and their qualifying habitats and species, using the colour categories shown below.

Red	There are likely to be significant effects (Appropriate Assessment required).
Amber	There may be significant effects, but this is currently uncertain (Appropriate Assessment required).
Green	There are unlikely to be significant effects (Appropriate Assessment not required).

Interpretation of 'likely significant effect'

- 3.12 Relevant case law helps to interpret when effects should be considered as a likely significant effect, when carrying out HRA of a land use plan.
- 3.13 In the Waddenzee case²², the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive (translated into Reg. 102 in the Habitats Regulations), including that:
- An effect should be considered 'likely', "if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site" (para 44);
 - An effect should be considered 'significant', "if it undermines the conservation objectives" (para 48); and
 - Where a plan or project has an effect on a site "but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned" (para 47).

²¹ SI No. 2010/490

²² ECJ Case C-127/02 "Waddenzee" Jan 2004.

- 3.14 A relevant opinion delivered to the Court of Justice of the European Union²³ commented that:
- "The requirement that an effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."*
- 3.15 This opinion (the 'Sweetman' case) therefore allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered 'trivial' or *de minimis*; referring to such cases as those *"that have no appreciable effect on the site"*. In practice such effects could be screened out as having no likely significant effect; they would be 'insignificant'.

Mitigation provided by the Local Plan

- 3.16 Some of the potential effects identified could be mitigated through the implementation of policies within the Local Plan itself. These include policies relating to the provision of improved sustainable transport links which could help to mitigate potential increases in air pollution associated with increased vehicle traffic, and the provision of green infrastructure within new developments which may help to relieve increases in visitor pressure at European sites. There are also policies with the specific purpose of protecting and site allocation proposals may also provide some mitigation of effects.
- 3.17 This potential mitigation has been taken into consideration during the screening process and has influenced the screening assumptions set out below and screening conclusions (see **Chapter 4**). Where it has been possible to conclude that there would be no likely significant effects taking into account mitigation, then there is no need to carry out Appropriate Assessment.

Screening assumptions and information used in reaching conclusions about likely significant effects

- 3.18 The screening stage of the HRA has taken the approach of screening each Local Plan policy individually, which is consistent with current guidance. The site allocations have also been screened in this way.
- 3.19 For some types of impacts, screening for likely significant effects has been determined on a proximity basis, using GIS data to determine the proximity of potential development locations to the European sites that are the subject of the assessment. However, there are many uncertainties associated with using set distances as there are very few standards available as a guide to how far impacts will travel. Therefore, during the screening stage a number of assumptions have been applied in relation to assessing the likely significant effects on European sites that may result from the Local Plan, as explained below. These assumptions draw from the information gathered during the screening of earlier HRAs, as well as the conclusions of that work.

Physical loss of or damage to habitat

- 3.20 Any development resulting from the Local Plan will be located within South Oxfordshire district; therefore loss of habitat from within the boundaries of a European site can be ruled out in relation to those sites that lie entirely outside of South Oxfordshire (i.e. Burnham Beeches SAC, Cothill Fen SAC, Hackpen Hill SAC, Kennet and Lambourn Floodplain SAC, Oxford Meadows SAC, River Lambourn SAC, Windsor Forest & Great Park SAC, and Thames Basin Heaths SPA). However, the potential for loss of habitat from within the boundaries of any European site that lies wholly or partially within the district (Aston Rowant SAC, Chilterns Beechwoods SAC, Hartslock Wood SAC, and Little Wittenham SAC) needs to be considered if Local Plan proposals could result in development coming forward in those areas.

²³ Advocate General's Opinion to CJEU in Case C-258/11 *Sweetman and others v An Bord Pleanála* 22nd Nov 2012.

- 3.21 Loss of habitat from outside of the boundaries of a European site could still affect the integrity of that site if it occurs in an area used by the qualifying species of the site (e.g. for off-site breeding, foraging or roosting).
- 3.22 Several of the European sites included in the HRA have transient species amongst their qualifying features that could travel outside of the site to make use of other areas of habitat. The European sites that have transient species amongst their qualifying features are:
- Chilterns Beechwoods SAC: stag beetle;
 - Little Wittenham SAC: great crested newt;
 - River Lambourn SAC: brook lamprey and bullhead;
 - Kennet and Lambourn Floodplain SAC: Desmoulins's whorl snail;
 - Windsor Forest and Great Park SAC: violet click beetle; and
 - Thames Basin Heaths SPA: Dartford warbler, nightjar and woodlark.
- 3.23 Where stag beetle is a qualifying feature of a site, the individuals may travel outside of the SAC boundary, although it is unlikely that they will travel far: it is generally only the male stag beetle that flies during the summer months, and the female beetle rarely flies.²⁴ The preferred habitat for stag beetles is old, established woodland, and the larvae feed on rotting tree matter.¹⁶ As the beetle larvae take years to develop, they have been vulnerable to tree clearance and the 'tidying up' of wood in parks and especially gardens.²⁵ Research²⁶ suggests that 2km may be an appropriate buffer inside which sites could be functionally connected, as this is the distance that males travel to females during the breeding season. Chilterns Beechwoods SAC is a composite of nine SSSIs. Bisham Woods SSSI, which is the part of the SAC that supports the qualifying stag beetle population, is greater than 2km from the district boundary. Therefore potential loss of or damage to off-site habitats associated with Chilterns Beechwoods SAC can be screened out of further assessment.
- 3.24 Great crested newts will travel away from their breeding ponds, during the terrestrial phase of their lifecycle, but not large distances. 500 metres²⁷ is considered an appropriate buffer distance inside which great crested newts might be found, from their breeding location. The site listing for Little Wittenham SAC²⁸ states that great crested newts have been found to range several hundred metres into the site's woodland blocks. Research has found that great crested newts at Little Wittenham SAC migrate within woodland and do not over-winter in the arable farmland²⁹. All of the woodland within 500 metres of the ponds at Little Wittenham SAC is within the SAC boundary. Therefore potential loss of or damage to off-site habitats associated with Little Wittenham SAC can be screened out of further assessment.
- 3.25 The River Lambourn SAC (15km outside the district), Kennet and Lambourn Floodplain SAC (15km outside the district), and Windsor Forest and Great Park SAC (13km outside the district) have transient qualifying features that are limited in range and are sufficient distance from potential development in South Oxfordshire that potential impacts on off-site habitats can be ruled out. Therefore, potential loss of or damage to off-site habitats associated with the River Lambourn SAC, Kennet and Lambourn Floodplain SAC, and Windsor Forest & Great Park SAC can be screened out of further assessment.
- 3.26 Thames Basin Heaths SPA is located approximately 13 km outside of the district. This is considered to be far enough that effects on its qualifying bird species can be ruled out in relation to the loss of or damage to off-site habitat used for breeding, foraging or roosting, particularly during breeding seasons. In coming to this judgement, we have made reference to the Thames Basin Heaths SPA Delivery Framework³⁰. This document has been endorsed by the Thames Basin

²⁴ <https://www.royalpark.org.uk/parks/richmond-park/richmond-park-attractions/wildlife/stag-beetles>

²⁵ <http://www.arkive.org/stag-beetle/lucanus-cervus/>

²⁶ <http://onlinelibrary.wiley.com/doi/10.1111/j.1469-7998.2006.00282.x/abstract>

²⁷ <https://www.gov.uk/guidance/great-crested-newts-surveys-and-mitigation-for-development-projects>

²⁸ <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCODE=UK0030184>

²⁹ http://etheses.dur.ac.uk/6683/1/6683_3987.PDF

³⁰ http://www.waverley.gov.uk/downloads/file/3503/thames_basin_heaths_spa_delivery_framework_2009_-_thames_basin_heaths_joint_strategic_partnership_board

Heaths Joint Strategic Partnership Board, the body established to agree arrangements for the long term protection of the SPA. The Framework advises that avoidance measures are necessary in relation to all residential development within a 'Zone of Influence' from 400 m to 5 km from the perimeter of the SPA and that applications for large scale development (over 50 houses) between 5 km and 7 km from the edge of the SPA should be assessed on a case by case basis. There is a presumption against development within 400 m of the SPA unless an Appropriate Assessment demonstrates that the development will not have an adverse effect on the integrity of the SPA. As the site is 13km from the district boundary, potential loss of or damage to off-site habitats associated with Thames Basin Heaths SPA can be screened out of further assessment.

- 3.27 **The physical loss of or damage to European site habitats (on-site or off-site) can therefore be screened out of further assessment, for all sites.**

Non-physical disturbance: noise, vibration and light pollution

- 3.1 Noise and vibration effects, e.g. during the construction of new housing development, are most likely to disturb bird species and are thus a key consideration with respect to European sites where birds are the qualifying features, although such effects may also impact upon some mammals and fish species.
- 3.2 Using a precautionary approach, we have assumed that the effects of noise, vibration and light are most likely to be significant if development takes place within 500 metres of a European site with qualifying features sensitive to these disturbances, or known off-site breeding, foraging or roosting areas.
- 3.3 Artificial lighting at night (e.g. from street lamps, flood lighting and security lights) is most likely to affect nocturnal species e.g. bats, and therefore have an adverse effect on the integrity of European sites where nocturnal species are a qualifying feature. None of the European sites within 17km of South Oxfordshire have bats as a qualifying feature. Although nightjar, which are a qualifying species of the Thames Basin Heaths SAC, are nocturnal the site is c.13km outside the district. Stag beetles, which are a qualifying feature of Chilterns Beechwoods SAC can be nocturnal. Adult male stag beetles do fly around dusk during May-August³¹, but although they can be attracted by light it is not known to be a significant factor in stag beetle mortality. As noted above, the most commonly referred to threat to stag beetles is tree clearance and the 'tidying up' of wood in parks and especially gardens. Potential impacts due to lighting can therefore be screened out of further assessment.
- 3.4 Noise and vibration only have the potential to affect European sites that are within or immediately adjacent to the district boundary. Hartslock Wood SAC and Aston Rowant SAC are both designated for their habitats and are not therefore sensitive to noise and vibration. The qualifying species of Little Wittenham SAC (great crested newts) and Chilterns Beechwoods SAC (stag beetle) are not considered to be sensitive to noise and vibration.
- 3.5 **Therefore, impacts in relation to noise, vibration and light pollution can be screened out of further assessment.**

Air pollution

- 3.6 Air pollution is most likely to affect European sites where plant, soil and water habitats are the qualifying features, but some qualifying animal species may also be affected, either directly or indirectly, by any deterioration in habitat as a result of air pollution. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen availability that can then affect plant health, productivity and species composition.
- 3.7 In terms of vehicle traffic, nitrogen oxides (NO_x, i.e. NO and NO₂) are considered to be the key pollutants. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NO_x can cause eutrophication of soils and water.
- 3.8 Based on the Highways Agency Design for Road and Bridges (DMRB) Manual Volume 11, Section 3, Part 1³² (which was produced to provide advice regarding the design, assessment and

³¹ <http://www.ypte.org.uk/animal/beetle-stag-/53>

³² <http://www.standardsforhighways.co.uk/ha/standards/dmr/b/vol11/section3/ha20707.pdf>

operation of trunk roads (including motorways)), it is assumed that air pollution from roads is unlikely to be significant beyond 200 m from the road itself. Where increases in traffic volumes are forecast, this 200 m buffer needs to be applied to the relevant roads in order to make a judgement about the likely geographical extent of air pollution impacts.

- 3.9 The DMRB Guidance for the assessment of local air quality in relation to highways developments provides criteria that should be applied at the screening stage of an assessment of a plan or project, to ascertain whether there are likely to be significant impacts associated with routes or corridors. Based on the DMRB guidance, affected roads which should be assessed are those where:
- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
 - Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
 - Daily average speed will change by 10 km/hr or more; or
 - Peak hour speed will change by 20 km/hr or more; or
 - Road alignment will change by 5 m or more.
- 3.10 Traffic forecast data (based on the planned level of growth) are therefore needed to determine if increases in vehicle traffic in and around South Oxfordshire are likely to be significant.
- 3.11 It has been assumed that only those roads forming part of the primary road network (motorways and 'A' roads) might be likely to experience any significant increases in vehicle traffic as a result of development (i.e. greater than 1,000 AADT). As such, where a site is not within 200 m of a motorway or 'A' road, likely significant effects from traffic-related air pollution were ruled out.
- 3.12 The European sites around South Oxfordshire that are within 200 m of strategic roads are Aston Rowant SAC (M40), Burnham Beeches SAC (A355), Chilterns Beechwoods SAC (A404, A4010), Kennet and Lambourn Floodplain SAC (A4, A34), Oxford Meadows SAC (A34, A40), River Lambourn SAC (M4, A4, A339, A34, A338) and Windsor Forest and Great Park SAC (A332, A329).
- 3.13 However, the Site Improvement Plans for Kennet and Lambourn Floodplain SAC³³, Oxford Meadows SAC³⁴ and River Lambourn SAC²⁴ do not identify air pollution as a threat or pressure, and are therefore not considered to be particularly sensitive to air pollution. While Site Improvement Plans provide an indication of the current threats and pressures at a site, and do not predict future changes, they do provide information on the aspects of the sites' ecology that are likely to be the most sensitive to development. The Kennet and Lambourn Floodplain SAC, Oxford Meadows SAC and River Lambourn SAC are all sites at which physical changes to the aquatic environment, invasive aquatic species or changes to land management are the main threats or pressures, despite the sites being situated close to major settlements (Oxford and Newbury) and the roads that serve them.
- 3.14 **Therefore, the potential impacts of air pollution at Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC have been screened in, where development has the potential to increase traffic on the M40, A355, A404, A4010, A332 or A329 roads.**

Impacts of recreation

- 3.15 Recreation activities and human presence more generally can have an adverse impact on the integrity of a European site, for example as a result of disturbance of sensitive animal species, trampling of plant species or habitat erosion. Where development is likely to result in an increase in the local population, the potential for an increase in visitor numbers and the associated impacts at sensitive European sites has been considered.
- 3.16 We have assumed that all of the sites within the scope of the HRA have the potential to be vulnerable to recreation impacts such as erosion, trampling or species disturbance to some degree. Those European sites that are closest to, most accessible to or most attractive to the residents of the towns and villages where development is proposed are most likely to be affected.

³³ <http://publications.naturalengland.org.uk/publication/4738329056641024>

³⁴ <http://publications.naturalengland.org.uk/publication/4942743310696448>

The South Oxfordshire Open Space User Survey (2005) reported that 35% of people are prepared to travel for 15 minutes and 45% of people are prepared to travel by car to access natural and semi-natural greenspace³⁵. Visitor surveys³⁶ at Little Wittenham SAC also identified that the majority of the visitors to the site live within 20 minutes driving time.

- 3.17 It is difficult to convert these statistics into an average travel distance by all travel modes to access natural and semi-natural greenspace. As a benchmark, therefore, we have made reference to the 'Zone of Influence' identified by the Thames Basin Heaths SPA Delivery Framework³⁷. Whilst it is recognised that the other European sites scoped into this HRA have different designated features to Thames Basin Heaths SPA, the SPA Delivery Framework is primarily concerned with avoiding adverse recreational or urbanising effects from residential development and the buffer distances it defines are judged to provide a reasonable proxy for the distance from housing development within which likely significant recreational effects cannot be ruled out.
- 3.18 As set out above in relation to loss or damage of habitat, the Framework advises that there is presumption against development within 400 m of the European site (assumed adverse effect on integrity unless site-specific Appropriate Assessment demonstrates otherwise), that avoidance measures are necessary in relation to all residential development within a Zone of Influence from 400 metres to 5km from the perimeter of the European site and that applications for large scale development (over 50 houses) between 5km and 7km from the edge of the European site should be assessed on a case by case basis. The potential for effects will depend upon the scale of development proposed and the features for which the site is designated; however, as a conservative estimate, it has been assumed that any development within 7km of a sensitive site could have impacts due to recreation.
- 3.19 Aston Rowant SAC, Chilterns Beechwoods SAC, Hartslock Wood SAC and Little Wittenham SAC all lie wholly or partially within the district. Cothill Fen SAC is c.4.5km outside the district and Oxford Meadows SAC is c.2km outside the district. The other European sites are greater than 7km outside the district.
- 3.20 Natural England's Site Improvement Plans record the threats and pressures relevant to each European site. Public access or disturbance are not identified as a current threat or pressure at the following sites, despite them lying close to large settlements:
- Aston Rowant SAC³⁸: c.7km from Thame;
 - Hartslock Wood SAC³⁹: <2km from Goring and Pangbourne;
 - Cothill Fen SAC⁴⁰: c.2.5km from Abingdon; or
 - Oxford Meadows SAC⁴¹: in Oxford.
- 3.21 These sites all lie close to or beyond the South Oxfordshire District boundary. HRAs carried out of the neighbouring authorities' plans have concluded that their plans will not have a significant effect on these sites due to recreation pressure. These sites are therefore not considered to be particularly sensitive to recreation impacts.
- 3.22 At Chiltern Beechwoods SAC, public access / disturbance is only identified in relation to the stag beetle population. The portion of the SAC that supports the stag beetle population (Bisham Woods SSSI) is greater than 7km from the district boundary. Public access or disturbance is, however, identified as a threat to the great crested newt population at Little Wittenham SAC⁴².
- 3.23 **The impacts of recreation are therefore screened in in relation to Little Wittenham SAC, where development could be within 7km of the site, but screened out in relation to all other European sites.**

³⁵ <http://www.southoxon.gov.uk/sites/default/files/Standards%20summary%20with%20justification.pdf>

³⁶ Earth Trust (2016) *Statement of Need for Improvements to the Earth Trust Centre*

³⁷ http://www.waverley.gov.uk/downloads/file/3503/thames_basin_heaths_spa_delivery_framework_2009_-_thames_basin_heaths_joint_strategic_partnership_board

³⁸ Site Improvement Plan for Aston Rowant SAC: <http://publications.naturalengland.org.uk/publication/4960794580090880>

³⁹ Site Improvement Plan for Hartslock Wood SAC: <http://publications.naturalengland.org.uk/publication/4874314121740288>

⁴⁰ Site Improvement Plan for Cothill Fen SAC: <http://publications.naturalengland.org.uk/publication/6482436405854208>

⁴¹ Site Improvement Plan for Oxford Meadows SAC: <http://publications.naturalengland.org.uk/publication/4942743310696448>

⁴² Site Improvement Plan for Little Wittenham SAC: <http://publications.naturalengland.org.uk/publication/6567758347108352>

Water quantity and quality

- 3.24 European sites at which aquatic or wetland environments support qualifying features have the potential to be affected by changes in water quantity or quality. The European sites with aquatic or wetland habitats, or those identified as sensitive to changes in water quality or quantity are:
- Cothill Fen SAC: has calcium-rich springwater-fed fens that have been identified as sensitive to water pollution and hydrological changes²⁸;
 - River Lambourn SAC and Kennet & Lambourn Floodplain SAC: river habitats that support qualifying invertebrate and fish species; identified as sensitive to water pollution and hydrological changes (including water levels, siltation and flood defences)⁴³;
 - Little Wittenham SAC: its ponds support great crested newts, but changes to water quality or quantity have not been identified as an issue at this site⁴⁴; this site has therefore been screened out;
 - Oxford Meadows SAC: lowland hay meadows, identified as sensitive to hydrological changes⁴⁵; and
 - Thames Basin Heaths SPA: includes wetland heath that has been identified as sensitive to hydrological changes.⁴⁶
- 3.25 The types of development in the Local Plan that have the potential to affect water quality / quantity or flow regimes at sensitive European sites are:
- Residential or employment development that would involve a significant increase in demand for water supply and treatment; and
 - Infrastructure development that requires significant excavation in proximity to watercourses or groundwater.
- 3.26 Changes to demand for water supply and disposal impact upon the locations where water is abstracted or treated, whereas excavation impacts upon locations that are hydrologically connected to the development site.
- 3.27 Hydrological connectivity can occur in proximity to a river, where development would be upstream of a European site on the same river, or via groundwater where development has the potential to affect an aquifer that the European site lies over.
- 3.28 The potential for effects relating to water supply and disposal has been considered with reference to SODC's Phase 1 Water Cycle Strategy⁴⁷, which is based on the Local Plan Preferred Options. Phase 2 will assess the specific site allocations, final housing numbers and timescales for growth. Although the Local Plan Preferred Options have been revised since the Phase 1 work was undertaken, the overall quantum of new residential development is very similar (currently 11,451; previously 11,624). The relative distribution of development between the major settlements is also similar. The high level conclusions reached in the Phase 1 work are therefore considered to be applicable.
- 3.29 The Phase 1 Water Cycle Strategy has concluded that water supply will not be a constraint to development, although infrastructure upgrades may be required to enable development at Wallingford, Didcot, Chalgrove Airfield, Chinnor and Berinsfield.
- 3.30 The assessment of the water quality effects of increased pressure on waste water treatment facilities was not fully concluded in the Phase 1 work and further modelling is being undertaken. The preliminary findings are summarised in **Table 3.1**.

⁴³ Site Improvement Plan for River Lambourn SAC and Kennet & Lambourn Floodplain SAC <http://publications.naturalengland.org.uk/publication/4738329056641024>

⁴⁴ Site Improvement Plan for Little Wittenham SAC <http://publications.naturalengland.org.uk/publication/6567758347108352>

⁴⁵ Site Improvement Plan for Oxford Meadows SAC <http://publications.naturalengland.org.uk/publication/4942743310696448>

⁴⁶ Site Improvement Plan for Thames Basin Heaths SPA <http://publications.naturalengland.org.uk/publication/6249258780983296>

⁴⁷ South Oxfordshire District Council – Water Cycle Study, Phase 1 Update, November 2016

Table 3.1 Summary of Phase 1 Water Cycle Strategy findings on waste water treatment

Waste water treatment works (& other main settlements served)	Discharges to	Predicted impact of development
Benson (& Crowmarsh)	Howbery Ditch	Upgrade required to accommodate growth
Chalgrove	Haseley Brook	Upgrade required to accommodate growth
Chinnor	Kingsey Cuttle Brook	Upgrade required to accommodate growth
Cholsey (& Wallingford)	Cholsey Brook	Upgrade required to accommodate growth
Culham	Clifton Hampden Ditch	Upgrade required to accommodate growth
Didcot	Moor Ditch	Environmental capacity could be a constraint to growth
Goring (& Woodcote)	River Thames	Can accommodate growth (but would be close to capacity)
Henley-on-Thames	Fawley Court Stream	Upgrade required to accommodate growth
Nettlebed	Groundwater	Upgrade required to accommodate growth
Sonning Common	Groundwater	Can accommodate proposed development
Thame	Scotsgrove Brook	Upgrade required to accommodate growth
Watlington	Pyrtton Stream	Upgrade required to accommodate growth
Wheatley	River Thame	Environmental capacity could be a constraint to growth

- 3.31 The two waste water treatment works at which environmental capacity could pose a constraint to growth discharge to watercourses that are tributaries to the River Thames. None of the European sites that are sensitive to changes in water quality or quantity are downstream of these treatment works.
- 3.32 In addition, the European sites fed by groundwater are not at risk from abstraction, as confirmed by the Environment Agency in response to the previous (2015) HRA work (see also **Appendix 4**):
- Water supply for Kennet and Lambourn Floodplain and River Lambourn is from the chalk of the Kennet catchment. Under CAMS this aquifer has no available resource - so no new source of water will come from this catchment.*
- 3.33 **Potential water quality and hydrological impacts have therefore been screened in for Cothill Fen SAC, Kennet & Lambourn Floodplain SAC, Oxford Meadows SAC, River Lambourn SAC, and Thames Basin Heaths SPA, where development involving large scale excavation could be hydrologically connected to these sites. Impacts related to changes in demand for water supply and treatment have been screened out for all sites.**

Identification of other plans and projects which may have 'in-combination' effects

- 3.34 Regulation 102 of the Amended Habitats Regulations 2010 requires an Appropriate Assessment where "a land use plan is likely to have a significant effect on a European site (either alone or in combination with other plans or projects) and is not directly connected with or necessary to the management of the site".
- 3.35 The first stage in identifying 'in-combination' effects involves identifying which other plans and projects in addition to the South Oxfordshire Local Plan may affect the European sites that were the focus of this assessment. There are a large number of potentially relevant plans and projects which could be considered; therefore the review at this stage focused on planned spatial growth

within the authorities adjacent to or near South Oxfordshire. **Appendix 2** lists the plans that were reviewed, outlining the components of each plan that could have an impact on nearby European sites and considering the findings of the accompanying HRA work (where available).

- 3.36 The purpose of the review of other plans was to identify any components that could have an impact on the European sites within and around South Oxfordshire that could also be significant affected by the Local Plan, e.g. proposals for development near to these sites which could have implications in terms of increased traffic, water use and recreation pressures and infrastructure development. The potential for the effects of these plans to combine with the effects of the Local Plan has been considered in the next chapter and will continue to be assessed where necessary during further iterations of the HRA.
- 3.37 HRAs of the following neighbouring local authorities' plans found no significant effects on European sites, either alone or in combination with other plans:
- Oxfordshire County Council (Local Transport Plan and Waste Core Strategy only);
 - Oxford City Council;
 - Vale of White Horse District Council;
 - Cherwell District Council;
 - Wycombe District Council (Princes Risborough Town Plan only);
 - Wokingham Borough Council; and
 - West Berkshire Council.
- 3.38 The following authorities are yet to conclude the HRA work for their current plans:
- Oxfordshire County Council (Waste Site Allocations DPD only);
 - Aylesbury Vale District Council;
 - Wycombe District Council; and
 - Reading Borough Council.

4 HRA Screening Assessment

- 4.1 As described in **Chapter 3**, a screening assessment has been carried out in order to identify the likely significant effects of the Local Plan on the European sites in and around the district. The full screening matrix used for this assessment can be found in **Appendix 3** and the findings are summarised in **Table 4.1** and the sections below. This HRA report has taken the approach of screening each policy and site allocation individually, which is consistent with current guidance. In reality, however, the Local Plan policies will combine to deliver the overall scale of development within the district and the in-combination effects of the policies together have therefore been taken into consideration where relevant.

Table 4.1 Summary of HRA screening findings for each policy: likelihood* of air, recreation and water quality/quantity effects

Policy	Air	Rec.	Water	Policy	Air	Rec.	Water	Policy	Air	Rec.	Water
STRAT1	n/a	n/a	n/a	H5	n/a	n/a	n/a	H22	n/a	n/a	n/a
STRAT2			n/a	H6			n/a	EMP1		n/a	n/a
STRAT3			n/a	H7			n/a	EMP2	n/a	n/a	n/a
STRAT4	n/a	n/a	n/a	H8			n/a	EMP3	n/a	n/a	n/a
STRAT5	n/a	n/a	n/a	H9			n/a	EMP4	n/a	n/a	n/a
STRAT6	n/a	n/a	n/a	H10			n/a	EMP5	n/a	n/a	n/a
STRAT7			n/a	H11	n/a	n/a	n/a	EMP6	n/a	n/a	n/a
STRAT8			n/a	H12	n/a	n/a	n/a	EMP7	n/a	n/a	n/a
STRAT9			n/a	H13	n/a	n/a	n/a	EMP8	n/a	n/a	n/a
STRAT10			n/a	H14	n/a	n/a	n/a	EMP9	n/a	n/a	n/a
HEN1	n/a	n/a	n/a	H15	n/a	n/a	n/a	EMP10	n/a	n/a	n/a
TH1	n/a	n/a	n/a	H16			n/a	EMP11		n/a	n/a
WAL1	n/a	n/a	n/a	H17			n/a	EMP12			n/a
H1	n/a	n/a	n/a	H18			n/a	EMP13			n/a
H2			n/a	H19	n/a	n/a	n/a	EMP14			n/a
H3			n/a	H20	n/a	n/a	n/a				
H4			n/a	H21	n/a	n/a	n/a				

*Green = Unlikely significant effects; Orange = Uncertain effects; n/a = impact is not relevant to the policy

Table continued overleaf...

...continued

Policy	Air	Rec.	Water	Policy	Air	Rec.	Water	Policy	Air	Rec.	Water
INF1	n/a	n/a	n/a	ENV5	n/a	n/a	n/a	DES6	n/a	n/a	n/a
TRANS1		n/a	n/a	ENV6	n/a	n/a	n/a	DES7	n/a	n/a	n/a
TRANS2	n/a	n/a	n/a	ENV7	n/a	n/a	n/a	DES8	n/a	n/a	n/a
TRANS3	n/a	n/a	n/a	ENV8	n/a	n/a	n/a	DES9	n/a	n/a	n/a
TRANS4	n/a	n/a	n/a	ENV9	n/a	n/a	n/a	DES10	n/a	n/a	n/a
TRANS5	n/a	n/a	n/a	ENV10	n/a	n/a	n/a	DES11	n/a	n/a	n/a
TRANS6	n/a	n/a	n/a	ENV11	n/a	n/a	n/a	TC1	n/a	n/a	n/a
TRANS7	n/a	n/a	n/a	ENV12	n/a	n/a	n/a	TC2		n/a	n/a
TRANS8		n/a	n/a	ENV13	n/a	n/a	n/a	TC3		n/a	n/a
INF2	n/a	n/a	n/a	EP1	n/a	n/a	n/a	TC4		n/a	n/a
INF3	n/a	n/a	n/a	EP2	n/a	n/a	n/a	TC5		n/a	n/a
INF4	n/a	n/a		EP3	n/a	n/a	n/a	TC6		n/a	n/a
INF5	n/a	n/a	n/a	DES1	n/a	n/a	n/a	CF1	n/a	n/a	n/a
ENV1	n/a	n/a	n/a	DES2	n/a	n/a	n/a	CF2		n/a	n/a
ENV2	n/a	n/a	n/a	DES3	n/a	n/a	n/a	CF3		n/a	n/a
ENV3	n/a	n/a	n/a	DES4	n/a	n/a	n/a	CF4	n/a	n/a	n/a
ENV4	n/a	n/a	n/a	DES5	n/a	n/a	n/a	CF5	n/a	n/a	n/a

Significant effects likely

- 4.2 **None of the policies or site allocations** in the Local Plan is considered **likely** to result in significant effects on the European sites in and around South Oxfordshire.

Significant effects unlikely

- 4.3 Significant effects are considered **unlikely** in relation to **most of the Local Plan policies**, either because the policies will not result in new development or because the scale, nature or location of the development proposed will not have an effect on European sites. In some cases the policies also provide mitigation for the impacts of other policies in the plan.
- 4.4 The following 69 policies are screened out because they will not result directly in development (i.e. they set out criteria for development that will be determined under other more specific policies, which have been screened separately for their impacts on European sites):

- STRAT1 - The Overall Strategy;
- STRAT4 - Didcot Garden Town;
- STRAT5 - Strategic Allocations;
- STRAT6 - Culham Science Centre;
- HEN1 - The Strategy for Henley;
- TH1 - The Strategy for Thame;
- WAL1 - The Strategy for Wallingford ;
- H1 - Delivering New Homes;
- H5 - Contingency Policy for Larger Villages;
- H11 - Affordable Housing;
- H12 - Exception Sites;
- H13 - Meeting Housing Needs;
- H14 - Self-Build and Custom Housing;
- H15 - Specialist Housing for Older People;
- H19 - Subdivision and Conversion to Multiple Occupancy;
- H20 - Replacement Dwellings;
- H21 - Extensions to Dwellings;
- H22 - Loss of Existing Residential Accommodation in Town Centres;
- EMP2 - Range, Size and Mix of Employment Premises;
- EMP3 - Retention of Employment Land;

- EMP4 – Employment Land in Didcot;
- EMP5 – New Employment Land in Henley;
- EMP6 – New Employment Land in Thame;
- EMP7 – New Employment Land in Wallingford;
- EMP8 – New Employment Land in Crowmarsh Gifford;
- EMP9 – Employment Land at Culham Science Centre;
- EMP10 – New Employment Land at Chalgrove;
- INF1 – Infrastructure Provision;
- TRANS2 – Promoting Sustainable Transport and Accessibility;
- TRANS3 – Safeguarding of Land for Strategic Transport Schemes;
- TRANS4 – Transport Assessments, Transport Statements and Travel Plans;
- TRANS5 – Consideration of Development Proposals;
- TRANS6 – Rail;
- TRANS7 – Development Generating New Lorry Movements;
- INF2 – Electronic Communications;
- INF3 – Telecommunications Technology;
- INF5 – Water Resources;
- ENV1 – Landscape and Countryside;
- ENV2 – Biodiversity: Designated Sites, Priority Habitats and Species;
- ENV3 – Biodiversity: Non Designated Sites, Habitats and Species;
- ENV4 – Watercourses;
- ENV5 – Green Infrastructure in New Developments;
- ENV6 – Historic Environment;
- ENV7 – Demolition of Listed Buildings;
- ENV8 – Alteration of and Extension to Listed Buildings;
- ENV9 – Conservation Areas;
- ENV10 – Archaeology;
- ENV11 – Historic Battlefields, Registered Parks and Gardens, and Historic Landscapes;
- ENV12 – Pollution: Impact from Neighbouring and/or Previous Land Uses on New Development; ENV13 – Pollution: Impact of Development on Human Health, the Natural Environment and/or Local Amenities;
- EP1 – Air Quality;
- EP2 – Hazardous Substances;
- EP3 – Minerals Safeguarding Areas;
- DES1 – Delivering High Quality Development;
- DES2 – Enhancing Local Character;
- DES3 – Design and Access Statements;
- DES4 – Masterplans for Allocated Sites and Major Developments;
- DES5 – Outdoor Amenity Space;
- DES6 – Privacy and Daylight;
- DES7 – Efficient Use of Resources;
- DES8 – Promoting Sustainable Design;
- DES9 – Renewable Energy;
- DES10 – New Buildings or Structures in the Countryside and Rural Areas;
- DES11 – Reuse of Rural Buildings;
- TC1 – Retail and Town & Larger Village Centres;
- TC6 – Primary Retail Frontages;
- CF1 – Safeguarding Community Facilities;
- CF4 – Existing Open Space, Sport and Recreation Facilities; and
- CF5 – Open Space, Sport and Recreation in New Residential Development.

4.5 Several of the policies in the plan will result in development of a type that could increase traffic and therefore have the potential to cause air pollution effects at sensitive European sites, but are of a scale or in a location that is unlikely to result in significant effects:

- TC3 – Retailing in Henley (screened out due to scale and location);
- TC4 – Retailing in Thame (screened out due to scale and location);
- TC5 – Retailing in Wallingford (screened out due to scale and location);
- CF2 – Provision of Community Facilities and Services (screened out due to scale); and
- CF3 – New Open Space, Sport and Recreation Facilities (screened out due to scale).

- 4.6 In addition to these, several policies will result in development of a type that could increase visitor numbers at Little Wittenham SAC and therefore have the potential to cause recreational pressure effects, but are of a scale or in a location that is unlikely to result in significant effects for either air pollution or recreation:
- STRAT10 – Land at Wheatley Campus, Oxford Brookes University (screened out due to location and scale);
 - H6 – Land to the West of Priests Close, Nettlebed (screened out due to location and scale);
 - H7 – Joyce Grove, Nettlebed (screened out due to location and scale);
 - H16 – Provision for Gypsies, Travellers and Travelling Showpeople (screened out due to scale);
 - H17 – Safeguarding Traveller Sites (screened out due to scale);
 - H18 – Infill Development (screened out due to scale);
 - EMP13 – Caravan and Camping Sites (screened out due to scale); and
 - EMP14 – Visitor Accommodation (screened out due to scale).
- 4.7 Of the policies listed above, the following also provide mitigation for impacts arising from other policies in the plan:
- TRANS2: encourages sustainable transport (air pollution mitigation);
 - TRANS4: encourages sustainable transport and reductions in car use (air pollution mitigation);
 - TRANS5: encourages sustainable transport (air pollution mitigation);
 - TRANS7: allows significant increases in lorry movements where this would not result in adverse environmental effects (air pollution mitigation);
 - INF4: mitigates its own impacts by requiring Environmental Impact Assessment (water quality / quantity mitigation);
 - ENV2: provides protection for internationally designated sites (mitigation for all impacts);
 - ENV5: requires development to contribute towards the provision of additional green infrastructure (recreation impact mitigation);
 - EP1: requires development to comply with the air quality action plan, national guidance, and local transport plan (air pollution mitigation);
 - DES7: requires development to comply with the air quality action plan (air pollution mitigation); and
 - CF5: requires residential development to provide or contribute towards accessible open space (recreation impact mitigation).
- 4.8 Policy TRANS1 also provides air pollution mitigation by supporting the implementation of sustainable transport and congestion-reducing proposals, but as uncertain effects on air pollution (see below).

Significant effects uncertain

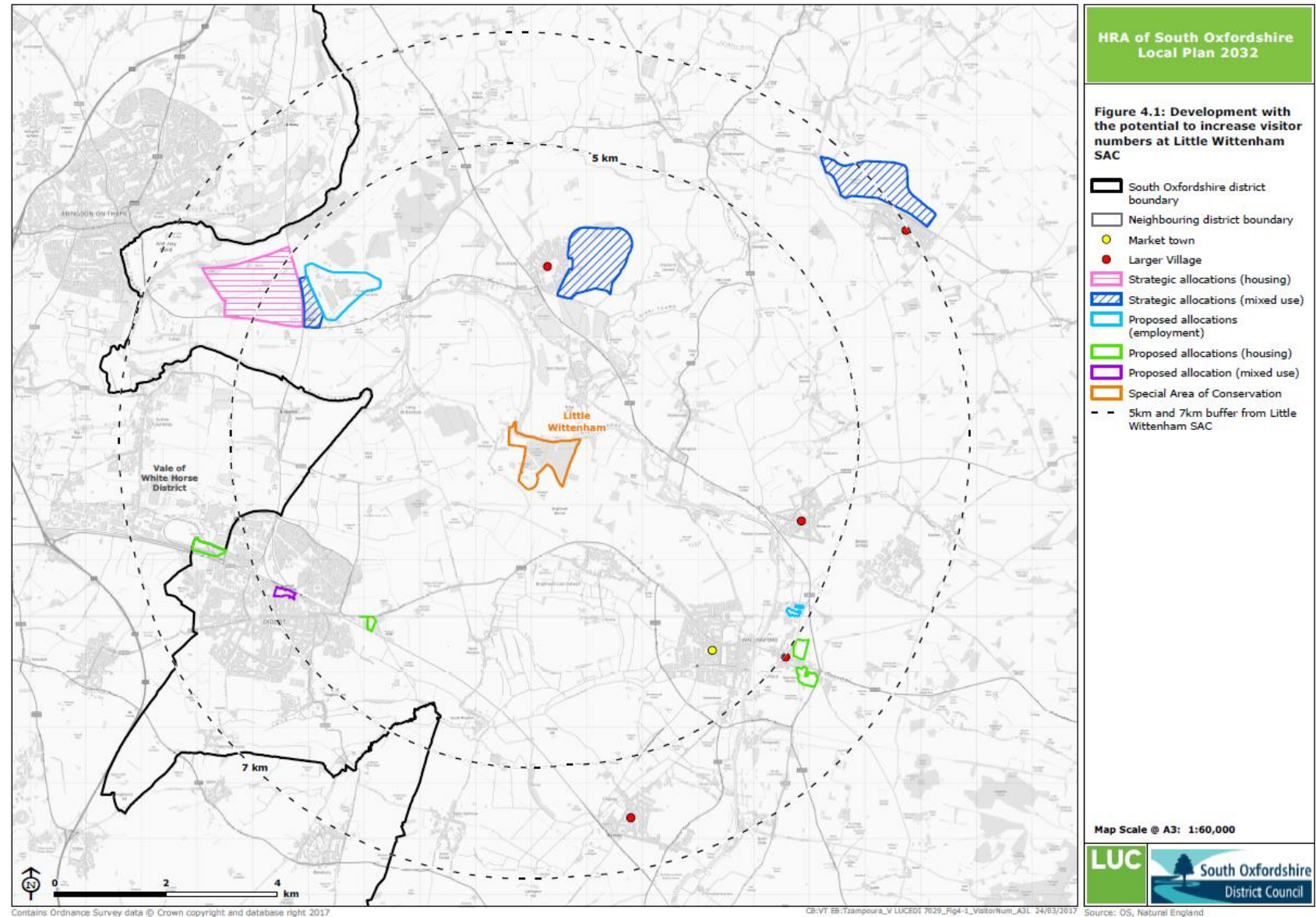
- 4.9 For a number of the Local Plan proposals it was concluded that there **may** be a significant effect on one or more European sites, **although this is uncertain**. Therefore, in line with the precautionary approach being applied in the HRA, until significant effects can be ruled out they are identified as likely significant effects.
- 4.10 The following policies were identified as having uncertain effects:
- STRAT2 – The Need for New Development in South Oxfordshire (air pollution and recreation impacts);

- STRAT3 – The Unmet Housing Requirements from Oxford City (air pollution and recreation impacts);
- STRAT7 – Land Adjacent to Culham Science Centre (recreation impacts only);
- STRAT8 – Land at Berinsfield (recreation impacts only);
- STRAT9 – Land at Chalgrove Airfield (recreation impacts only);
- H2 – New Housing in Didcot (in-combination recreation impacts only);
- H3 – Housing in the Towns of Henley-on-Thames, Thame and Wallingford (recreation impacts only, but not all locations);
- H4 – Housing in Larger Villages (recreation impacts only, but not all locations);
- H8 – Land to the East of Benson Lane, Crowmarsh Gifford (in-combination recreation impacts only);
- H9 – Land to the South of Newnham Manor, Crowmarsh Gifford (in-combination recreation impacts only);
- H10 – Housing in Smaller Villages (recreation impacts only);
- EMP1 – The Amount and Distribution of New B-Class Employment Land (air pollution impacts only);
- EMP11 – Development in the Countryside and Rural Areas (in-combination air pollution impacts only);
- EMP12 – Tourism (in-combination air pollution impacts only);
- TRANS1 – Supporting Strategic Transport Investment (air pollution impacts only); and
- TC2 – Amount and Location of New Retail Floorspace (air pollution impacts only).

Recreation impacts

- 4.11 The policies identified as having uncertain impacts on Little Wittenham SAC, due to increased visitor numbers, are those that will result in new homes within 7km of the SAC. Some of the policies provide for housing across the whole district, in which case only a proportion of the new homes they will result in have the potential to be close to Little Wittenham SAC. Where the policies allocate development in a specific location, however, all of the new homes provided for by the policy may be within 7km. **Figure 4.1** shows the strategic allocations, proposed allocations, market towns and larger villages within 7km of the SAC.

Figure 4.1 Development with the potential to increase visitor numbers at Little Wittenham SAC



- 4.12 An estimate of the new homes that are likely to result from the policies identified⁷ is summarised in **Table 4.1**.

Table 4.2 New homes within 7km of Little Wittenham SAC

Policy	Number of new homes policy provides for	Proportion of these new homes within 7km of Little Wittenham SAC	Effects alone or in combination?
STRAT2 - The Need for New Development in South Oxfordshire and STRAT3 - The Unmet Housing Requirements from Oxford City (total housing supply)	At least 8,784 new homes (in addition to the 12,016 already consented)	As distributed between the sites listed below Up to c.9,155 new homes	Alone / in-combination
STRAT7 - Land Adjacent to Culham Science Centre	≤3,500 new homes	All ≤3,500 new homes	Alone / in-combination
STRAT8 - Land at Berinsfield	≤2,100 new homes	All ≤2,100 new homes	Alone / in-combination
STRAT9 - Land at Chalgrove Airfield	≤3,000 new homes	c. 50% ≤1,500 new homes	Alone / in-combination
H2 - New Housing in Didcot	300 new homes (in addition to the 6,200 already consented)	All 300 new homes	In-combination only
H3 - Housing in the Towns of Henley-on-Thames, Thame and Wallingford	1,355 new homes	Homes in Wallingford only c.226 new homes	Alone / in-combination
H4 - Housing in Larger Villages	1,122 new homes	Homes in Chalgrove, Berinsfield, Benson, Crowmarsh Gifford and Cholsey only 269-779 new homes	Alone / in-combination
H8 - Land to the East of Benson Lane, Crowmarsh Gifford	150 new homes	All 150 new homes	In-combination only
H9 - Land to the South of Newnham Manor, Crowmarsh Gifford	100 new homes	All 100 new homes	In-combination only
H10 - Housing in Smaller Villages	500 new homes	Unknown ≤500 new homes	Alone / in-combination

- 4.13 South Oxfordshire is expected to have an average household size of 2.18⁴⁸ by the end of the plan period. The new homes will therefore accommodate an increase in population of up to c.19,960 within 7km of Little Wittenham SAC, in addition to the homes already committed (6,200 at Didcot, plus a small number at other sites, or c.13,500 people). The current population in the same area is approximately 62,564⁴⁹, based on 2011 census data. The Local Plan therefore seeks to accommodate a population increase of approximately 50% since 2011, within 7km of Little Wittenham SAC.
- 4.14 Little Wittenham SAC currently receives c.150,000 visits each year⁵⁰. An increase of 50%, in line with the estimated population increase, would therefore result in an additional c.75,000 visits per year. The Earth Trust, which manages Little Wittenham SAC, has undertaken visitor surveys and

⁴⁸ <http://www.whitehorsedc.gov.uk/sites/default/files/Oxfordshire%20Population%20Forecasts%20to%202026.pdf>

⁴⁹ Based on 2011 census data for Lower Super Output Areas in South Oxfordshire that are 7km from Little Wittenham SAC; calculated using GIS

⁵⁰ Earth Trust (2016) *Statement of Need for Improvements to the Earth Trust Centre*

estimates that visits to the site will increase by 11% by 2020 and 36% by 2030⁴⁵. A 50% increase in visitor numbers is a conservative estimate but suggests that the Local Plan may result in a greater number of visitors to the SAC than is currently planned for.

- 4.15 The increase in visitor numbers at Little Wittenham SAC could result in disturbance to or damage to the habitats of the site's qualifying species, great crested newts. This is considered in further detail in the Appropriate Assessment.

Air pollution impacts

- 4.16 The policies that have been assessed as having uncertain potential for air pollution impacts are those that could increase traffic flows on roads that pass within 200 metres of a sensitive European site. **Table 4.3** summarises those policies and the nature and quantum of development associated with them.

Table 4.3 Development with the potential for air pollution effects

Policy	Development that the policy provides for	Effects alone or in combination?
STRAT2 - The Need for New Development in South Oxfordshire and STRAT3 - The Unmet Housing Requirements from Oxford City (total housing supply)	8,784 homes (in addition to the 12,016 already consented) Located at: - Strategic allocations - Market towns - Larger villages - Smaller villages / other	Alone / in-combination
EMP1 - The Amount and Distribution of New B-Class Employment Land	≥12.34 ha of B-class employment land (in addition to the 11.16 ha already consented) Located at: - Henley (1ha) - Thame (2ha) - Wallingford (3.1ha) - Crowmarsh Gifford (2.5ha) - Culham (2ha) - Chalgrove (7.25ha) - Berinsfield (tbc)	Alone / in-combination
EMP11 - Development in the Countryside and Rural Areas	Unspecified (small scale)	In-combination
EMP12 - Tourism	Unspecified (small scale)	In-combination
TRANS1 - Supporting Strategic Transport Investment	Unspecified infrastructure improvements, and 11 safeguarded highways improvement schemes: - A4010 North Moreton - Abingdon southern bypass - Benson bypass - Clifton Hampden bypass - Culham to Didcot Thames River crossing - Didcot Central Corridor - Didcot Northern Perimeter - Sandford park & ride - Science Bridge, Didcot - Stadhampton bypass - Watlington bypass	Alone / in-combination
TC2 - Amount and Location of New Retail Floorspace	3,700m ² food store (Henley, Wallingford & Thame) 16,300m ² non-food store	Alone / in-combination

- 4.17 All of the potential impacts relate to the general increase in traffic on the road network, although larger housing, employment or retail allocations have the potential to increase traffic flows by greater than 1,000 AADT on a single road, in isolation. In addition, transport proposals that affect

road speed or alignment, as well as traffic flows in general, could exceed the DMRB criteria⁵¹ for the screening of potentially significant changes in air quality.

4.18 Roads that pass within 200 metres of sensitive European sites are as follows:

- M40: Aston Rowant SAC;
- A355: Burnham Beeches SAC;
- A404 & A4010: Chilterns Beechwoods SAC; and
- A332 & A329: Windsor Forest & Great Park SAC.

4.19 SODC is currently preparing a transport study to assess the effects of the Local Plan proposals on the road network; however, at this stage, predicted AADT flows are not currently available. Until that work has been undertaken, it is not yet possible to quantify the effects on the M40, A355, A404, A4010, A332, or A329, as a result of the plan. If the study shows that the DMRB criteria are exceeded for any of these roads, where they are within 200 metres of a sensitive European site, then Appropriate Assessment will be required. This will be updated at the next stage of the HRA work, and will take into account a High Court judgment dated 20 March 2017 regarding in-combination effects relating to air pollution in Wealden District Council, Lewes District Council, and the South Downs National Park Authority⁵².

⁵¹ Air pollution impacts should be screened into further assessment where:

- Daily traffic flows will change by 1,000 AADT (Annual Average Daily Traffic) or more; or
- Heavy duty vehicle (HDV) flows will change by 200 AADT or more; or
- Daily average speed will change by 10 km/hr or more; or
- Peak hour speed will change by 20 km/hr or more; or
- Road alignment will change by 5 m or more.

<http://www.standardsforhighways.co.uk/ha/standards/dmr/vol11/section3/ha20707.pdf>

⁵² High Court hearing before Mr Justice Jay between Wealden District Council (Claimant), and Secretary of State for Communities and Local Government, Lewes District Council, South Downs National Park Authority (Defendants) and Natural England (Interested Party). Neutral Citation Number: [2017] EWHC 351 (Admin)

5 Appropriate Assessment

Appropriate Assessment approach

- 5.1 Following the screening stage, if likely significant effects on European sites are unable to be ruled out, the plan-making authority is required under Regulation 102 of the Habitats Regulations 2010 to make an 'Appropriate Assessment' of the implications of the plan for European sites, in view of their conservation objectives. EC Guidance⁵³ states that the Appropriate Assessment should consider the impacts of the plan (either alone or in combination with other projects or plans) on the integrity of European sites with respect to their conservation objectives and to their structure and function.
- 5.2 A site's integrity depends on it being able to sustain its 'qualifying features' (i.e. those Annex 1 habitats, Annex II species, and Annex 1 bird populations for which it has been designated) and to ensure their continued viability. A high degree of integrity is considered to exist where the potential to meet a site's conservation objectives is realised and where the site is capable of self-repair and renewal with a minimum of external management support.
- 5.3 An Appropriate Assessment has therefore been undertaken for all of the European sites in and around South Oxfordshire (+17km) where likely significant effects from the Local Plan were identified (or were not able to be ruled out) during the screening stage.
- 5.4 At the screening stage, it was not possible to rule out likely significant effects with respect to recreation in relation to Little Wittenham SAC in relation to:
- The supply of 23,468 homes (11,452 not yet committed) – Policies STRAT2 & STRAT3; including:
 - Strategic housing allocations at Culham Science Centre, Berinsfield and Chalgrove Airfield – Policies STRAT7, STRAT8, and STRAT9;
 - Housing allocations in Didcot –Policy H2;
 - Housing in market towns (Henley-on-Thames, Thame and Wallingford) – Policy H3;
 - Housing in larger villages, including site allocations at Crowmarsh Gifford – Policies H4, H8 & H9; and
 - Housing in smaller villages – Policy H10.
- 5.5 Note that it has not yet been possible to complete the screening of potential air pollution effects in relation to policies STRAT2, STRAT3, EMP1, EMP11, EMP12, TRANS1 or TC2. If the SODC transport study shows that the DMRB air pollution criteria are exceeded as a result of these policies, on main roads (M40, A355, A404, A4010, A332, or A329) within 200 metres of a sensitive European site, then Appropriate Assessment will be required. This will be updated at the next stage of the HRA work, and will take into account the 20 March 2017 High Court judgment regarding in-combination air pollution effects.
- 5.6 The development of new homes within 7km of Little Wittenham SAC that would occur as a result of the policies identified above has been estimated to increase visitor numbers to the site by up to 50%, or 75,000 per year. Disturbance and damage to habitats could have an adverse effect on the great crested newt population for which this site is designated.
- 5.7 As described in **Chapter 1**, a conclusion needs to be reached as to whether or not a policy or site allocation in the Local Plan would adversely affect the integrity of a European site. As stated in the EC Guidance, assessing the effects on the site(s) integrity involves considering whether the predicted impacts of the Local Plan policies (either alone or in combination) have the potential to:

⁵³ *Assessment of plans and projects significantly affecting European sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC.* European Commission Environment DG, November 2001.

- Cause delays to the achievement of conservation objectives for the site;
- Interrupt progress towards the achievement of conservation objectives for the site;
- Disrupt those factors that help to maintain the favourable conditions of the site;
- Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site;
- Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem;
- Change the dynamics of relationships that define the structure or function of the site (e.g. relationships between soil and water, or animals and plants);
- Interfere with anticipated natural changes to the site;
- Reduce the extent of key habitats or the population of key species;
- Reduce the diversity of the site;
- Result in disturbance that could affect the population, density or balance between key species;
- Result in fragmentation; and
- Result in the loss of key features.

- 5.8 The conservation objectives for each European site (listed in **Appendix 2**) are generally to maintain the qualifying features in favourable condition. The Site Improvement Plans for each European site provide a high level overview of the issues (both current and predicted) affecting the condition of the European features on the site(s) and outline the priority measures required to improve the condition of the features. These have been drawn on to help to understand what is needed to maintain the integrity of the European sites.
- 5.9 For each European site where an uncertain likely significant effect was identified at the screening stage in relation to a policy or group of site allocations in the Local Plan (i.e. those listed in **Table 4.2** and shaded orange in the screening matrix in **Appendix 3**), the potential impacts have been set out below and judgements made (based on the information available) regarding whether the impact will have an adverse effect on the integrity of the site. Consideration has been given to the potential for mitigation measures to be implemented that could reduce the likelihood or severity of the potential impacts such that there would not be an adverse effect on the integrity of the site.

Assessment of effects on integrity of Little Wittenham SAC

- 5.10 Little Wittenham SAC is designated for its great crested newt population, which is supported by two main ponds, although the newts have also been found to travel several hundred metres into the surrounding woodland. The woodland lies entirely within the SAC, in addition to some grassland, and the SAC is part of a larger area managed by the Earth Trust.
- 5.11 The Earth Trust restricts access to the most sensitive areas of the SAC⁵⁴ by maintaining a signed network of paths and a pond viewing area⁵⁵, within the woodland. The Earth Trust's site as a whole, however, experiences a level of visitor numbers that places pressure on the site. Erosion, disturbance (e.g. to nesting birds) and pressure on infrastructure including parking are all an issue for the wider site⁵⁶ and therefore limit the extent to which an increase in visitor numbers could be accommodated in areas of the site away from the SAC.
- 5.12 The Earth Trust has submitted a planning application⁵⁷ to SODC for improvements to the visitor centre and parking at the site, aimed at relieving some of the effects of increases in visitor

⁵⁴ http://www.southoxon.gov.uk/sites/default/files/Appropriate%20Assessment_2.pdf

⁵⁵ http://www.earthtrust.org.uk/Libraries/Documents/Little_Wittenham_Nature_Reserve_Walk.sflb.ashx

⁵⁶ Earth Trust (2016) *Statement of Need for Improvements to the Earth Trust Centre*

⁵⁷ SODC planning reference P16/S3133/FUL

numbers. The work would facilitate access to the site as whole, however the ecological study submitted with the planning application has concluded the following:

There is potential for increased recreational pressure at Little Wittenham SAC due to the proposed development. However, the Earth Trust carefully manages public access to limit access to the Little Wittenham Special Area of Conservation and directs visitors instead to the Wittenham Clumps and other land within its ownership. Great crested newts are not particularly sensitive to recreational pressure. Natural England considered that 100% of the site was in favourable condition in 2010. It is therefore considered that the proposed development will not have a significant effect on the Special Area of Conservation and that an appropriate assessment is not necessary.

- 5.13 The planning application has been given permission (resolution to grant subject to agreement of s106) and Natural England has raised no objection to the proposals⁵⁸. Natural England agrees with the conclusions that there will be no likely significant effects on the SAC as:

The proposals could increase visitor pressure on the SAC; however Great Crested Newts are not particularly sensitive to visitor pressure, and the Earth Trust manage visitors to limit access to the SAC.

- 5.14 The increase in local population that would arise as a result of the Local Plan (either alone or in combination with other plans) could result in visitor pressure that has not yet been planned for. The Earth Trust's management of visitor access and the relatively low sensitivity of the great crested newt population are likely to mitigate additional visitor numbers. However, at this stage, it is not yet possible to conclude whether the additional visitors due to the Local Plan will have an adverse effect on the qualifying features of the SAC. Further consultation will be undertaken to quantify the increase in visitor numbers to the SAC that would arise from the Local Plan (through discussions with the Earth Trust) and to confirm the likely effect of those visitor numbers on the great crested newt population (through discussions with Natural England). This will be concluded at the next stage of the HRA work.

- 5.15 The risk that the increase in population will cause significant increases in visitor numbers at Little Wittenham SAC will also be mitigated to an extent by the following Local Plan policies:

Policy ENV5: Green Infrastructure in new developments

Development will be expected to contribute towards the provision of additional Green Infrastructure and protect and enhance existing Green Infrastructure.

Planning permission will be granted if proposals can demonstrate that they will:

- *protect, conserve and where possible, enhance the District's green infrastructure;*
- *provide an appropriate level of green infrastructure where a requirement has been identified for additional provision either within the Green Infrastructure Strategy, the relevant Neighbourhood Plan, or the Habitats Regulations Assessment;*
- *avoid the loss, fragmentation, severance or a negative impact on the function of green infrastructure;*
- *provide appropriate mitigation where there would be an adverse impact on green infrastructure; and*
- *provide an appropriate replacement where it is necessary for development to take place on areas of green infrastructure,*

All green infrastructure provision should be designed to meet the quality standards set out within the Green Infrastructure Strategy or the relevant Neighbourhood Plan. Consideration should also be given to inclusive access using such guides as the Fieldfare Trust "Countryside for All – A good practice guide to Disabled People's Access in the Countryside" and the South Oxfordshire Design Guide.

And:

⁵⁸ Natural England response dated 5th December 2016:
<http://www.southoxon.gov.uk/ccm/support/Main.jsp?MODULE=ApplicationDetails&REF=P16/S3133/FUL>

Policy CF5 - Open Space, Sport and Recreation in new residential development

New residential development will be required to provide or contribute towards accessible open space, sport, recreation and play in line with the most up to date standards (currently set out in South Oxfordshire District Council Open Space Standards 2013), including:

- *Amenity greenspace (including parks and gardens)*
- *Allotments*
- *Equipped children's play areas*
- *Sports facilities*
- *Playing pitches*

The provision of open space, sport, recreation and play is expected to be delivered on site, unless this is demonstrated not to be feasible.

- 5.16 Policy ENV5 requires developments to provide (or contribute towards) and 'appropriate' level of infrastructure, as identified within the green infrastructure strategy, neighbourhood plan or HRA. An appropriate level of green infrastructure to reduce visitor numbers to Little Wittenham SAC has not yet been identified in these documents, but may not be required.
- 5.17 Policy CF5 requires residential developments to provide or contribute towards new accessible open space, in line with SODC's open space standards⁵⁹. These include provision for natural and semi-natural greenspace, although this is not identified explicitly in the policy itself. The required standard for natural and semi-natural greenspace provision is as follows:
- *At least one accessible natural greenspace with a minimum size of 2ha within 2km (maximum walking distance) of all households;*
 - *At least one accessible natural greenspace with a minimum size of 20 ha. within 5km (maximum cycling distance and easy driving distance) of all households;*
 - *At least one accessible natural greenspace with a minimum size of 100 ha. within 10km (reasonable driving distance) of all households; and*
 - *All sites conforming to a high quality standard.*
- 5.18 SODC has also prepared a draft greenspace strategy with Vale of White Horse District Council. The South and Vale Green Infrastructure Strategy⁶⁰ provides additional planning guidance within the two districts on how the green infrastructure network can be safeguarded and improved, to better benefit local communities and biodiversity. The strategy recognises the role that green infrastructure (GI) can play in reducing the effects of recreation at other sites but identifies a current deficit in the provision of accessible natural greenspace, in both districts.
- 5.19 The strategy includes the following planning principles that would contribute towards mitigation of recreation impacts on Little Wittenham SAC:
- GI should be embedded into the layout of new development alongside the design of the built environment and grey infrastructure from the start of the masterplanning process.*
- Development should provide or contribute towards the provision of on- or off-site GI as appropriate in locations with identified deficiencies, including arrangements for on-going management and maintenance of green spaces.*
- The amount and quality of GI of different types that is required by a development to ensure residents have the opportunity to interact with nature, and encourage recreation, sports and healthier lifestyles, should reflect Natural England's standards for accessible natural greenspace and the standards for open space provision recommended in the Councils' Open Space, Sports and Recreation Studies.*
- 5.20 The mitigation provided by these policies and guidance could be strengthened by specific reference in the Local Plan for the need to provide greenspace that is accessible and natural, and

⁵⁹ <http://www.southoxon.gov.uk/sites/default/files/Standards%20summary%20with%20justification.pdf>

⁶⁰ http://www.whitehorsedc.gov.uk/java/support/dynamic_serve.jsp?ID=684252047&CODE=FA29EBACD0BCFF4EFBFF7D14251BF835

that provides for the type of experience that visitors would otherwise seek at Little Wittenham SAC. This would also strengthen provision across the district as a whole where it may be lacking. However, the need for this will be identified following analysis of further information from the Earth Trust and discussion with Natural England.

- 5.21 **At this stage, it is not yet possible to conclude whether the increase in visitor numbers arising from the South Oxfordshire Local Plan, either alone or in combination with other plans, would have an adverse effect on the integrity of Little Wittenham SAC.**

In-combination effects with other plans, policies and programmes

- 5.22 The Local Plan has the potential for in-combination effects arising from the following:
- Already-consented development that has been counted within the overall figures for the supply of housing and employment land (Local Plan policies STRAT2 and EMP1);
 - Development proposed by neighbouring authorities that would result in increased population and therefore visits to Little Wittenham SAC; and
 - Development proposed by neighbouring authorities that would result in increases in traffic on the M40, A355, A404, A4010, A332 or A329 within 200 metres of Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, or Windsor Forest & Great Park SAC.
- 5.23 None of the completed HRAs for neighbouring authorities' plans have identified significant effects either alone or in-combination with other plans. In some cases (Oxfordshire County waste site allocations, Aylesbury Vale District, Wycombe District and Reading Borough authorities), however, the HRA work has not been completed for the authorities' current plans. These will be monitored in case additional information becomes available.
- 5.24 The extent to which other plans could have significant effects in combination with the Local Plan will be assessed at the next stage of the HRA work, once the assessment of air pollution and recreation impacts has been concluded.

6 Conclusions

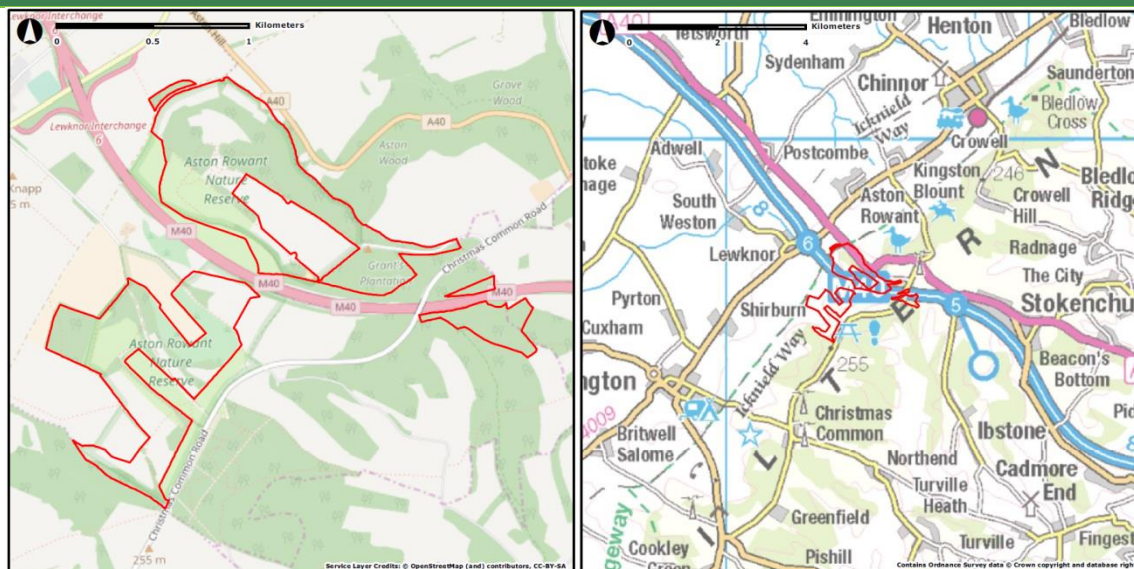
- 6.1 The HRA of the South Oxfordshire Local Plan (March 2017) has been undertaken in accordance with currently available guidance and based on a precautionary approach as required under the Habitats Regulations. The HRA and Appropriate Assessment conclusions are summarised below.
- 6.2 At this stage in the Local Plan preparation, the HRA has concluded that adverse effects on the integrity of European sites around South Oxfordshire from policies and site allocations in the Local Plan will not occur in relation to:
- Physical loss or damage to offsite habitat;
 - Noise/vibration and light pollution; or
 - Changes to water quality or quantity.
- 6.3 At this stage, with the information available, air pollution impacts have been assessed as uncertain in relation to potential increases in traffic on the following roads within 200 metres of sensitive European sites:
- M40: Aston Rowant SAC;
 - A355: Burnham Beeches SAC;
 - A404 & A4010: Chilterns Beechwoods SAC; and
 - A332 & A329: Windsor Forest & Great Park SAC.
- 6.4 Further information will be required from SODC's transport study to determine whether the Local Plan proposals will result in a degree of change in those locations that could have a significant effect, which may need to consider potential in-combination effects with other plans and projects following the 20 March 2017 High Court judgment. If the screening criteria are exceeded in these locations, Appropriate Assessment will be required at the next HRA stage.
- 6.5 The increase in population that will be accommodated by the development of new homes within 7km of Little Wittenham SAC that would occur as a result of the Local Plan has been estimated to increase visitor numbers to the site by up to 50%, or 75,000 per year. Disturbance and damage to habitats could have an adverse effect on the great crested newt population for which this site is designated. The Appropriate Assessment has not yet been able to conclude whether there will be adverse effects on the integrity of the SAC. This will be concluded in the next iteration of the HRA, following discussions with Natural England and the Earth Trust.

LUC
March 2017

Appendix 1

European sites in and around South Oxfordshire

1. Aston Rowant Special Area of Conservation



Site description

Aston Rowant SAC is one of the largest surviving complexes of beech woodland, mixed scrub, juniper and chalk grassland habitats once widespread in the Chilterns but now largely fragmented by agricultural improvement, the cessation of traditional grazing systems and afforestation.

Qualifying features

H5130	Juniper on heaths or calcareous grassland
H9130	Beech forests on neutral to rich soils
Site status*	100% in favourable condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶¹: pressures, threats and related development

The main pressures and threats to this site include an unsustainable on-site population, changes in species distribution, disease of juniper as well as the impacts of air pollution and the risks of atmospheric nitrogen deposition upon juniper. Additionally, conflicting conservation objectives threaten juniper and deer threaten beech. With regard to the types of development that may be brought forward in the Local Plan, air pollution could impact the site.

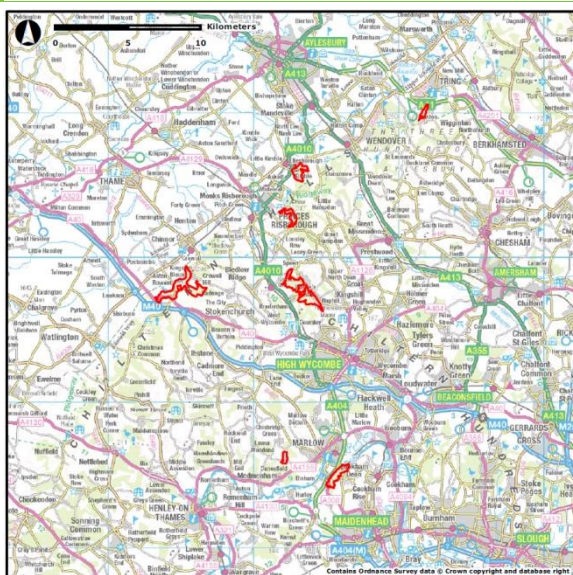
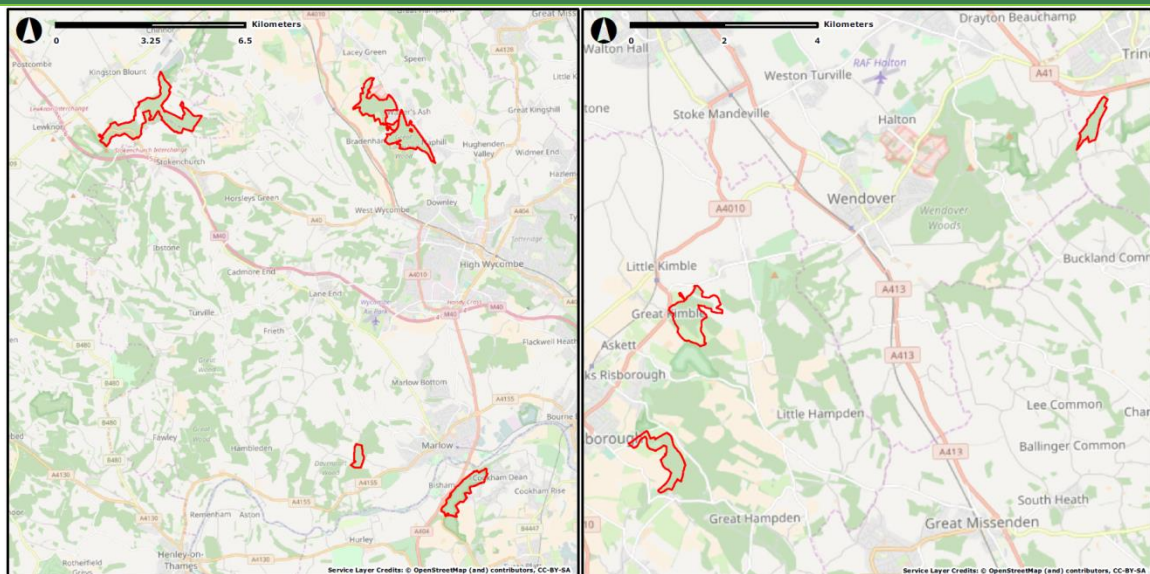
Key environmental conditions supporting the site

1. Regular management to keep vegetation open and allow seedlings to establish
2. Prevention of rabbit grazing on seedlings
3. Minimal air pollution

*Site status is an assessment by Natural England of the status of the SSSIs within the SAC

⁶¹ Natural England - Site Improvement Plan: Aston Rowant (SIP007)
<http://publications.naturalengland.org.uk/publication/4960794580090880?category=6149691318206464>

2. Chilterns Beechwoods Special Area of Conservation



Site description

Chilterns Beechwoods complex is of national importance as a large, unfragmented area of ancient semi-natural woodland characteristic of the Chilterns scarp. The rich flora includes no fewer than 52 species indicative of old woods. Over a hundred species of fungi are recorded. Paths, rides and glades are numerous, and the presence of boggy hollows and standing and fallen dead timber provide diverse niches for invertebrates.

Qualifying features

H6210	Dry grasslands and scrublands on chalk or limestone
H9130	Beech forests on neutral to rich soils
S1083	Stag beetle
Site status*	100% in favourable condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

2. Chilterns Beechwoods Special Area of Conservation

Site Improvement Plan⁶²: pressures, threats and related development

The main pressures and threats to this site include the impacts of forestry and woodland management, disease, deer and the invasive species of grey squirrel upon beech. Additionally, the changes in species distribution of stag beetle as well as the impact of public access and disturbance upon stag beetle. Air pollution and the impact of atmospheric nitrogen deposition also threaten the dry grasslands, beech and stag beetle. With regard to the types of development that may be brought forward in the Local Plan, air pollution and visitor disturbance could impact the site.

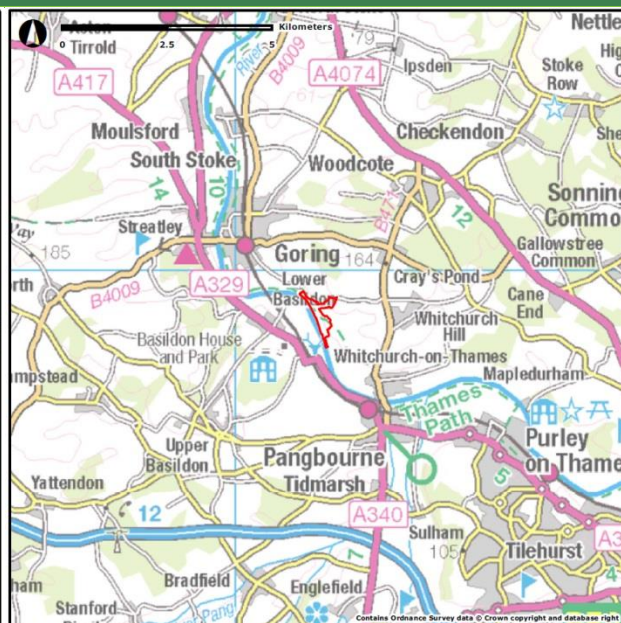
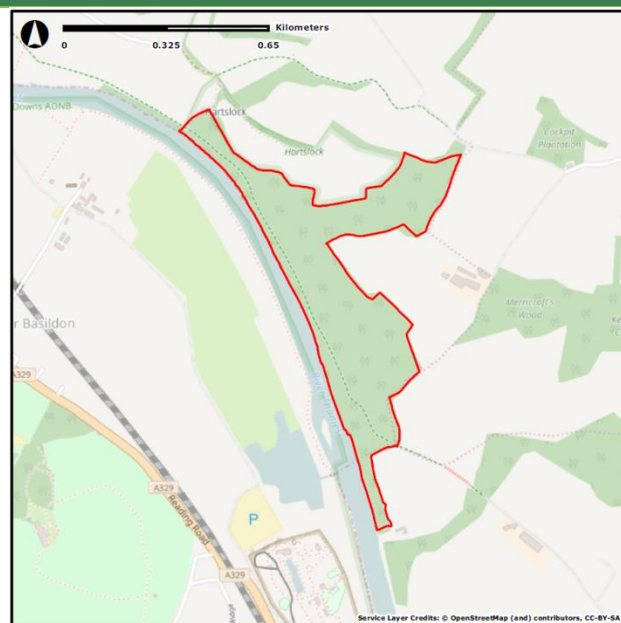
Key environmental conditions supporting the site

1. *Minimal air pollution*
2. *Managed public access*
3. *Appropriate management of grasslands*
4. *Absence of direct fertilisation*

**Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC*

⁶² Natural England - Site Improvement Plan: Chilterns Beechwoods (SIP045)
<http://publications.naturalengland.org.uk/publication/6228755680854016?category=6149691318206464>

3. Hartslock Wood Special Area of Conservation



Site description

Hartslock Wood SAC contains a mixture of semi-natural habitats which are characteristic of the Chiltern scarp. It includes an area of species-rich chalk downland and one of the few examples of ancient yew wood in the Chilterns, as well as semi-natural broadleaved woodland, chalk scrub and riverine fen.

Qualifying features

H6210	Dry grasslands and scrublands on chalk or limestone
H91J0	Yew dominated woodland
Site status*	100% in favourable condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶³: pressures, threats and related development

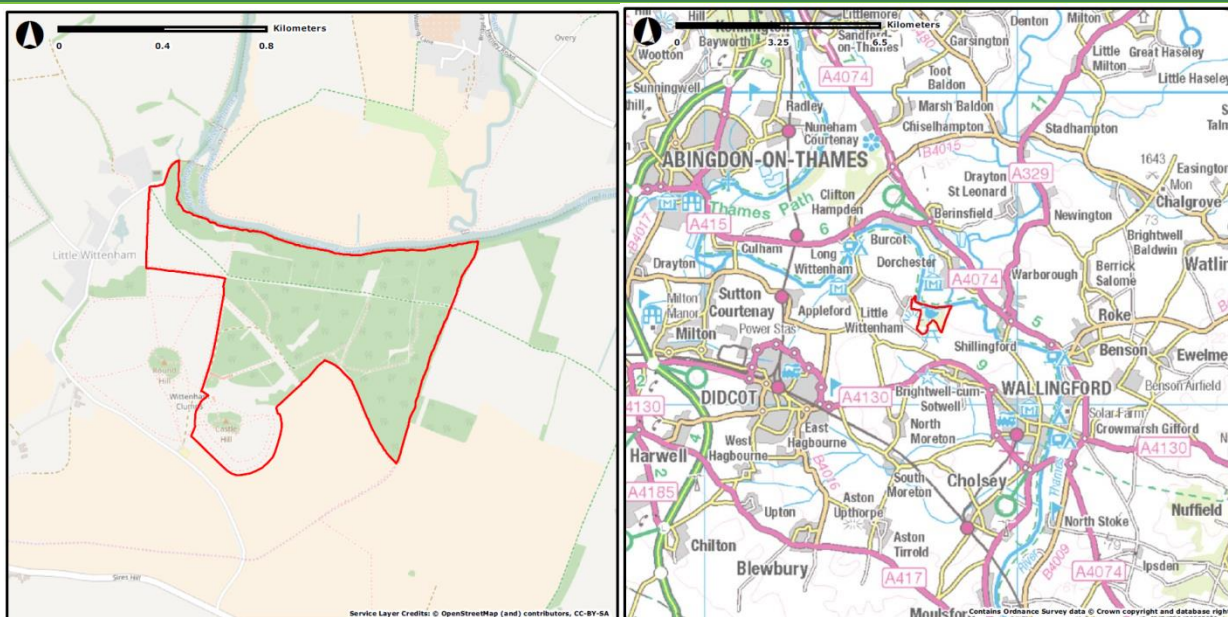
The main threat to this site is air pollution and the risk of atmospheric nitrogen deposition upon the dry grasslands and yew-dominated woodland. With regard to the types of development that may be brought forward in the Local Plan, air pollution could impact the site.

Key environmental conditions supporting the site

1. Appropriate management of grazing
2. Minimal air pollution
3. Absence of direct fertilisation

⁶³ Natural England - Site Improvement Plan: Hartslock Wood (SIP100)
<http://publications.naturalengland.org.uk/publication/4874314121740288?category=6149691318206464>

4. Little Wittenham Special Area of Conservation



Site description

Little Wittenham SAC is located beside the River Thames and consists of an area of woodland with ponds, as well as grassland and scrub on the slopes of a prominent hill. Great crested newts have been found throughout the site in a range of different habitats but the population is concentrated around the larger ponds in the woodland. Great crested newts are dependent on both terrestrial habitats (for foraging and refuge) and aquatic habitats (for breeding).

Qualifying features

S1166	Great crested newt
Site status*	100% in favourable condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶⁴: pressures, threats and related development

The main pressures and threats to this site include the impacts of public access and disturbance, and invasive fish species upon great crested newt. With regard to the types of development that may be brought forward in the Local Plan, visitor disturbance could impact the site.

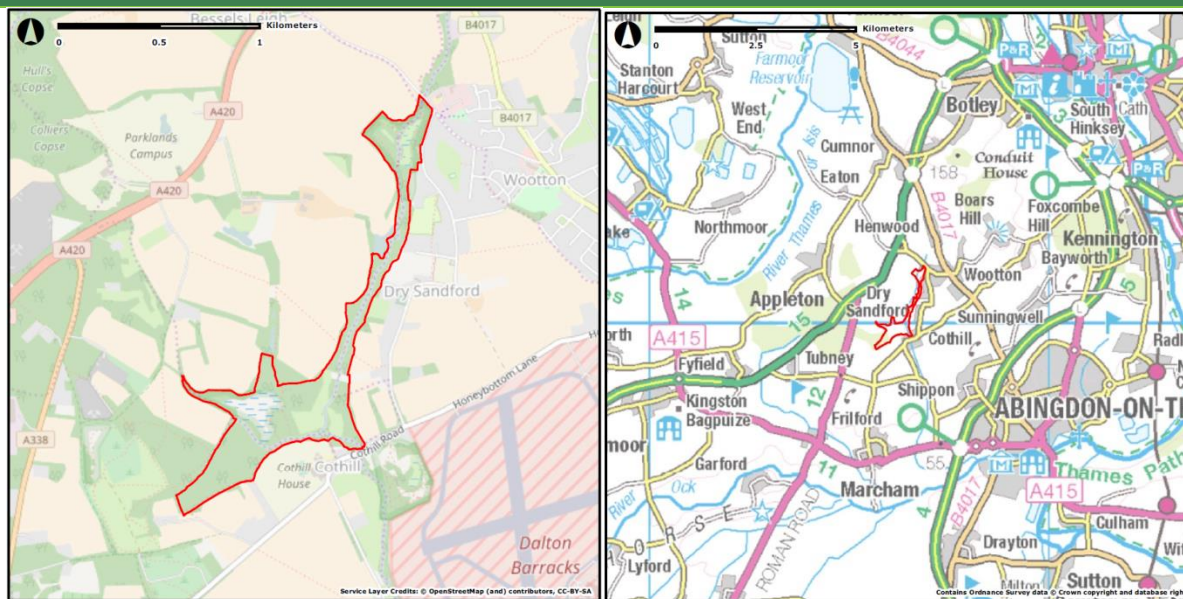
Key environmental conditions supporting the site

- Suitable foraging and refuge habitat within 500 metres of the pond
- Relatively unpolluted water of neutral pH
- Some ponds deep enough to retain water throughout February to August at least one year in three

*Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC

⁶⁴ Natural England - Site Improvement Plan: Little Wittenham (SIP122)
<http://publications.naturalengland.org.uk/publication/6567758347108352?category=6149691318206464>

5. Cothill Fen Special Area of Conservation



Site description

Cothill Fen is an exceptionally important site with an outstanding range of nationally rare habitats which support a large number of rare invertebrates and plants.

The habitats consist of calcareous fen, calcareous grassland, woodland and scrub of varying degrees of wetness. The habitat supports over 330 species of vascular plant and over 120 nationally scarce or rare invertebrates, including the nationally rare Southern Damselfly (*Coenagrion mercuriale*).

Qualifying features

H7230	Alkaline Fens; Calcium-rich springwater-fed fens
H91E0	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> ; Alder woodland on floodplains
Site status*	65% in favourable condition; 35% in unfavourable recovering condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶⁵: pressures, threats and related development

The main pressures and threats to this site include the impacts of water pollution and hydrological changes, as well as air pollution and the impact of atmospheric nitrogen deposition upon the calcium-rich spring water-fed fens.

With regard to the types of development that may be brought forward in the Local Plan, air pollution, and water quality and quantity could impact the site.

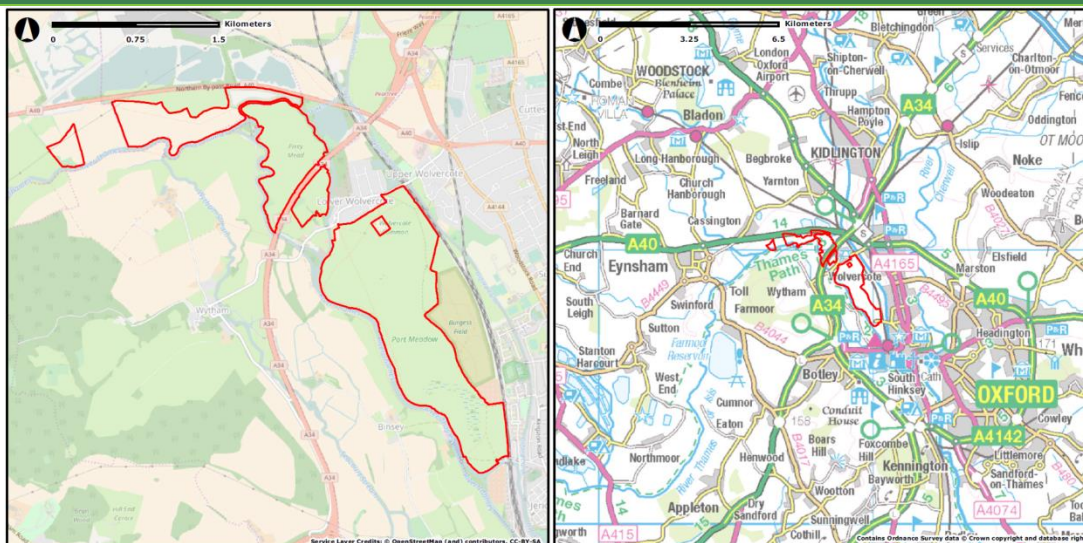
Key environmental conditions supporting the site

1. High water table
2. Calcareous base rich water supply

*Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC

⁶⁵ Natural England - Site Improvement Plan: Cothill Fen (SIP047)
<http://publications.naturalengland.org.uk/publication/6482436405854208?category=6149691318206464>

6. Oxford Meadows Special Area of Conservation



Site description

Oxford Meadows SAC is an amalgamation of three discrete, adjacent tracts of unimproved chalk grassland. Together they represent an extensive area of a habitat now uncommon in the Berkshire Downs.

Qualifying features

H6510	Lowland hay meadows
S1514	Apium repens; Creeping marshwort
Site status*	100% in favourable condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶⁶: pressures, threats and related development

The main pressures and threats to this site include the impacts of hydrological changes and the invasive species of *Crassula* upon creeping marshwort. With regard to the types of development that may be brought forward in the Local Plan, water quantity changes could impact the site.

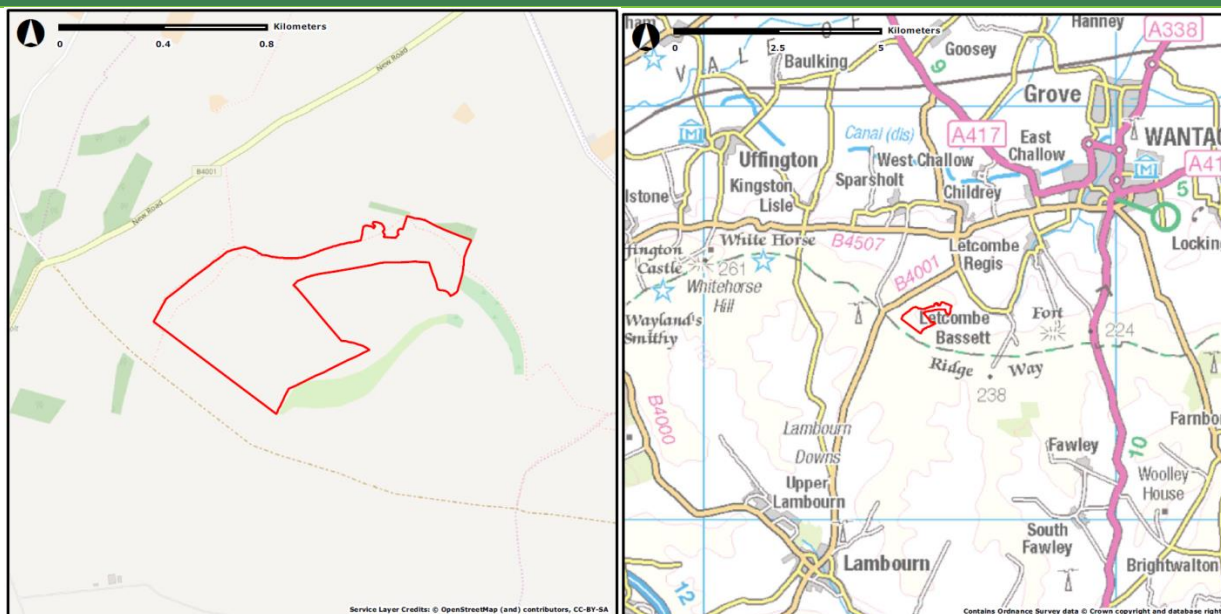
Key environmental conditions supporting the site

1. Maintenance of traditional hay cut
2. Maintenance of appropriate grazing regime
3. Minimal air pollution
4. Absence of direct fertilisation
5. Balanced hydrological regime
6. Absence of excessive nutrient enrichment of floodwaters

*Site status is an assessment by Natural England of the status of the SSSIs within the SAC

⁶⁶ Natural England - Site Improvement Plan: Oxford Meadows (SIP163)
<http://publications.naturalengland.org.uk/publication/4942743310696448?category=6149691318206464>

7. Hackpen Hill Special Area of Conservation



Site description

Hackpen Hill SAC is an extensive area of unimproved chalk grassland in the North Wessex Downs, and is considered to be one of the most important areas in the UK for the rare early gentian.

The site has a variety of aspect and gradients, with the grassland dominated by red fescue and upright brome. The herb flora includes a significant population of early gentian, as well as autumn gentian, fragrant orchid, frog orchid, horseshoe vetch, common rock-rose and dwarf thistle.

Qualifying features

H6210	Semi-natural dry grasslands and scrubland facies: on calcareous substrates; dry grassland and scrublands on chalk or limestone
S1654	Early gentian
Site status*	100% in favourable condition

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶⁷: pressures, threats and related development

There are no pressures and threats identified currently affecting this site.

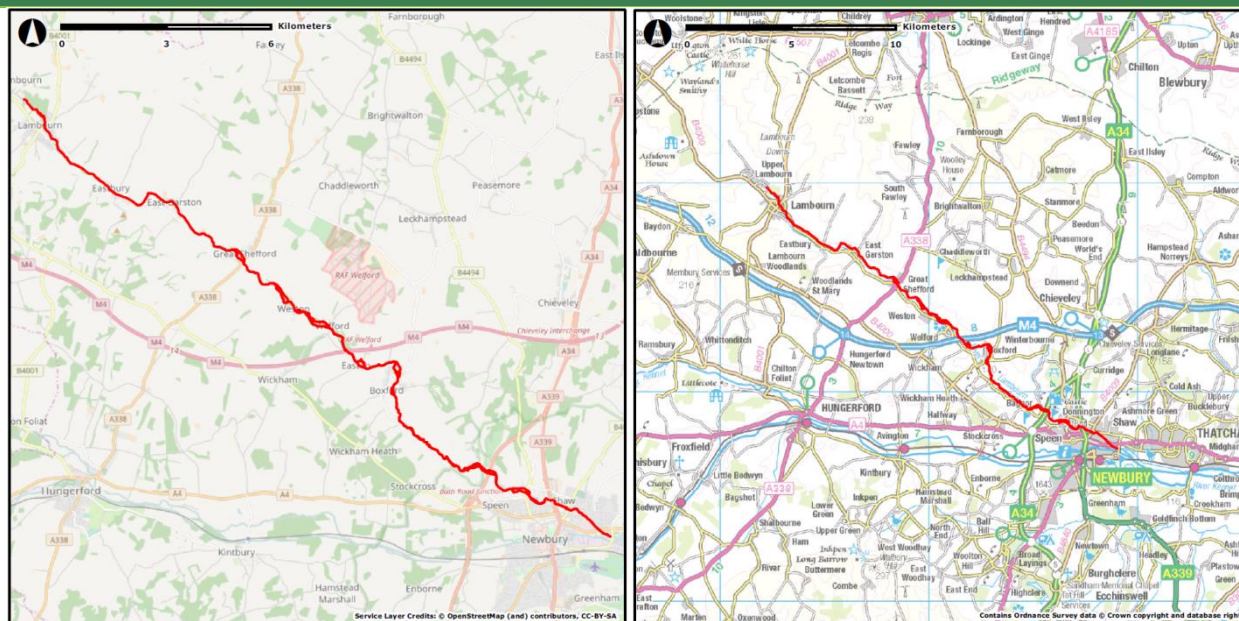
Key environmental conditions supporting the site

- Maintenance of appropriate grazing regime
- Controlling rabbit numbers on the site

*Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC

⁶⁷ Natural England - Site Improvement Plan: Hackpen Hill (SIP096)
<http://publications.naturalengland.org.uk/publication/5938642669273088?category=6149691318206464>

8. River Lambourn Special Area of Conservation



Site description

The River Lambourn SAC is a classic example of a lowland chalk river. It rises 152 metres above sea level in Lynch Wood, north of Lambourn and flows down to a confluence with the River Kennet east of Newbury. The catchment that the River Lambourn drains is almost entirely chalk which results in a predominantly gravelly river bed. A key feature of this river is the tendency for the upper section to only flow during late autumn, winter and early spring. This is known as a 'winterbourne' and is a natural characteristic of chalk rivers. Any flora or fauna occurring in these stretches must be adapted to wide variations in flow, thus winterbourne sections tend to be less species-rich than the lower reaches which hold water all year round.

Qualifying features

H3260	Rivers with floating vegetation often dominated by water-crowfoot
S1096	Brook Lamprey
S1163	Bullhead
Site status*	100% unfavourable condition, no change

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶⁸: pressures, threats and related development

The main pressures and threats to this site include the impacts of siltation, the invasive species of crayfish, inland flood defence works and inappropriate cutting and mowing upon the following features; rivers with floating vegetation often dominated by water-crowfoot, Brook lamprey, and Bullhead.

With regard to the types of development that may be brought forward in the Local Plan, water quality and quantity could impact the site.

⁶⁸ Natural England - Site Improvement Plan: River Lambourn and Kennet-Lambourn Floodplain (SIP112)
<http://publications.naturalengland.org.uk/publication/4738329056641024?category=6149691318206464>

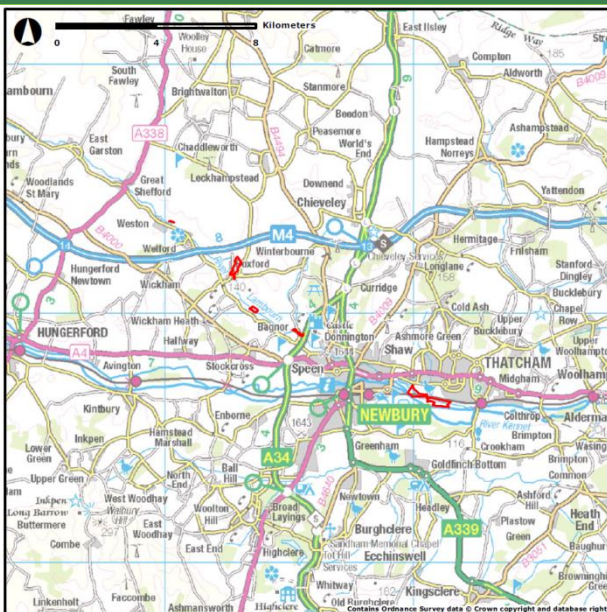
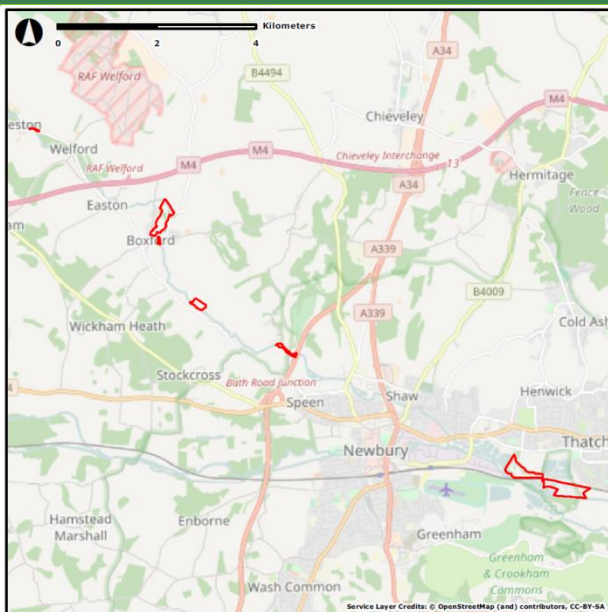
8. River Lambourn Special Area of Conservation

Key environmental conditions supporting the site

1. Water quality
2. Water quantity
3. Habitat quality

*Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC

9. Kennet and Lambourn Floodplain Special Area of Conservation



Site description

The catchment of the River Kennet forms a major stronghold in England for the nationally rare and declining Desmoulin's whorl snail *Vertigo moulinsiana*. This species is listed in the British Red Data Book and is scheduled on Annex II of the European Habitats and Species Directive. It is confined to calcareous river valleys, fens and lake margins. It is thought to be rare throughout Europe and that the British Isles now support a large proportion of the European population.

Qualifying features

S1016	Desmoulin's whorl snail
Site status*	69% in favourable condition; 15% in unfavourable condition, recovering; 1% in unfavourable condition, no change; 16% in unfavourable condition, declining

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁶⁹: pressures, threats and related development

The main pressures and threats to this site include the impacts hydrological changes caused by the decline of *Vertigo moulinsiana*, water pollution caused by molluscicides, changing land management and inappropriate water levels, upon Desmoulin's whorl snail. Also, the impacts of water pollution and hydrological changes upon these features as well as Desmoulin's whorl snail.

With regard to the types of development that may be brought forward in the Local Plan, water quality and quantity could impact the site.

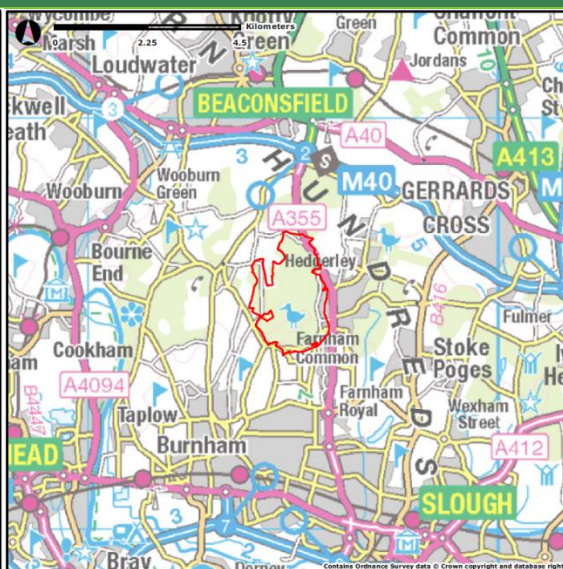
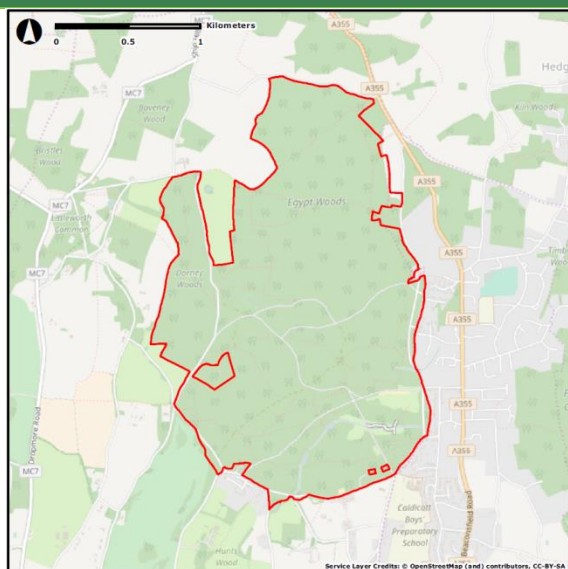
Key environmental conditions supporting the site

1. Open, unshaded areas
2. Adequate supply of high quality water

*Site status is an assessment by Natural England of the status of the SSSIs within the SAC

⁶⁹ Natural England - Site Improvement Plan: River Lambourn and Kennet-Lambourn Floodplain (SIP112)
<http://publications.naturalengland.org.uk/publication/4738329056641024?category=6149691318206464>

10. Burnham Beeches Special Area of Conservation



Site description

An extensive area of the Burnham Plateau where Thames gravels and underlying Reading Beds give rise to acid soils supporting mature and developing woodland, old coppice, scrub and heath. There are ancient oak and beech pollards of which the latter are a celebrated feature of international renown. Fragments of wet heath and bog, as well as an alder wood and a number of ponds coincide with springs and wet flushes, and with a small stream which in places cuts down to the Chalk producing swallowholes. This complex of habitats, of which none are widely represented in Buckinghamshire and one (the ancient pollards) is virtually unique, harbours numerous plants, birds and invertebrates of regional importance, as well as several nationally rare species.

Qualifying features

H9120	Beech forests on acid soils
Site status*	63% in favourable condition; 37% in unfavourable condition, recovering

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁷⁰: pressures, threats and related development

The main pressures and threats to this site include the impacts of air pollution and the risk of atmospheric nitrogen deposition, public access and disturbance, habitat fragmentation, deer, species decline and invasive species upon Beech. With regard to the types of development that may be brought forward in the Local Plan, air pollution, visitor disturbance and direct habitat loss could impact the site.

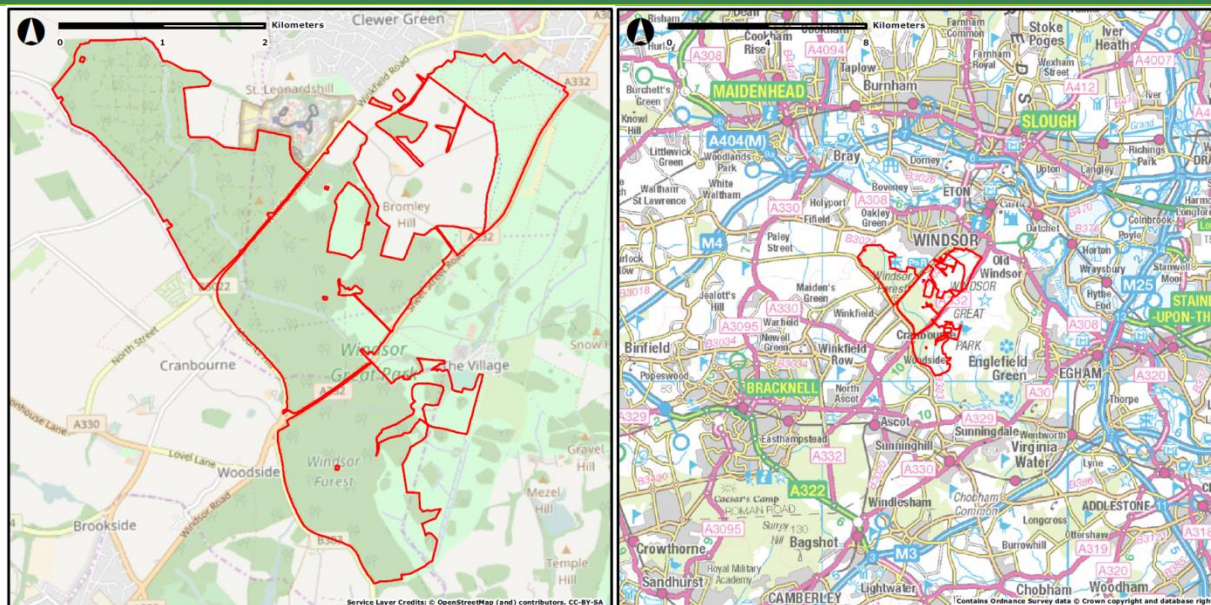
Key environmental conditions supporting the site

1. Air quality related to neighbouring extraction site
2. Water supply
3. Growth of secondary woodland

*Site status is an assessment by Natural England of the status of the SSSI within the SAC

⁷⁰ Natural England - Site Improvement Plan: Burnham Beeches (SIP032)
<http://publications.naturalengland.org.uk/publication/5689860228644864?category=6149691318206464>

11. Windsor Forest and Great Park Special Area of Conservation



Site description

A range of habitats are represented, from coniferous and mixed plantations through mature and over-mature broadleaved woodland to wood pasture and parkland. Relicts of the primary forest still survive as ancient oak pollards scattered throughout the Park and Forest. Veteran trees occur with a mosaic of unimproved and semi-improved grassland and grass-heath. Many of these ancient trees are over 500 years old and some reputed to be up to 800 years. Of equal importance, although not reaching such a great age, are numerous over-mature beech trees. Being partially hollow and decayed, the oaks and beech afford habitats for a number of extremely rare and specialised insects, particularly beetles, some of which are unknown elsewhere in the British Isles, as well as nesting sites for several species of hole-nesting birds. Groves of hornbeam are favoured by hawfinches including one of the largest wintering flocks of this species in Britain.

Qualifying features

H9120	Beech forests on acid soils
H9190	Dry oak-dominated woodland
S1079	Violet click beetle
Site status*	55% in favourable condition; 45% in unfavourable condition, recovering

Special Area of Conservation objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁷¹: pressures, threats and related development

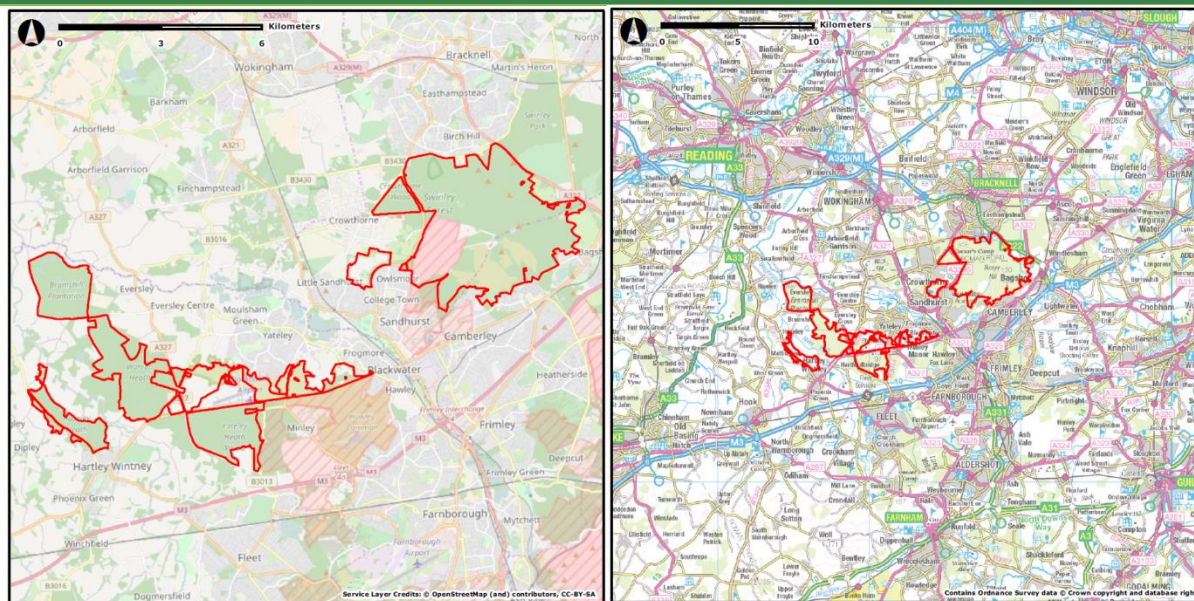
The main pressures and threats to this site include the impacts of forestry and woodland management upon dry oak-dominated woodland, as well as beech and violet click beetle. In addition, the impact of disease upon dry oak-dominated woodland, the impact of air pollution and the impact of atmospheric nitrogen deposition upon beech and dry oak-dominated woodland, and the impact of invasive pest and plant species upon dry oak-dominated woodland and violet click beetle.

With regard to the types of development that may be brought forward in the Local Plan, air pollution could impact

⁷¹ Natural England - Site Improvement Plan: Windsor Forest and Great Park (SIP263)
<http://publications.naturalengland.org.uk/publication/6221375450644480?category=6149691318206464>

11. Windsor Forest and Great Park Special Area of Conservation
the site.
Key environmental conditions supporting the site
<ol style="list-style-type: none"> 1. Continuous supply of old and decaying trees 2. Water quality 3. Maintenance of a high and stable water table 4. Maintenance of an appropriate grazing regime 5. Threat of non-native / invasive species 6. Scrub encroachment 7. Good air quality
*Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC

12. Thames Basin Heath Special Protection Area



Site description

The site comprises extensive areas of conifer plantation together with a series of shallow acidic ponds within relic wet heathland and a small unimproved grassland area adjacent which provides habitat for the nationally rare small fleabane *Pulicaria vulgaris*.

Qualifying features

A224	European nightjar (breeding)
A246	Woodlark (breeding)
A302	Dartford warbler (breeding)
Site status*	58% in unfavourable condition, recovering; 41% in favourable condition, 1% in unfavourable condition, declining; <1% in unfavourable condition; no change

Special Protection Area objectives

1	Avoid the deterioration of the qualifying natural habitats and significant disturbance to them, ensuring the integrity of the site is maintained and makes a full contribution to achieving Favourable Conservation Status for the qualifying features on this site.
2	Subject to natural change, maintain or restore: <ul style="list-style-type: none"> the extent and distribution of natural habitats, and habitats of protected species; the structure and function of habitats, and habitats of protected species the supporting processes on which protected species and their habits rely; the population of protected species; and the distribution of protected species within the site.

Site Improvement Plan⁷²: pressures, threats and related development

The main pressures and threats to this site include the impacts of public access and disturbance, as well as unknowns regarding feature location, extent and condition, upon European nightjar, Woodlark, and Dartford Warbler. In addition, impacts of forestry and woodland management and inappropriate scrub control upon European nightjar, Woodlark, Dartford Warbler, wet heathland with cross-leaved heath and European dry heaths. Impacts of undergrazing, military operations, habitat fragmentation, wildfire and arson, as well as air pollution and the impact of atmospheric nitrogen deposition, upon European nightjar, Woodlark, Dartford Warbler, wet heathland with cross-leaved heath, European dry heaths and depressions on peat substrates. Also, impacts of invasive species on wet heathland with cross-leaved heath and European dry heaths. Additionally, impacts of hydrological changes on wet heathland with cross-leaved heath and depressions on peat substrates.

With regard to the types of development that may be brought forward in the Local Plan, air pollution, visitor disturbance, direct habitat loss and water quantity changes could impact the site.

⁷² Natural England - Site Improvement Plan: Thames Basin (SIP237)
<http://publications.naturalengland.org.uk/publication/6249258780983296?category=6149691318206464>

12. Thames Basin Heath Special Protection Area	
Key environmental conditions supporting the site	
<ol style="list-style-type: none"> 1. Water quality 2. Maintenance of a high and stable water table 3. Maintenance of an appropriate grazing regime 4. Good air quality (nitrogen impact) 	
<p>*Site status is an assessment by Natural England of the status of the Site of Special Scientific Interest within the SAC</p>	

Appendix 2

Plans, Policies and Programmes with the Potential for In-Combination Effects

Local Plans and Strategies

Oxfordshire County Council Local Transport Plan 2015-2031 ('Connecting Oxfordshire')

Status

Adopted in September 2015 and then updated in 2016

Proposed development

Provides transport infrastructure to serve the estimated increase of 85,000 new jobs and 100,000 new homes in the county by 2031, while also reducing emissions to air and protecting and enhancing the environment. The proposals include:

- Enhanced road capacity at: the A34 and Oxford to Cambridge expressway; the A40; Oxford City ring road; the A420 corridor; local routes in Science Vale, Bicester, Banbury, Witney & Carterton; and cross-boundary links
- Measures to reduce car use e.g. prioritising sustainable modes of transport, better integrated public transport
- Managing freight: promoting freight by rail and working to improve strategic roads
- Managing the demand for parking
- Improving accessibility and safety
- Requiring developments to mitigate adverse effects on transport, make provision for sustainable transport, and agree local routing where appropriate to protect environmentally sensitive locations from traffic.

HRA

The 2015 HRA of the Local Transport Plan concluded that there would be no likely significant effects from the plan's proposals, subject to design and mitigation. The work did identify the potential need for project-level HRA of future projects, in relation to Oxford Meadows SAC, Cothill Fen SAC, and Little Wittenham SAC; however, air pollution effects at these sites were screened out on the basis of distance from roads, and the proposals will not increase recreation pressure at Little Wittenham SAC.

Therefore, there are no likely in-combination effects of the Oxfordshire County Council Local Transport Plan 2015-2031 with the South Oxfordshire Local Plan.

Oxfordshire County Council Minerals and Waste Local Plan: Core Strategy Proposed Submission Document 2015

Status

The current plan was adopted in July 1996 and covering the period to 2006. This will be replaced by a new Minerals and Waste Local Plan (Core Strategy and Site Allocations), which is currently in preparation.

The new Core Strategy is currently undergoing consultation on its proposed modifications (February 2017). The site allocations DPD is not yet available.

Proposals

The plan sets out policies to meet the county's requirements for minerals supply and waste disposal, including.

The plan also identifies strategic areas for development but specific sites will be identified through the Site Allocations DPD.

Policy M4 states that locations for minerals working will need to avoid locations likely to have an adverse effect on sites of international nature conservation insurance, and:

In the case of locations within the Eynsham / Cassington / Yarnton part of the Thames, Lower Windrush and Lower Evenlode Valleys area, it must be demonstrated that there will be no change in water levels in the Oxford Meadows Special Area of Conservation and the proposal must not involve the working of land to the north or north east of the River Evenlode; in the case of locations within the Corallian Ridge area, it must be demonstrated that there will be no change in water levels in the Cothill Fen Special Area of Conservation.

HRA

The 2012 HRA concluded that the Core Strategy would not have a likely significant effect on any Special Areas of Conservation. An earlier version of the HRA (2011) had identified the possibility of hydrological effects from minerals extraction on Oxford Meadows SAC and Cothill Fen SAC, but additional studies concluded that minerals extraction could take place, if additional safeguards were put in place, without a likely effect on the SACs.

It is assumed that the Site Allocations DPD will be in line with the Core Strategy and therefore that the HRA conclusions will be similar, however that work has not yet been undertaken by Oxfordshire County Council.

There are no likely in-combination effects of the Oxfordshire Minerals and Waste Local Plan Core Strategy with the South Oxfordshire Local Plan.

Oxford City Council Core Strategy 2026 and the Sites and Housing Plan 2011-2026

Status

Core Strategy adopted in March 2011.

Sites and Housing Plan adopted in February 2013.

Replaced many policies within the Local Plan 2016-2026, including those relating to employment land and housing provision.

Core Strategy and Sites and Housing Plan will be replaced by the Local Plan 2016-2036 once adopted.

Housing Provision

Provision of 8,000 additional dwellings over the plan period from 2006-2026.

The Sites and Housing Plan lists the housing site allocations, and indicates approximately half of the 2,258 allocated dwellings will be at the Cowley/Blackbird Leys site.

Employment Land Provision

Provision of employment land for 11,000-14,000 jobs over the plan period via the granting of planning permission for developments that seek to achieve 'managed economic growth', whereby proposals show they maintain, strengthen, modernise or diversify Oxford's economy.

The Sites and Housing Plan highlights that some key employment sites are to be protected, unless viable alternatives are found.

HRA

The April 2011 HRA for the adopted Core Strategy concluded that there would be no significant effects on European sites. An Appropriate Assessment was carried out to assess the effects of recreation pressure, air pollution and changes to water quantity and quality on Oxford Meadows SAC; this concluded no adverse effects on integrity. Potential in-combination effects with SODC Local Plan, in relation to recreational pressure at Little Wittenham SAC were ruled out on the basis of the HRA of SODC's draft growth options.

The February 2012 HRA for the draft Sites and Housing Plan determined that, providing all of the mitigation measures recommended were carried out, the Sites and Housing Plan was not likely to have any adverse impact on European sites, either alone, or in combination with other plans or projects.

Therefore, there are no likely in-combination effects of the Oxford City Council Core Strategy 2026 and the Sites and Housing Plan 2011-2026 with the South Oxfordshire Local Plan.

Vale of White Horse Local Plan 2031 Part 1: Strategic Sites and Policies and Draft Local Plan 2013 Part 2: Detailed Policies and Additional Sites

Status

Part 1 Adopted in December 2016.

Part 2 in draft and open to consultation.

This replaces the majority of the Local Plan 2011. The remaining 'saved' policies from the Local Plan 2011 will be replaced by the Local Plan 2031 Part 2 once adopted. This will set out strategic policies and locations for

strategic housing for the agreed quantum of Oxford's unmet housing need to be addressed within the Vale of White Horse District.

Housing Provision

The Local Plan Part 1 makes provision of at least 20,560 homes over the plan period between 2011 and 2031.

12,495 of these are to be delivered through strategic allocations, the majority of which are to be provided within the South East Vale Sub-Area, predominantly at Grove Airfield and Valley Park where each site has been allocated 2,550 dwellings, and at Crab Hill where 1,500 dwellings have been allocated.

The Draft Local Plan Part 2 makes provision for at least 22,760 homes over the plan period between 2011 and 2031. The additional 2,200 homes (in comparison to that provided for in Part 1) are to address a proportion of the unmet housing need for Oxford City.

12,495 of these are to be delivered through Part 1 strategic allocations and 3,850 of these are to be delivered through Part 2 strategic allocations.

Employment Land Provision

The Local Plan Part 1 makes provision for 218 hectares of strategic employment land which is anticipated to deliver approximately 23,000 jobs over the plan period between 2011 and 2031. 93 hectares of this land will be at the Harwell Campus Enterprise Zone.

HRA

The February 2015 HRA of the draft Local Plan 2031 Part 1 concluded that no strategic housing sites would lead to likely significant effects, either alone or in combination. The July 2016 addendum to the HRA concluded that modifications made to the Local Plan since the previous HRA was undertaken did not impact the findings of the previous HRA.

The March 2017 HRA for the draft Local Plan 2031 Part 2 concluded that, given the incorporation of the recommendations within the HRA and subject to development of strategic air quality studies relating to Oxford Meadows SAC, the plan will not lead to likely significant effects on European sites either alone, or in combination with other plans and projects.

Therefore, there are no likely in-combination effects of the Vale of White Horse Local Plan 2031 Part 1: Strategic Sites and Policies and Draft Local Plan 2013 Part 2: Detailed Policies and Additional Sites with the South Oxfordshire Local Plan.

Cherwell District Council Local Plan 2011-2031

Status

Part 1 was adopted in July 2015 (and Policy Bicester 13 was re-adopted in December 2016). This sets out the strategic planning policy framework and strategic site allocations for the district to 2031.

Part 1 is now also in the process of a partial review which focuses specifically on how to accommodate additional housing and associated supporting infrastructure within Cherwell in order to help meet Oxford's unmet housing need.

Part 2 is also in the process of being prepared and contains non-strategic site allocations and development management policies.

Until Part 2 is adopted, there are saved policies within the adopted Local Plan 1996, adopted in November 1996, which are still in use. However, the plan period extended until 2001, therefore the policies are expired.

Housing Provision

Part 1 provides for 22,840 additional dwellings over the plan period from 2011-2031.

Part 2 is informed by the Oxfordshire Growth Board which has agreed the appointment of Cherwell to make provision for an additional 4,400 homes over the plan period from 2011-2031 to help meet Oxford's unmet housing needs.

Employment Land Provision

Part 1 provides for 200 hectares of employment sites providing approximately 20,500 jobs, and provides for the retention of existing employment sites.

HRA

The October 2014 HRA for the Submission Cherwell Local Plan incorporating proposed modifications (August 2014) (Local Plan Part 1) determined that it would not lead to likely significant effects, either alone or in combination, on the qualifying features of any European sites.

Therefore, there are no likely in-combination effects of the Cherwell District Council Local Plan 2011-2031 with the South Oxfordshire Local Plan.

Aylesbury Vale Draft Local Plan 2016 and the Aylesbury Vale District Local Plan 2004

Status

Local Plan 2016 is in draft, still in preparation.

Local Plan 2004 was adopted in January 2004 and in 2007 a selection of these policies were saved. However, the plan period extended until 2011, therefore the policies are expired. The Local Plan 2016 will replace this once adopted.

Housing Provision

The Draft Local Plan 2016 makes provision for 33,300 homes, however this is subject to a decision on unmet needs.

Strategic growth to be focussed on Aylesbury, and development at Buckingham, Winslow, Wendover and Haddenham supported by growth at other larger, medium and smaller villages. The strategy also allocates growth at a new settlement and on sites adjacent to Milton Keynes.

Employment Land Provision

The draft Local Plan 2016 makes provision for 22 hectares of employment land.

Strategic growth to be focussed on Aylesbury, and development at Buckingham, Winslow, Wendover and Haddenham supported by growth at other larger, medium and smaller villages. The strategy also allocates growth at a new settlement and on sites adjacent to Milton Keynes.

HRA

A HRA of the Draft Local Plan has not yet been undertaken.

At this stage, it is not possible to rule out effects in-combination of the Aylesbury Vale Draft Local Plan 2016 with the South Oxfordshire Local Plan

Wycombe Draft Local Plan 2031, Core Strategy 2008, Local Plan 2004 and Princes Risborough Draft Town Plan 2016

Status

The Local Plan 2031 is in draft, still in preparation. This will review the Core Strategy 2008 and replace the Local Plan 2004.

The Core Strategy was adopted in 2008 and covers the plan period from 2006-2026.

The Local Plan 2004 was adopted in January 2004 and in 2007 a selection of these policies was saved. However, the plan period extended until 2011, therefore the policies are expired. The Local Plan 2031 will replace this once adopted.

Princes Risborough is one of the district's larger settlements, that lies close to the boundary with South Oxfordshire. The draft Town Plan (an Area Action Plan) was consulted on in March 2016 and will form part of the emerging Local Plan.

Housing Provision

Local Plan 2031 makes provision for 10,000 homes over the plan period from 2013-2033 as well as

approximately 5,000 homes to help meet the unmet element of the district's housing needs. The majority of homes are to be provided at the urban area of High Wycombe.

Core Strategy makes provision for a total of 7,240 houses over the plan period from 2006-2026 and notes that the Site Allocations DPD will identify and allocate sufficient land for this.

The Princes Risborough draft Town Plan makes provision for a town extension of 2000-2,500 homes, employment development and infrastructure improvements.

Employment Land Provision

Local Plan 2031 makes provision employment land via safeguarding existing employment areas, supporting High Wycombe as a location for high quality offices, facilitating rural enterprise and diversification, and allocating additional employment sites on the edge of High Wycombe, at Stokenchurch, limited development on former reserve sites and at Princes Risborough.

Core Strategy makes provision of employment land primarily through the regeneration and intensification of existing business areas, as well as through new sites for business.

HRA

A HRA of the Draft Local Plan has not yet been undertaken. However a draft HRA screening has been prepared for the Princes Risborough draft Town Plan that identified no likely significant effects on European sites.

At this stage, it is not possible to rule out effects in-combination of the Wycombe Draft Local Plan 2031 with the South Oxfordshire Local Plan

Wokingham Borough Core Strategy 2010 and Managing Development Delivery Local Plan 2014

Status

Core strategy adopted in 2010.

Managing Development Delivery Local Plan adopted in 2014.

Both or parts of both will be superseded by the Local Plan Update due to be adopted in 2019.

Housing Provision

Core Strategy makes provision for at least 13,232 over the plan period from 2006-2026, including those at allocated sites.

The Managing Development Delivery Local Plan highlights that the Core Strategy requires the provision of at least 13,230 dwellings over the plan period from 2006-2026 and identifies allocated sites.

Employment Land Provision

Core Strategy makes provision for employment development at 9 Core Employment Areas. Some limited additional employment development may also be identified in the Managing Development Delivery plan, within Strategic Development Locations and at retail centres.

The Managing Development Delivery Local Plan highlights that Core Employment Areas are defined in the Core Strategy and identifies allocated sites.

HRA

The Core Strategy advises that an Appropriate Assessment was undertaken and identified the potential significant impacts upon Thursley, Ash, Pirbright & Chobham SPA and Windsor Forest & Great Park SAC, but concluded that likely significant effects could be avoided.

Therefore, there are no likely in-combination effects of the Wokingham Borough Core Strategy 2010 and Managing Development Delivery Local Plan 2014 with the South Oxfordshire Local Plan.

Reading Borough Local Development Framework: Core Strategy (2008), draft Local Plan Issues and Options (2016) and Sites and Detailed Policies Document (2012)

Status

Core Strategy adopted in January 2008 and alteration adopted in January 2015.

Sites and Detailed Policies Document adopted in October 2012 and alteration adopted in January 2015.

The Reading Borough Local Development Framework (the Core Strategy, Reading Central Area Action Plan and Sites and Detailed Policies Document) will be replaced by the New Local Plan which is in draft. The Issues and Options document has undergone consultation in March 2016.

Housing Provision

Core Strategy makes provision for a total of 10,930 dwellings over the plan period from 2006-2026.

Reading Central Area Action Plan makes provision for housing allocations at opportunity sites within the Reading Central Area of the Borough.

The Sites and Detailed Policies Document makes provision for housing site allocations.

Employment Land Provision

Core Strategy seeks additional employment provision, particularly offices, in the centre and along the A33 corridor, whilst at the same time allows for the release of areas no longer required for employment use, including some parts of the central area.

Sites and Detailed Policies Document makes provision for employment site allocations.

HRA

A HRA of the Draft Local Plan has not yet been undertaken.

At this stage, it is not possible to rule out effects of the Reading Borough new Local Plan in-combination with the South Oxfordshire Local Plan

West Berkshire Council Core Strategy (2006-2026)

Status

Core Strategy adopted in July 2012.

Housing Provision

Core Strategy makes provision for at least 10,500 additional dwellings over the plan period from 2006-2026.

Delivery includes housing in settlement boundaries and within broad locations and strategic sites, including those at and south of Newbury.

Employment Land Provision

Core Strategy makes provision for managing the growth of employment floorspace including through Protected Employment Areas.

Protected Employment Areas are located predominantly within Newbury, Thatcham and along the M4 and A4 corridors.

HRA

The 2016 HRA concluded that the Core Strategy, either alone or in combination with other plans and projects, will not affect the integrity of any of the European sites within the district or within 5km of the district boundary.

Therefore, there are no likely in-combination effects of the West Berkshire Council Core Strategy with the South Oxfordshire Local Plan.

Appendix 3
Screening Matrix for the Publication Local Plan

The screening matrix below shows which types of impacts on European sites could potentially result from each of the policies and sites allocated in the Local Plan. Where a site is not expected to have a particular type of impact, the relevant cell is shaded **green**. Where a site could potentially have a certain type of impact, this is shown in **orange**. The final column sets out the screening conclusions, taking into account mitigation provided by other policies in the Local Plan (or other plans and strategies) as explained in **Chapters 3 and 4**, and shown in the fifth column.

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
Policies					
STRAT1: The Overall Strategy	None – this policy describes the overall strategy for development within the district but will not itself result in new development; the principles set out in this strategic policy are covered by other more specific development policies.	n/a	n/a	n/a	No
STRAT2: The Need for New Development in South Oxfordshire (at least 17,050 homes and 30 hectares of employment development)	Residential development Employment development Increase in vehicle traffic Increase in recreation pressure	Air pollution Disturbance from recreation	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC Recreation: Little Wittenham SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and	Uncertain: air pollution and recreation The screening of this policy considers the overall number of new homes in the district. The effect of those homes in specific locations is assessed in relation to specific allocations, below. STRAT2 and STRAT3 between them provide for a housing need of 20,800 and a total supply of up to 23,468 homes. 12,016 homes have already been completed or committed; therefore this policy will result in at least 5,034 new homes (assuming the STRAT3 provides the remainder). The provision of new homes in the district is likely to relate to an increase in population and therefore result in an increase in traffic flows on roads throughout the district.

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	<p>Where those roads pass within 200m of sensitive European sites, the increase in traffic could have air pollution impacts. This policy could have an air pollution effect alone or in combination with other policies (e.g. STRAT3) or the proposed homes that have already been consented. This is considered further in the Appropriate Assessment.</p> <p>Development within 7km of Little Wittenham SAC has the potential to increase visitor numbers at the site and cause disturbance from recreation. While not all of the new homes accounted for in STRAT2 will be within 7km, that area does encompass a number of large settlements (e.g. Didcot & Wallingford), larger villages (e.g. Benson & Berinsfield), and strategic allocations (e.g. Culham & Chalgrove Airfield). Policies ENV5 and CF5 will provide some mitigation for recreational pressure impacts, but Appropriate Assessment is required to consider the impacts further.</p>
STRAT3: The unmet housing requirements from Oxford City (c.3,750 homes)	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for</p>	<p>Uncertain: air pollution and recreation</p> <p>The screening of this policy considers the overall number of new homes in the district. The effect of those homes in specific locations is assessed in relation to specific allocations, below.</p> <p>This policy will result in up to 3,750 new homes in the district (see</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	<p>explanation under STRAT2).</p> <p>The provision of new homes in the district is likely to relate to an increase in population and therefore result in an increase in traffic flows on roads throughout the district. Where those roads pass within 200m of sensitive European sites, the increase in traffic could have air pollution impacts. This policy could have an air pollution effect alone or in combination with other policies (e.g. STRAT3) or the proposed homes that have already been consented. This is considered further in the Appropriate Assessment.</p> <p>Development within 7km of Little Wittenham SAC has the potential to increase visitor numbers at the site and cause disturbance from recreation. While not all of the new homes accounted for in STRAT2 will be within 7km, that area does encompass a number of large settlements (e.g. Didcot & Wallingford), larger villages (e.g. Benson & Berinsfield), and strategic allocations (e.g. Culham & Chalgrove Airfield). Policies ENV5 and CF5 will provide some mitigation for recreational pressure impacts, but Appropriate Assessment is required to consider the impacts further.</p>
STRAT4: Didcot Garden Town	None – this policy sets out the design principles for the garden town but will not itself result in new	n/a	n/a	n/a	No

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
	development				
STRAT5: Strategic Allocations	None – this policy sets out the principles for development within strategic areas but will not itself result in new development. The strategic allocations are assessed individually, below.	n/a	n/a	n/a	No
STRAT6: Culham Science Centre	None – this policy sets out the principles for development at Culham Science Centre but will not itself result in new development. The allocation of additional employment land at this site is assessed separately, below.	n/a	n/a	n/a	No
STRAT7: Land adjacent to Culham Science Centre (3,500 homes)	Residential development Increase in vehicle traffic Increase in recreational pressure	Air pollution Disturbance from recreation	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC Recreation: Little Wittenham SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policies ENV5 and CF5 require new developments to contribute towards the	Uncertain: recreation Culham Science Centre lies c.4km from Little Wittenham SAC. The increase in population at this location could therefore contribute an increase in visitors to the SAC. Unlikely: air pollution Development at Culham Science Centre would contribute increases in traffic on the A4074, A415, and A34, and to a lesser extent other roads in and near the district. None of these roads are close to sensitive European sites and the district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	
STRAT8: Land at Berinsfield (2,200 homes)	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green</p>	<p>Uncertain: recreation</p> <p>Berinsfield lies c.3km from Little Wittenham SAC. The increase in population at this location could therefore contribute an increase in visitors to the SAC.</p> <p>Unlikely: air pollution</p> <p>Development at Berinsfield would contribute increases in traffic on the A4074, A415, and A329, and to a lesser extent other roads in and near the district. The A329 passes close to Windsor Forest & Great Park SAC, but development at Berinsfield would be unlikely to increase traffic flows near to the SAC by more than 1000 AADT. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	STRAT3.
STRAT9: Land at Chalgrove Airfield (3,500 homes)	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and</p>	<p>Uncertain: recreation</p> <p>Chalgrove Airfield lies c.7km from Little Wittenham SAC. The increase in population at this location could therefore potentially contribute an increase in visitors to the SAC.</p> <p>Unlikely: air pollution</p> <p>Development at Chalgrove Airfield would contribute increases in traffic on the A329, and to a lesser extent other roads in and near the district. The A329 passes close to Windsor Forest & Great Park SAC, but development at Chalgrove Airfield would be unlikely to increase traffic flows near to the SAC by more than 1000AADT. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	
STRAT10: Land at Wheatley Campus, Oxford Brookes University (500 homes)	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space.</p>	<p>Unlikely: recreation and air pollution</p> <p>Wheatley Campus lies greater than 13km away from Little Wittenham SAC and is therefore not likely to contribute a significant increase in visitors to the site.</p> <p>Development at Wheatley Campus would contribute increases in traffic on the M40 and A40, and to a lesser extent other roads in and near the district. The M40 passes close to Aston Rowant SAC and Chilterns Beechwoods SAC, and could therefore an increase in traffic from Wheatley Campus could increase air pollution at these sites. However, 500 homes is unlikely to contribute an increase in traffic of greater than 1000AADT. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers. Policy ENV2 provides protection to European sites from all potential impacts.	
HEN1: The Strategy for Henley	None – this policy describes the principles for development in Henley but will not itself result in new development	n/a	n/a	n/a	No
TH1: The Strategy for Thame	None – this policy describes the principles for development in Thame but will not itself result in new development	n/a	n/a	n/a	No
WAL1: The Strategy for Wallingford	None – this policy describes the principles for development in Wallingford but will not itself result in new development	n/a	n/a	n/a	No
H1: Delivering new homes	None – this policy describes the circumstances in which new housing will be permitted outside of allocated sites, but will not itself result in new development	n/a	n/a	n/a	No
H2: New Housing in Didcot	Residential development	Air pollution	Air pollution: Aston Rowant SAC,	Policies TRANS1, TRANS2, TRANS4,	Uncertain: recreation

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
<p>(at least 6,500 homes, including the following sites and indicative dwelling numbers-</p> <p>Already committed:</p> <ul style="list-style-type: none"> - Ladygrove East (642) - Didcot NE (2,030) - Great Western Park (2,587) - Orchard Centre Phase II (300) - Gateway (300) - Hadden Hill (74) <p>Not yet committed:</p> <ul style="list-style-type: none"> - Vauxhall Barracks (300) <p>270 homes will also be provided at a site known as 'Didcot A', however these will be provided for by Vale of White Horse Core Policy)</p>	<p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Disturbance from recreation</p>	<p>Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	<p>Only the 300 homes at Vauxhall Barracks have not yet been committed. This site lies c.5.5km from Little Wittenham SAC. The increase in population at this location could therefore potentially contribute an increase in visitors to the SAC, however the number of additional visitors would be low. This policy is unlikely to have a significant recreational pressure effect alone; however it could have an effect in combination with other policies.</p> <p>Unlikely: air pollution</p> <p>Development at Didcot would contribute increases in traffic on the A4130 and A34, and to a lesser extent other roads in and near the district. These roads are not close to sensitive European sites and the district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>
<p>H3: Housing in the towns of Henley-on-Thames, Thame and Wallingford</p>	<p>Residential development</p> <p>Increase in vehicle traffic</p>	<p>Air pollution</p> <p>Disturbance</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7</p>	<p>Uncertain: recreation (Wallingford only)</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
(at least 1,355 additional homes, including the following locations and indicative dwelling numbers: -Henley-on-Thames (677) -Thame (452) -Wallingford (226))	Increase in recreational pressure	from recreation	SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC Recreation: Little Wittenham SAC	seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers. Policy ENV2 provides protection to European sites from all potential impacts.	The strategic sites at Wallingford lie c.5km from Little Wittenham SAC. The increase in population at this location could therefore potentially contribute an increase in visitors to the SAC. Unlikely: recreation (Thame & Henley-on-Thames) and air pollution (all three locations) Thame lies c.18km and Henley-on-Thames c.20km away from Little Wittenham SAC. Development at these locations is unlikely to significantly increase visitor numbers at Little Wittenham SAC. Development at Henley-on-Thames would contribute increases in traffic on the A4130 and A4155; Wallingford on the A4130, A4074 and A329; and Thame on the A418, A4129, A329 and A40. All sites would contribute traffic to other roads in and near the district, to a lesser extent. The A329 passes close to Windsor Forest & Great Park SAC, but development at Wallingford and Thame (c.678 homes) would be unlikely to increase traffic flows near to the SAC by more than 1000AADT. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.
H4: Housing in Larger Villages (A minimum of 1,122 additional homes including the following	Residential development Increase in vehicle traffic Increase in recreational	Air pollution Disturbance from recreation	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the	Uncertain: recreation (Benson, Berinsfield, Chalgrove, Cholsey and Crowmarsh Gifford)

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
<p>locations and indicative dwelling numbers):</p> <ul style="list-style-type: none"> - Benson (355) - Berinsfield (not yet known) - Chalgrove (200) - Chinnor (not yet known) - Cholsey (not yet known) - Crowmarsh Gifford (not yet known) - Goring (90/105) - Nettlebed (not yet known) - Sonning Common (195) - Watlington (200-400) - Wheatley (not yet known) - Woodcote (76)) 	pressure		<p>Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	<p>Benson, Berinsfield, Chalgrove, Cholsey and Crowmarsh Gifford all lie <7km from Little Wittenham SAC and could therefore potentially contribute an increase in visitors to the SAC. However, the number of proposed homes at each of these sites is small an unlikely to contribute significant recreational pressure from each site alone. These sites do have the potential for recreational effects in combination with other policies (e.g. H3).</p> <p>Unlikely: recreation (Chinnor, Goring, Nettlebed, Sonning Common, Watlington, Wheatley and Woodcote) and air pollution</p> <p>The other larger villages are situated >7km from Little Wittenham SAC. Development at these locations is unlikely to significantly increase visitor numbers at Little Wittenham SAC.</p> <p>The larger villages are distributed around the district and housing numbers are distributed across all locations. They are therefore unlikely to contribute increases in traffic flows of greater than 1000 AADT to any road, either alone or in combination with each other. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>
H5: Contingency Policy for Larger Villages	None – this policy sets out the principles for permitting development in larger	n/a	n/a	n/a	No

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
	villages, outside of neighbourhood plans and will not itself result in new development				
<p>H6: Land to the west of Priests Close, Nettlebed (19 homes); and</p> <p>H7: Joyce Grove, Nettlebed (20 homes)</p>	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides</p>	<p>Unlikely: recreation and air pollution</p> <p>Nettlebed lies greater than 13km away from Little Wittenham SAC and these allocations are for a small number of homes. They are therefore not likely to contribute a significant increase in visitors to the site.</p> <p>Development at Nettlebed would contribute increases in traffic on the A4130, and to a lesser extent other roads in and near the district. This road does not pass close to sensitive European sites and the allocations are for a small number of houses. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				protection to European sites from all potential impacts.	
<p>H8: Land to the east of Benson Lane, Crowmarsh Gifford (150 homes); and</p> <p>H9: Land to the south of Newnham Manor, Crowmarsh Gifford (100 homes)</p>	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European</p>	<p>Uncertain: recreation</p> <p>Crowmarsh Gifford lies c.5km from Little Wittenham SAC. The increase in population at this location could therefore potentially contribute an increase in visitors to the SAC, however the number of additional visitors would be low. These sites are unlikely to have a significant recreational pressure effect alone; however they could have an effect in combination with other policies.</p> <p>Unlikely: air pollution</p> <p>Development at Crowmarsh Gifford would contribute increases in traffic on the A4130, A4074 and A329, and to a lesser extent other roads in and near the district. The A329 passes close to Windsor Forest & Great Park SAC, but development at Crowmarsh Gifford would be unlikely to increase traffic flows near to the SAC by more than 1000 AADT. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				sites from all potential impacts.	
H10: Housing in Smaller Villages (500 homes)	Residential development Increase in vehicle traffic Increase in recreational pressure	Air pollution Disturbance from recreation	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC Recreation: Little Wittenham SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers. Policy ENV2 provides protection to European sites from all potential	Uncertain: recreation The location of proposed housing in smaller villages is not specified in the Local Plan; however if 500 homes were developed close to Little Wittenham SAC, these could contribute to an increase in visitors to the site, either alone or in combination with other policies. Unlikely: air pollution 500 homes would be unlikely to contribute an increase in traffic of more than 1000 AADT to any one road, even if all of the development was in one location. The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect impacts.	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
H11: Affordable Housing; H12: Exception Sites; H13: Meeting Housing Needs; H14: Self-Build and Custom Housing; and H15: Specialist Housing for Older People.	None – these policies set out the requirements for specific types of housing but will not themselves result in new development	n/a	n/a	n/a	No
H16: Provision for Gypsies, Travellers and Travelling Showpeople (Including the following allocations- Gypsy & Traveller pitches: - Didcot (5) - Berinsfield (7) - Culham (7) Travelling Showpeople plots: - Chalgrove Airfield (5));and H17: Safeguarding Traveller Sites	Residential development Increase in vehicle traffic Increase in recreational pressure	Air pollution Disturbance from recreation	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC Recreation: Little Wittenham SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC,	Unlikely: recreation and air pollution The allocated plots and pitches permitted by policy H16 are at sites for residential development assessed under policies STRAT7-9 and H2. The small number of additional residents at these sites provided for by policy H16 will not contribute significant recreation or air pollution effects on European sites. Policies H16 and H17 do allow for some development outside of these allocations, as extensions to existing sites, or where there has been a need to close an existing site. However, the identified need for 19 pitches and 5 plots is met by the allocated sites and the existing sites are small (max. 16 pitches). Any additional development is likely to be very small scale and unlikely to result in significant effects on European sites. The district-wide increase in traffic due to new residential development

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	overall (in-combination effects) is considered under STRAT2 and STRAT3.
H18: Infill Development	<p>Residential development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide</p>	<p>Unlikely: recreation and air pollution</p> <p>The scale of development that would result from this policy will be small and will not contribute to significant recreation or air pollution effects on European sites.</p> <p>The district-wide increase in traffic due to new residential development overall (in-combination effects) is considered under STRAT2 and STRAT3.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				some mitigation recreation impacts associated with increases visitor numbers. Policy ENV2 provides protection to European sites from all potential impacts.	
H19: Sub-division and Conversion to Multiple Occupation; H20: Replacement Dwellings; and H21: Extensions to Dwellings	None – these policies set out principles for development to existing dwellings and will not result in new development.	n/a	n/a	n/a	No
H22: Loss of Existing Residential Accommodation in Town Centres	None – this policy restricts the loss of existing residential development and will not result in new development	n/a	n/a	n/a	No
EMP1: The amount and distribution of new B-class employment land (At least 30 hectares, to include the following- Already committed: - Didcot (3.04ha safeguarded) - Wallingford (2.82ha safeguarded) - Culham (5.3ha safeguarded) Not yet committed: - Henley (1ha) - Thame (2ha) - Wallingford (3.1ha) - Crowmarsh Gifford (Howberry Park)(2.5ha) - Culham (2ha) - Chalgrove (7.25ha) - Berinsfield (tbc))	Employment development Increase in vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policy ENV2 provides	Uncertain: air pollution This policy makes provision for at least 30 ha of employment space, of which 11.16 ha is already committed; however at least 17.85 ha has been allowed for under this policy, at specific sites. The European sites that are sensitive to air pollution are closest to the western side of the district. Therefore, employment development at Henley, Thame or Chalgrove is more likely to increase traffic on roads passing close to those sites. However, the sites in combination and the overall quantum of employment development have the potential to

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				protection to European sites from all potential impacts.	increase traffic on roads close to sensitive sites. This policy could therefore have an air pollution impact either alone or in combination with other policies (e.g. STRAT2) or already-committed employment development.
EMP2: Range, Size and Mix of Employment Premises	None – this policy sets principles for the type of employment space but will not result in new development	n/a	n/a	n/a	No
EMP3: Retention of Employment Land	None – this policy describes the circumstances in which change of use of existing employment land will be permitted. It will not result in new development	n/a	n/a	n/a	No
EMP4: Employment Land in Didcot; EMP5: New Employment Land in Henley; EMP6: New Employment Land in Thame; EMP7: New Employment Land in Wallingford; EMP8: New Employment Land at Crowmarsh Gifford; EMP9: Employment Land at Culham Science Centre; and EMP10: New Employment Land at Chalgrove	None – these policies describe the process by which the land allocated in policy EMP1 will be permitted, but will not themselves result in new development	n/a	n/a	n/a	No
EMP11: Development in the Countryside and Rural Areas	Employment development	Air pollution	Air pollution: Aston Rowant SAC,	Policies TRANS1, TRANS2, TRANS4,	Uncertain: air pollution The scale of development that will

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	Increase in vehicle traffic		Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policy ENV2 provides protection to European sites from all potential impacts.	come forward as a result of this development is likely to be small in scale. However this policy could contribute additional traffic to roads and therefore have an air pollution impact on sensitive sites, in combination with other policies (e.g. EMP1).
EMP12: Tourism	Tourism development Increase in vehicle traffic Increase in recreational pressure	Air pollution Disturbance from recreation	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC Recreation: Little Wittenham SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policies ENV5 and CF5 require new	Uncertain: air pollution The scale of development that will come forward as a result of this development is likely to be small in scale. However this policy could contribute additional traffic to roads and therefore have an air pollution impact on sensitive sites, in combination with other policies (e.g. EMP1). Unlikely: recreation Although this policy may result in an increase in tourist visitors to the district, it is likely to also provide a wider choice of attractions. Overall, this policy is unlikely to significantly increase visitor numbers at Little Wittenham SAC.

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				<p>developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	
EMP13: Caravan and Camping Sites	<p>Tourism development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policy EMP8 itself includes some mitigation as development will only be permitted where it will have no adverse ecological effects on the site or its surroundings.</p> <p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for</p>	<p>Unlikely: air pollution and recreation</p> <p>The scale of development that will come forward as a result of this development is likely to be small in scale. The temporary increases in population that the policy will result in are unlikely to generate significant increases in traffic, or visitors to Little Wittenham SAC.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policies ENV5 and CF5 require new developments to contribute towards the provision of new green infrastructure and accessible open space. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation recreation impacts associated with increases visitor numbers.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	
EMP14: Visitor Accommodation	<p>Tourism development</p> <p>Increase in vehicle traffic</p> <p>Increase in recreational pressure</p>	<p>Air pollution</p> <p>Disturbance from recreation</p>	<p>Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC</p> <p>Recreation: Little Wittenham SAC</p>	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for</p>	<p>Unlikely: air pollution and recreation</p> <p>The scale of development that will come forward as a result of this development is likely to be small in scale. The temporary increases in population that the policy will result in are unlikely to generate significant increases in traffic, or visitors to Little Wittenham SAC.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>air pollution impacts</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	
INF1: Infrastructure Provision	None – this policy requires new development to be served by appropriate infrastructure and services, but will not itself increase traffic or visitor numbers .	n/a	n/a	n/a	No
TRANS1: Supporting Strategic Transport Investment	Transport development Changes to vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	<p>Policy TRANS1 states that the council will work to ensure that the impacts of new development on the strategic and local road network are adequately mitigated. This may provide some mitigation for air pollution impacts related to other policies in the plan.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policy ENV2 provides</p>	<p>Uncertain: air pollution</p> <p>The highways improvements identified by SODC that would be implemented via this policy will change the flow of traffic on the road network. Further work is required to determine whether this policy could have a significant effect on air pollution close to European sites, either alone or in combination with other policies.</p> <p>Some of the strategic transport development that this policy relates to is covered by the Oxfordshire Local Transport Plan⁷³, which is subject to its own HRA. The Local Transport Plan may have significant effects in combination with policies within this Local Plan. This has been</p>

⁷³ <https://www.oxfordshire.gov.uk/cms/content/lt4-policy-and-overall-strategy>

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				protection to European sites from all potential impacts.	considered in the Appropriate Assessment and in Appendix 2.
TRANS2: Promoting Sustainable Transport and Accessibility	None – this policy encourages sustainable transport and will not result in development that would increase vehicle traffic or visitor numbers	n/a	n/a	Policy TRANS2 makes provision for sustainable transport, intended to reduce journeys by car. It requires new development to be designed to encourage walking and cycling within and to/from the development. This will provide some mitigation for air pollution impacts related to other policies in the plan.	No
TRANS3: Safeguarding of Land for Strategic Transport Schemes	None – this policy safeguards land for some of the development that would come forward under STRAT1, but will not itself result in new development	n/a	n/a	n/a	No
TRANS4: Transport Assessments, Transport Statements and Travel Plans	None – this policy sets out the requirements for transport assessment and will not result in new development	n/a	n/a	Policy TRANS4 requires all new development that will have 'transport implications' alone or in combination with other developments to undertake a transport assessment and travel plan, aimed at reducing transport impacts and improving access to sustainable transport. This will	No

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				provide some mitigation for air pollution impacts related to other policies in the plan.	
TRANS5: Consideration of development proposals	None – this policy requires all development to make provision for access but will not result in new development	n/a	n/a	Policy TRANS5 requires all new development to be accessible by sustainable transport modes and be served by a road network that can accommodate traffic without damage to the environment. This will provide some mitigation for air pollution impacts related to other policies in the plan.	No
TRANS6: Rail	None – this policy encourages sustainable transport and will not result in development that would increase vehicle traffic or visitor numbers	n/a	n/a	n/a	No
TRANS7: Development Generating new Lorry Movements	None – this policy sets out principles for development that would result in significant increases in lorry movements but will not itself result in new development	n/a	n/a	Policy TRANS7 only permits significant increases in lorry movements where it would not result in adverse environmental effects. This will provide some mitigation for air pollution impacts related to other policies in the plan.	No
TRANS8: Community Facilities and	Transport development	Air pollution	Air pollution: Aston Rowant SAC,	Policies TRANS1, TRANS2, TRANS4,	Unlikely: air pollution

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Rural Transport	Changes to vehicle traffic		Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policy ENV2 provides protection to European sites from all potential impacts.	The scale of development that would result from this policy will be small and will not contribute to significant air pollution effects on European sites.
INF2: Electronic Communications	None – this policy requires new development to be served by communications infrastructure, but will not itself increase traffic or visitor numbers	n/a	n/a	n/a	No
INF3: Telecommunications Technology	None – this policy will result in infrastructure development but will not increase traffic or visitor numbers	None	n/a	Policy INF3 will not permit development where it would have an unacceptable effect on an area of ecological interest	No
INF4: Safeguarding of land for a reservoir	Reservoir development Excavation	Water quality and hydrological impacts	Water quality / quantity: Cothill Fen SAC, Kennet & Lambourn Floodplain SAC, Oxford Meadows SAC, River	Policy INF4 states that the reservoir will only be brought forward if Thames Water's Resource Management Plan identifies the need for it, and an	Unlikely: water quality / quantity The nearest European site to Chinnor that is sensitive to changes in water quality or quantity is Oxford Meadows SAC, which lies c.26km away. The proposed location lies on tributaries of the

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			Lambourn SAC, and Thames Basin Heaths SPA	Environmental Impact Assessment is carried out. Policy ENV2 provides protection to European sites from all potential impacts.	River Thame but is not hydrologically connected to sensitive European sites, either by surface or groundwater. In addition, the mitigation incorporated into this policy will minimise any risk to European sites.
INF5: Water Resources	None – this policy requires developments to put in place adequate water supply and treatment but will not itself result in new development	n/a	n/a		No
ENV1: Landscape and Countryside	None – this policy sets out principles to protect landscape and countryside from inappropriate development, and will not result in new development	n/a	n/a	Policy ENV1 includes a statement that development will be permitted where it protects or enhances landscape features that contribute to biodiversity.	No
ENV2: Biodiversity - Designated Sites, Priority Habitats and Species	None – this policy sets out principles to protect biodiversity from inappropriate development, and will not result in new development	n/a	n/a	Policy ENV2 states that the highest level of protection will be given to sites of international nature conservation importance. Any development likely to result in a significant effect will need to satisfy the requirements of the Conservation of Habitat and Species Regulations 2010. In addition, development that would affect SSSIs (which all European sites coincide with) will only be permitted in	No

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				exceptional circumstances. This policy will provide some mitigation for all potential impacts on European sites associated with other policies in the plan.	
ENV3: Biodiversity – Non designated sites, habitats and species	None – this policy protects non-designated sites, habitats and species and will not result in new development	n/a	n/a	Policy ENV3 strengthens the general protection for biodiversity in the local plan.	No
ENV4: Watercourses	None – this policy protects watercourses and will not result in new development	n/a	n/a	Policy ENV4 protects watercourses from harm associated with development	No
ENV5: Green Infrastructure in new developments	None – this policy requires developments to contribute to the provision of new green infrastructure but will not increase traffic or visitor numbers	n/a	n/a	Policy ENV5 requires new developments to contribute towards the provision of new green infrastructure. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation for impacts from other policies that have the potential to increase visitor numbers.	No
ENV6: Historic Environment; ENV7: Demolition of Listed Buildings; ENV8: Alteration of and Extension to Listed Buildings;	None – these policies provides protection for heritage assets and will not result in new development	n/a	n/a	n/a	No

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ENV9: Conservation Areas; ENV10: Archaeology; and ENV11: Historic Battlefields, Registered Parks and Gardens and Historic Landscapes					
ENV12: Pollution - Impact from Neighbouring and/or Previous Land Uses on New Development (Receptors)	None – this policy protects the occupants of new development from pollution and will not result in new development	n/a	n/a	n/a	No
ENV13: Pollution - Impact of Development on Human Health, the Natural Environment and/or Local Amenity (Sources)	None – this policy protects the environment, human health and amenity from pollution and will not result in new development	n/a	n/a	Policy ENV13 requires that development will not have a significant adverse impact on the environment, including air pollution and other types of pollution, although this is unlikely to mitigate air pollution impacts associated with increases in traffic	No
EP1: Air Quality	None – this policy protects air quality and will not result in new development	n/a	n/a	Policy EP3 requires new development to comply with the council's air quality action plan, national air quality guidance and local transport plans. Where developments have a negative effect on air quality, mitigation should be provided. This policy will provide some mitigation for air pollution impacts associated with other	No

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				policies in the plan.	
EP2: Hazardous substances	None – this policy limits development associated with hazardous waste and will not result in new development	n/a	n/a	n/a	No
EP3: Minerals Safeguarding Areas	None – this policy directs non-mineral development away from safeguarded minerals areas, but will not itself result in new development	n/a	n/a	n/a	No
DES1: Delivering High Quality Development; DES2: Enhancing Local Character; DES3: Design and Access Statements; DES4: Masterplans for allocated sites and major development; DES5: Outdoor Amenity Space; DES6: Privacy and daylight	None – these policies set principles for the design of new development and the design process, but will not themselves result in new development	n/a	n/a	n/a	No
DES7: Efficient use of resources	None – this policy relates to the design of development and will not result in new development	n/a	n/a	Policy DES7 includes requirements new developments to be consistent with the council's air quality action plan. This policy will therefore provide some mitigation for air pollution impacts associated with other policies in the plan.	No
DES8: Promoting sustainable design	None – this policy relates to the design of development and will not result in new	n/a	n/a		No

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
	development				
DES9: Renewable Energy	None – this policy enables energy infrastructure development but will not increase traffic or visitor numbers	n/a	n/a	n/a	No
DES10: New buildings of structures in the countryside and rural areas	None – this policy sets describes the circumstances in which new buildings will be permitted in rural areas but will not itself result in new development.	n/a	n/a	n/a	No
DES11: Re-use of rural buildings	None – this policy relates to the reuse of existing buildings and will not result in new development	n/a	n/a	n/a	No
TC1: Retail and town and larger village centres	None – this policy sets out the principles for locating retail development within settlements, but will not itself result in new development	n/a	n/a	n/a	No
TC2: Amount and location of new retail floorspace (3,700m ² food store and 16,300m ² non-food store)	Retail development Changes to vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air	Uncertain: air pollution The increase in retail development within the district may alter the travel patterns of the population it serves. If the development results in an increase in traffic on roads close to sensitive European sites, it could have an air pollution impact on those sites, either alone or in combination with other policies (e.g. STRAT2)

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				quality action plan. Policy ENV2 provides protection to European sites from all potential impacts.	
TC3: Retailing in Henley (single food store of c.1,500-2,000m ²)	Retail development Changes to vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts. Policies EP3 and DES7 require that new development complies with the council's air quality action plan. Policy ENV2 provides protection to European sites from all potential impacts.	Unlikely: air pollution A single food store in Henley is unlikely to contribute sufficient additional traffic to any one road that passes close to a sensitive European site. The district-wide increase in traffic due to new retail development overall (in-combination effects) is considered under TC2.
TC4: Retailing in Thame (small / medium format convenience / food store)	Retail development Changes to vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.	Unlikely: air pollution A single small food store in Thame will not contribute sufficient additional traffic to any one road that passes close to a sensitive European site. The district-wide increase in traffic due to new retail development overall (in-combination effects) is considered under TC2.

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				<p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	
TC5: Retailing in Wallingford (single food store of c.2,000m ²)	<p>Retail development</p> <p>Changes to vehicle traffic</p>	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	<p>Unlikely: air pollution</p> <p>A single food store in Wallingford is unlikely to contribute sufficient additional traffic to any one road that passes close to a sensitive European site. The district-wide increase in traffic due to new retail development overall (in-combination effects) is considered under TC2.</p>
TC6: Primary Retail frontages	None – this requires neighbourhood plans to designate primary shopping frontages and will not itself result in new development	n/a	n/a	n/a	No
CF1: Safeguarding Community Facilities	None – this policy safeguards existing facilities and will not result in new	n/a	n/a	n/a	No

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
	development				
CF2: Provision of Community Facilities and Services	Community and social infrastructure development Increase in vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air quality action plan.</p> <p>Policy ENV2 provides protection to European sites from all potential impacts.</p>	<p>Unlikely: air pollution</p> <p>The scale of development that would result from this policy is likely to be small and will not contribute to significant air pollution effects on European sites.</p>
CF3: New Open Space, Sport and Recreation facilities	Community and social infrastructure development Increase in vehicle traffic	Air pollution	Air pollution: Aston Rowant SAC, Burnham Beeches SAC, Chilterns Beechwoods SAC, and Windsor Forest & Great Park SAC	<p>Policies TRANS1, TRANS2, TRANS4, TRANS5 and TRANS7 seek to reduce the impacts development on the road network and encourage trips by sustainable modes of travel rather than car. These will therefore provide mitigation for air pollution impacts.</p> <p>Policies EP3 and DES7 require that new development complies with the council's air</p>	<p>Unlikely: air pollution</p> <p>The scale of development that would result from this policy is likely to be small and will not contribute to significant air pollution effects on European sites.</p>

	Likely activities (operation) to result as a consequence of the proposal	Likely effects if proposal implemented	European site(s) potentially affected	Potential mitigation measures – if implemented would avoid likely significant effect	Could the proposal have likely significant effects on European sites (taking mitigation into account)?
				quality action plan. Policy ENV2 provides protection to European sites from all potential impacts.	
CF4: Existing Open Space, Sport and Recreation Facilities	None – this policy safeguards existing facilities and will not result in new development	n/a	n/a	n/a	No
CF5: Open Space, Sport and Recreation in new residential development	None – this policy enables green infrastructure to serve new development but will not itself increase traffic or visitor numbers	n/a	n/a	Policy CF5 requires new residential development to provide or contribute towards accessible open space, in line with SODC open space standards. Where this provides suitable, accessible and natural spaces close to Little Wittenham SAC, this policy will provide some mitigation for impacts from other policies that have the potential to increase visitor numbers.	No

Appendix 4

Consultation Responses

Summary of comments relevant to the HRA and the response provided within the HRA report

Date of comment and document consulted on	Comment	HRA response
<p>13 February 2015</p> <p>HRA of the South Oxfordshire Local Plan 2031 (housing distribution and growth scenarios), January 2015</p>	<p>Environment Agency:</p> <p><i>Only a few of the sites identified in the HRA are truly water dependant habitats:</i></p> <ul style="list-style-type: none"> • Cothill Fen • River Lambourn • Kennet and Lambourn Floodplain • Little Wittenham <p><i>Water supply/availability is already covered by an existing regulatory regime. However, we have reviewed all licences to ensure that that do not have a significant impact on Habitat Directives sites. Without further detail on any increased water demand, it's impossible for us to specifically confirm that new developments will or will not impact upon the environment.</i></p> <p><i>Of the sites above only the River Lambourn and Kennet and Lambourn would likely be impacted by abstraction. Cothill Fen has a very small, localised catchment and is fed by water moving locally through the sand. Little Wittenham has ponds that are fed by rainwater and potentially spring sources. Other ponds on site are supported by the Thames. No likely abstraction points will impact on these.</i></p> <p><i>Water supply for Kennet and Lambourn Floodplain and River Lambourn is from the chalk of the Kennet catchment. Under CAMS this aquifer has no available resource - so no new source of water will come from this catchment.</i></p> <p><i>All the woodland sites identified are perched on top of the Chilterns with significant unsaturated zones beneath them meaning abstraction can't impact them and discharges can't get to them.</i></p>	<p>This information has been acknowledged in the assumptions used to screen potential water quality and quantity impacts (paragraphs 3.24-3.33 of this report).</p>
<p>17 February 2015</p> <p>HRA of the South Oxfordshire Local Plan 2031 (housing distribution and growth scenarios), January 2015</p>	<p>Natural England:</p> <p><i>The draft HRA as submitted for the South Oxfordshire District Local Plan 2031 is satisfactory.</i></p>	<p>No action required. This HRA has built upon the assumptions and findings of the earlier HRA work.</p>

