

Sustainability Appraisal (SA) of the Vale of White Horse District Local Plan 2031: Part 2

SA Report

September 2017

REVISION SCHEDULE					
Rev	Date	Details	Prepared by	Reviewed by	Approved by
1	Sept 2017	SA Report published alongside the 'Publication' version of Vale of White Horse Local Plan: Part 2	Mark Fessey Principal Consultant	Steve Smith Technical Director	Steve Smith Technical Director

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AECOM Infrastructure & Environment UK Limited
 2 Leman Street, London E1 8FA
 Telephone: 020 7061 7000

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INTRODUCTION

1 BACKGROUND

- 1.1.1 AECOM is commissioned to lead on Sustainability Appraisal (SA) in support of the emerging Vale of White Horse Local Plan 2031: Part 2 (LPP2).
- 1.1.2 LPP2 will allocate land for development, and also present policies (district-wide and site-specific) to guide future planning applications. Alongside Local Plan 2031: Part 1 (LPP1), which was adopted in 2016, it will establish a planning framework for the District up to 2031.
- 1.1.3 SA is a mechanism for considering and communicating the likely effects of an emerging plan, and alternatives, with a view to avoiding and mitigating adverse effects and maximising the positives. SA of Local Plans is a legal requirement.¹

2 SA EXPLAINED

- 2.1.1 It is a requirement that SA is undertaken in-line with the procedures prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004, which transposed into national law EU Directive 2001/42/EC on Strategic Environmental Assessment (SEA).²
- 2.1.2 In-line with the Regulations, a report (known as **the SA Report**) must be published for consultation alongside the draft plan that essentially 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'.³ The report must then be taken into account, alongside consultation responses, when finalising the plan.
- 2.1.3 More specifically, the SA Report must answer the following **three questions**:
1. What has plan-making / SA involved **up to this point**?
 - Including in relation to 'reasonable alternatives'.
 2. What are the SA findings **at this stage**?
 - i.e. in relation to the draft plan.
 3. What happens **next**?

2.1 This SA Report⁴

- 2.1.1 This report is the VOWH LPP2 SA Report. It is published alongside the final draft - 'Publication Version' - of LPP2, under Regulation 19 of the Local Planning Regulations.
- 2.1.2 Questions 1 - 3 are answered in turn, in order to provide the required information. Before answering Question 1, two initial questions are answered in order to further set the scene:
- i) What is the plan trying to achieve?
 - ii) What is the scope of the SA?

¹ Since provision was made through the Planning and Compulsory Purchase Act 2004 it has been understood that local planning authorities must carry out a process of Sustainability Appraisal alongside plan-making. The centrality of SA to Local Plan-making is emphasised in the National Planning Policy Framework (2012). The Town and Country Planning (Local Planning) (England) Regulations 2012 require that an SA Report is published for consultation alongside the 'Proposed Submission' plan document.

² *Procedurally* SA and SEA are one and the same, on the basis that there is no legislation or guidance to suggest that SA process should differ from the prescribed SEA process. SA and SEA differ only in terms of substantive focus. SA has an equal focus on all three 'pillars' of sustainable development (environment, social and economic), whilst SEA involves a degree of focus on the environmental pillar. SA can therefore be said to 'incorporate' SEA.

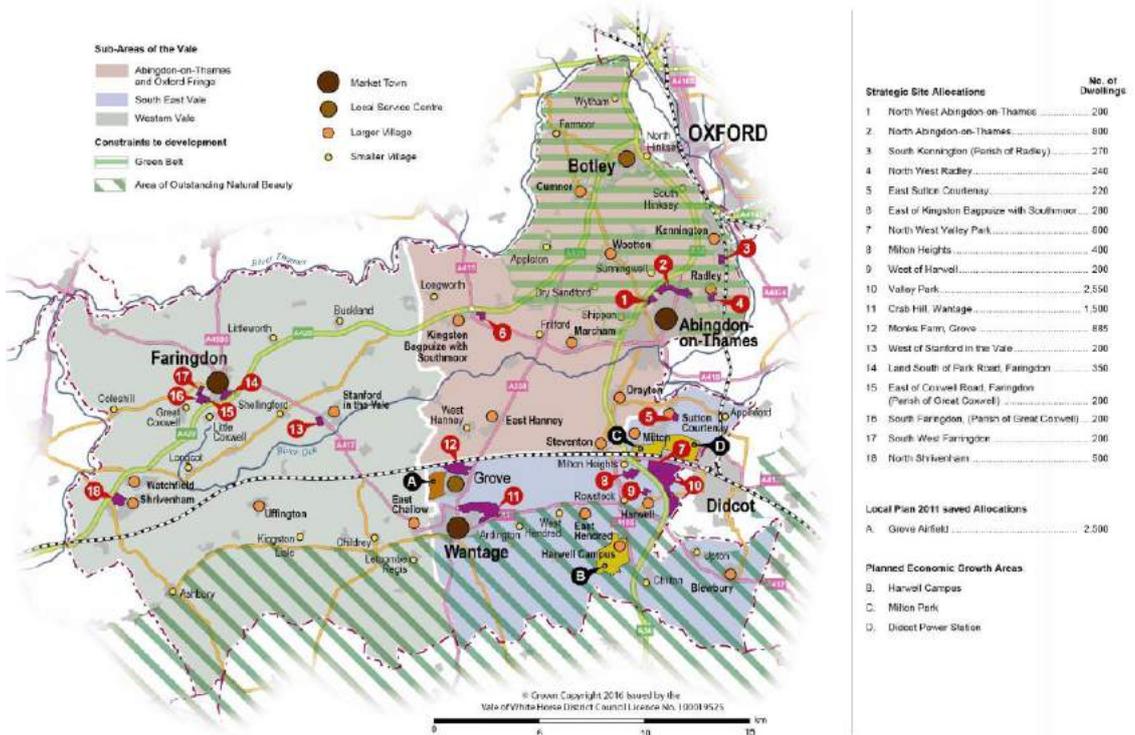
³ Regulation 12(2) of the Environmental Assessment of Plans and Programmes Regulations 2004.

⁴ See Appendix I for further explanation of the regulatory basis for answering certain questions within the SA Report, and a 'checklist' explaining more precisely the regulatory basis for presenting certain information.

3 WHAT IS THE PLAN SEEKING TO ACHIEVE?

3.1.1 The aim of LPP2 is to compliment LPP1, which was adopted by the Council in December 2016.⁵ **Figure 3.1** shows the key diagram from LPP1. The figure shows: each of the settlements that fall within the top four tiers of the settlement hierarchy; key constraints to development; the three sub areas that have been defined for the purposes of planning; and the LPP1 site allocations.

Figure 3.1: Key diagram from LPP1



3.1.2 In respect of site allocations, LPP2 must allocate sites in accordance with the broad spatial strategy and objectives established by LPP1. Specifically, **LPP1** establishes that LPP2 must –

- 1) Allocate sites, if necessary, to ensure that the District’s objectively assessed housing needs(OAHN) is provided for over the plan period, recognising that LPP1 provides for a large proportion of OAHN through its site allocations, and also recognising that a proportion will be provided for through other means.
 - Specifically, LPP1 Core Policy 4 (Meeting Our Housing Needs) establishes that LPP2 should allocate land for **1,000 homes**, with a footnote explaining that this figure - “*will be reduced where dwellings are allocated in Neighbourhood Development Plans or come forward through the Development Management Process [i.e. planning permissions].*”
- 2) Allocate sites to meet an apportionment of Oxford’s un-met housing need. Specifically –
 - LPP1 Core Policy 2 (Cooperation on Unmet Housing Need for Oxfordshire) states that: “To ensure Oxford’s unmet need is addressed, the Council will allocate sites to contribute towards Oxford’s unmet housing need within LPP2, to be submitted to the Secretary of State, within two years of adoption of LPP1.”

⁵ See www.whitehorsedc.gov.uk/services-and-advice/planning-and-building/planning-policy/new-local-plan-2031-part-1-strategic-sites

- Supporting text to LPP1 Core Policy 2 states that: “In November 2015, the Oxfordshire Growth Board agreed a working assumption unmet need housing requirement figure of 15,000... The preparation of LPP2 will be closely informed by the Oxfordshire Growth Board process to apportion the ‘working assumption’ unmet figure of 15,000...”
- The Oxfordshire Growth Board published *A Countywide Approach to Meeting the Unmet Housing Need of Oxford* in October 2016, which concluded that 2,200 homes should be apportioned to the Vale. The Council has accepted this apportionment, and hence determined that LPP2 must allocate land for **2,200 homes** to meet unmet needs, subject to the plan-making process.⁶

- 3) Explore opportunities in the South East Vale Sub Area to support Science Vale and Didcot Garden Town objectives. Specifically LPP1 para 5.85 states that: “*The Didcot area forms part of Science Vale and has been designated by central government as a Garden Town. To ensure our aspiration for this area of change is met, this will be considered further through LPP2, which will provide additional focus on delivery and implementation and on successful place making.*” This is a flexible provision; however, further impetus to allocate land for housing in the South East Vale to support Science Vale and Didcot Garden Town objectives was provided by an Interim Report received from the Planning Inspector examining LPP1 in June 2016. The report raised the possibility of allocating in the region of **1,400 homes** to support Science Vale and Didcot Garden Town objectives.

3.1.3 In respect of site allocations, LPP2 must also respond to **changing circumstances**, e.g. –

- the report of the Planning Inspectorate into the soundness of LPP1 (December 2016);
- latest understanding of unmet needs within the Oxfordshire Housing Market Area (HMA),
 - albeit recognising that there is a County-wide forum, in the form of the Oxfordshire Growth Board, that reduces the need for bilateral negotiations between individual authorities, and helps to create certainty (see further discussion in Box 6.1, below);
- the latest situation in respect of the predicted housing trajectory, given the requirement to maintain a five year supply of deliverable land across the entire plan period up to 2031;⁷ and
- other factors, for example the National Infrastructure Commission is currently exploring route options for an Oxford to Cambridge ‘Expressway’.⁸

3.1.4 In addition to allocating development sites, LPP2 must also present a range of **development management policies** to compliment the thematic Core Policies presented within LPP1, replace the extant ‘saved policies’ of Local Plan 2011, and ultimately provide a policy framework for determining planning applications.

3.2 What is the Local Plan not seeking to achieve?

3.2.1 It is important to emphasise that the plan will be strategic in nature (albeit less strategic in nature than LPP1, with development management policies technically being defined as non-strategic). Even the allocation of sites / establishment of site-specific policy through this plan should also be considered a strategic undertaking, i.e. a process that omits consideration of some detailed issues (in the knowledge that these will be clarified and addressed at the planning application stage). The strategic nature of LPP2 is reflected in the scope of the SA.

⁶ See <https://www.oxfordshire.gov.uk/cms/content/oxfordshire-growth-board>

⁷ Paragraph 47 of the NPPF requires not only that Local Plans make provision to meet the full, objectively assessed needs for housing in the housing market area (as far as is consistent with other policies in the NPPF), but also “*identify and update annually a supply of specific deliverable sites sufficient to provide five years’ worth of housing against the housing requirements...*”

⁸ See <https://www.gov.uk/government/publications/oxford-to-cambridge-expressway-strategic-study-stage-3-report>

4 WHAT IS THE SCOPE OF THE SA?

4.1 Introduction

4.1.1 The aim here is to introduce the reader to the scope of the SA, i.e. the sustainability issues / objectives that should be a focus of (and provide a broad methodological framework for) SA.

4.1.2 Further information on the scope of the SA – i.e. a review of sustainability issues/objectives as highlighted through a review of the sustainability ‘context’ and ‘baseline’ - is presented in **Appendix II**.

Consultation on the scope

4.1.3 The Regulations require that “*When deciding on the scope and level of detail of the information that must be included in the Environmental Report [i.e. the SA scope], the responsible authority shall consult the consultation bodies*”. In England, the consultation bodies are the Environment Agency, Historic England and Natural England.⁹ As such, these authorities were consulted on the SA scope in 2012.¹⁰ Since that time, the SA scope has evolved as new evidence has emerged; however, the scope remained fundamentally the same as that agreed through the dedicated scoping consultation.¹¹

4.1.4 Most recently, in autumn 2016, work was undertaken to further update the SA baseline review, in-light of the specific objectives of LPP2. This work led to an SA Scoping Update being published for consultation with the consultation bodies in October 2016.¹² Consultation responses received have been taken into account within this report.

4.2 Key issues / objectives

Table 4.1 presents the 11 sustainability objectives established through scoping work, including consultation, and presents each alongside a short list of more specific ‘issues’ and ‘appraisal questions’ (i.e. prompts for appraisal). N.B. **bold** text is used to highlight the key words within each objective, which are then used as shorthand later in this report.

4.2.1 Taken together, the sustainability objectives, issues and appraisal questions presented in Table 4.1 provide a methodological ‘framework’ for appraisal.

⁹ In-line with Article 6(3) of the SEA Directive, these consultation bodies were selected because ‘*by reason of their specific environmental responsibilities, [they] are likely to be concerned by the environmental effects of implementing plans and programmes.*’

¹⁰ An SA framework was established by the Vale of White Horse Core Strategy SA Scoping Report (2012). Subsequently, the Vale decided to pursue a two Part Local Plan, as opposed to a Core Strategy.

¹¹ Scoping work was undertaken over the course of the plan-making / SA process for LPP1, in that there was ongoing review of the sustainability ‘context’ and ‘baseline’; however, at no point was the decision taken to update the SA framework. The SA Report submitted alongside LPP1 in 2015 presented the SA framework alongside a detailed review of the sustainability context and baseline.

¹² The SA framework presented within the Scoping Update remained unchanged from that presented within the 2012 Scoping Report and the LPP1 SA Report.

Table 4.1: The SA framework

Sustainability objective	Sustainability issues	Appraisal questions <i>Does the proposal...</i>
1. Provide sufficient suitable homes including affordable homes.	Shortage of housing, including affordable, market and supported living Need to preserve and enhance the quality of built environments Pressure for development, particularly housing	Provide enough homes of appropriate types in appropriate locations at the appropriate times? Provide enough affordable homes?
2. Ensure the availability of high-quality services and facilities in the Vale’s towns and rural areas.	Rural isolation and limited access to services Deprivation in some parts of the Vale Protection and provision of recreational facilities including natural greenspace	Provide appropriate facilities and services in appropriate locations at the appropriate times? Support facilities including relation to health; education; recreation and sport; community, cultural and leisure; other essential services? Support schemes that are well designed and inclusive?
3. Reduce the need to travel and improve provisions for walking, cycling and public transport and reduce road congestion.	Congestion on strategic and local road network Lack of alternatives to the private car Rural isolation and limited access to services Need to mitigate/reduce effects of noise, air and light pollution	Reduce the need to travel through more sustainable patterns of land use and development? Encourage modal shift to more sustainable forms of travel? Enable key transport infrastructure improvements?
4. Improve the health and well-being of Vale residents.	Health of Vale residents Deprivation in some parts of the Vale	Provide and enhance the provision of community access to green infrastructure, in accordance with national standards? Reduce opportunities for crime and anti-social activities, and reduce fear of crime?
5. Reduce inequality , poverty and social exclusion in the Vale, and raise educational achievement and skills levels.	Low levels of educational achievement	Promote regeneration of deprived areas? Improve opportunities and facilities for all types of learning? Encourage an available and skilled workforce which meets the needs of existing and future employers; reduces skills inequalities; and helps address skills shortages?
6. Support a strong and sustainable economy within the Vale’s towns and rural areas.	Provision of employment opportunities for residents Declining proportion of economically active population Low levels of educational achievement	Promote economic growth and a diverse and resilient economy? Provide opportunities for all employers to access: different types and sizes of accommodation; flexible employment space; and high-quality communications infrastructure? Build on the knowledge-based and high-tech economy in the Central Oxfordshire and Science Vale UK area, including the Science Vale UK Enterprise Zone? Promote and support a strong network of towns and villages and the rural economy?

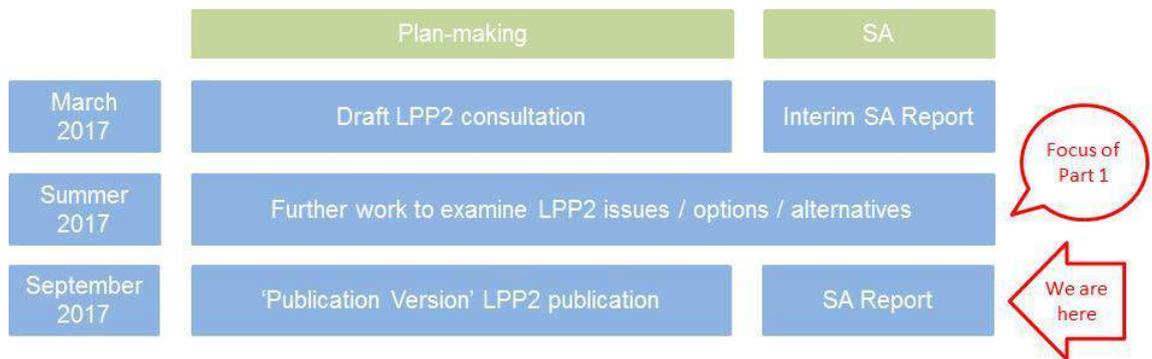
Sustainability objective	Sustainability issues	Appraisal questions <i>Does the proposal...</i>
7. Improve and protect the natural environment including biodiversity, water and soil quality	Protection and improvement of biodiversity, particularly Special Areas of Conservation	<p>Protect and enhance natural habitats, wildlife, biodiversity and geodiversity?</p> <p>Protect the integrity of European sites and other designated nature conservation sites?</p> <p>Encourage the creation of new habitats and features for wildlife?</p> <p>Prevent isolation/fragmentation and re-connect / de-fragment habitats?</p> <p>Enhance water quality and help to meet the requirements of the Water Framework Directive?</p> <p>Protect groundwater resources?</p> <p>Minimise and reduce the potential for exposure of people to ground pollution?</p>
8. Protect the cultural heritage and provide a high-quality townscape and landscape .	<p>Protection of valued landscapes</p> <p>Need to preserve and enhance the quality of built environments</p> <p>Protection and provision of recreational facilities including natural greenspace</p>	<p>Protect and enhance archaeology and heritage assets, and areas of sensitive landscape including AONB and Green Belt?</p> <p>Improve access to, and enjoyment, understanding and use of cultural assets where this will not cause harm?</p>
9. Reduce air, noise and light pollution	<p>Need to mitigate/reduce effects of noise, air and light pollution</p> <p>Need to reduce use of fossil fuels and encourage development of renewables</p>	<p>Minimise and reduce the potential for exposure of people to noise, air and light pollution?</p>
10. Reduce greenhouse gas emissions and the use of resources and improve resource efficiency	<p>Need to reduce use of fossil fuels and encourage development of renewables</p> <p>Action to mitigate the causes and adapt to the effects of climate change</p>	<p>Reduce greenhouse gas emissions?</p> <p>Re-use existing buildings?</p> <p>Promote development on previously developed land and minimise land use?</p> <p>Encourage sustainable, low carbon building practices and design?</p> <p>Reduce energy use?</p> <p>Promote renewable energy generation?</p> <p>Reduce water use?</p> <p>Provide adequate infrastructure to ensure the sustainable supply of water and disposal of sewerage?</p> <p>Maximise opportunities for reuse, recycling and minimising waste?</p>
11. Increase resilience to climate change and flooding	<p>Reduction and prevention of flooding</p> <p>Action to mitigate the causes and adapt to the effects of climate change</p>	<p>Minimise and reduce flood risk to people and property?</p> <p>Respond to the likelihood of future warmer summers, wetter winters, and more extreme weather events?</p> <p>Minimise development on high-quality agricultural land?</p> <p>Provide for local needs locally?</p>

PART 1: WHAT HAS PLAN-MAKING / SA INVOLVED UP TO THIS POINT?

5 INTRODUCTION (TO PART 1)

- 5.1.1 Preparation of LPP2 began in 2016, subsequent to receipt of an Interim Report from the Planning Inspector presiding over the Examination of LPP1. The Interim Report established a remit for LPP2, in respect of the key matter of site allocations.
- 5.1.2 Subsequently, in early 2017, the Council consulted on a ‘Draft’ version of LPP2, over a six week period, with an Interim SA Report published alongside.
- 5.1.3 All past plan-making / SA steps are relevant at the current time; however, the aim here is not to recap the entire plan-making story to date.
- 5.1.4 Rather, the aim is to explain how work was undertaken, subsequent to the Preferred Options consultation, to develop and then appraise **reasonable alternatives**, and how the Council then took into account appraisal findings when finalising the Proposed Submission LPP2. Presenting this information is important given regulatory requirements.¹³

Figure 5.1: Key steps in the plan-making / SA process



- 5.1.5 More specifically still, this part of the report presents information regarding the consideration of reasonable alternative approaches to the allocation of land for housing through LPP2, or **‘housing growth alternatives’**. It is clear that allocating land for housing is at the heart of the plan objectives (see Chapter 3).¹⁴

What about other plan issues?

- 5.1.6 Whilst the plan will set policy to address a range of other thematic issues through district-wide development management policy, these policy areas have not been a focus of alternatives appraisal, and are not discussed further within this part of the Report (but are a focus of the appraisal presented in Part 2 of this report, which deals with the Publication Version LPP2).

What about site options?

- 5.1.7 Appraisal of site options in isolation has also been a focus of SA work. However, site options appraisal has been undertaken as an informal, initial step, with the aim of informing development of reasonable housing growth alternatives (i.e. alternative combinations of site options). As such, within Part 1 of this report, site options are discussed in Chapter 6: “Establishing the reasonable alternatives”.¹⁵

¹³ There is a requirement for the SA Report to present an appraisal of ‘reasonable alternatives’ and ‘an outline of the reasons for selecting the alternatives dealt with’. The aim is to inform the consultation, and subsequent plan finalisation.

¹⁴ The Regulations require that, when determining what should be a focus of alternatives appraisal, account is taken of ‘the plan objectives’. Recent case-law (most notably Friends of the Earth Vs. Welsh Ministers, 2015) has established that planning authorities may apply discretion and planning judgement when determining what should reasonably be the focus of alternatives appraisal.

¹⁵ There is no requirement to present detailed site options appraisal findings within this report, given that site options are not ‘alternatives’ where there is no mutually exclusive choice to be made between them.

What about SA work from March 2017?

- 5.1.8 The aim here is to report on the work completed in summer 2017 to examine issues / options / alternatives. The analysis presented within the March 2017 Interim SA Report was an input to that work, and is discussed as such, rather than being repeated in full. The March 2017 Interim SA Report is available on the Council's website at: whitehorsedc.gov.uk/services-and-advice/planning-and-building/planning-policy/local-plan-2031-part-2.

Structure of this part of the report

- 5.1.9 This part of the report is structured as follows:

Chapter 6 - explains the process of **establishing** the reasonable alternatives

Chapter 7 - presents the outcomes of **appraising** the reasonable alternatives

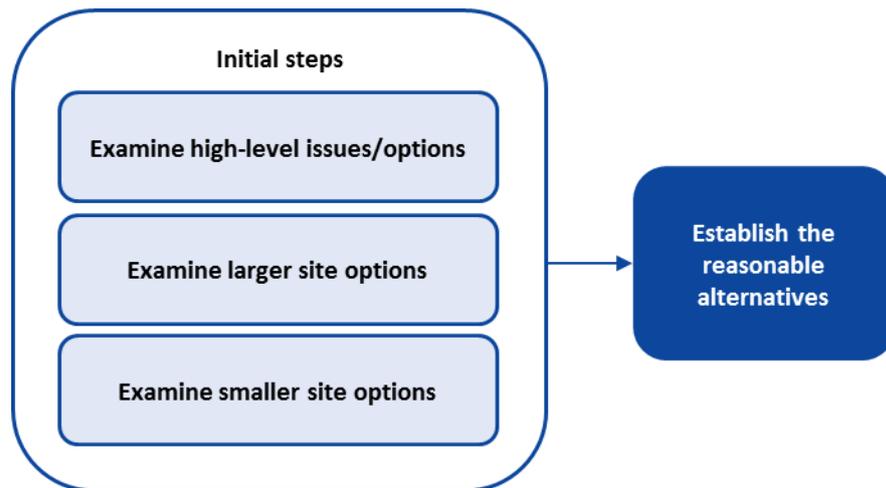
Chapter 8 - explains reasons for **establishing** the preferred option, in light of the appraisal.

6 ESTABLISHING THE REASONABLE ALTERNATIVES

6.1 Introduction

- 6.1.1 The aim here is to discuss the key steps taken, in summer 2017, that led to the development of reasonable housing growth alternatives for appraisal / consultation.
- 6.1.2 Ultimately, the aim of this chapter is to present ‘an outline of the reasons for selecting the alternatives dealt with’, in accordance with the SEA Regulations.¹⁶
- 6.1.3 Specifically, this chapter explains how reasonable alternatives were established subsequent to two stages of initial work, and a subsequent ‘interim’ step – see **Figure 6.1**.

Figure 6.1: Establishing reasonable alternatives



Structure of this chapter

- 6.2 - Discusses the examination of high-level issues / options
- 6.3 - Discusses the examination of larger site options
- 6.4 - Discusses the examination of smaller site options
- 6.5 - Explains how the initial steps enabled establishment of the reasonable alternatives.

¹⁶ Schedule II of the Environmental Assessment of Plans and Programmes (‘SEA’) Regulations 2004

6.2 High-level issues / options

Introduction

6.2.1 Discussion under the first sub-heading examines more closely the district-wide LPP2 housing target, expanding on the discussion presented within Chapter 3, above. Discussions under the subsequent three sub-headings then consider the housing target for each of the three district sub areas (see Figure 3.1), as well as other high level issues/options.

District-wide

6.2.2 The proposed 'housing target' for the District is 22,760 homes, for delivery over the period 2011 to 2031 (1,138 dwellings per annum, dpa). This figure reflects: A) the District's Objectively Assessed Housing Need (OAHN) figure of 20,560 homes, as established by LPP1 Core Policy 4; and B) Vale's 2,200 home apportionment of Oxford's unmet housing needs (see Box 6.1).

6.2.3 The existing supply figure - comprising completions (since the start of the plan period) and existing commitments (i.e. sites with planning permission, neighbourhood plan allocations and LPP1 allocations) - is 20,236 homes. In addition, the assumption is that 1,100 homes will be provided for at windfall sites (i.e. sites not allocated through the Local Plan). As such, there is a need for LPP2 to provide for at least $22,760 - 20,236 - 1,100 = 1,424$ homes.

N.B. this figure is **only a rough guide**. Targets are more accurately considered at the sub area scale (see discussion below).

6.2.4 Final points to note are -

- LPP1 Core Policy 4 remains up-to-date. Whilst new evidence of OAHN does inevitably come to light, as time moves on, this is not an issue for LPP2. Were there to be a need to plan for a new OAHN figure, this would likely trigger an LPP1 early review.
- The agreed unmet need figure is considered firmly fixed at the current time. There are no plans to review the Oxford unmet need figure, or its apportionment, and the Vale has not been asked by any authorities to take any additional unmet needs. All four Oxfordshire districts are progressing plans in order to provide for Oxford's unmet needs - see **Table 6.1**.
- Stage 1 of the Oxfordshire Infrastructure Strategy (OxIS) was recently completed, which identified infrastructure needs to support growth in the period to 2040. Stage 2 is currently ongoing, which is looking to rank infrastructure priorities, recognising limited funding. **Figure 6.1** shows the types of infrastructure needs examined by the study.

Table 6.1: Progress on neighbouring Local Plans

Council	Next Stage ¹⁷	Commentary on unmet need
Oxford	Reg 19 due 2018	The Preferred Options consultation document (July 2017) proposes to provide for just under 8,000 homes, as per the agreement reached through the Oxfordshire Growth Board in 2016, resulting in 15,000 homes unmet need, to be provided for within the surrounding districts.
Cherwell	Submission due 2017	The Proposed Submission Plan (August 2017) proposes to provide for the agreed unmet need apportionment (4,400 homes) in full through allocations in the Kidlington / A44 corridor area, close to the edge of Oxford.
South Oxfordshire	Reg 19 due 2017	A report was recently submitted for consideration by the Council's 'Scrutiny Committee' stating: ¹⁸ "We have included a specific Local Plan Policy STRAT3 – 'The unmet housing requirements from Oxford City' to make contributions of 3,750 homes towards Oxford city's unmet housing needs and make a commitment to undertake a partial review of the South Oxfordshire Local Plan at such time as the Oxford City Local Plan is adopted and the level of unmet homes is known. We consider that this is an appropriate and reasonable response to this matter pending completion of the Oxford City Local Plan." The figure of 3,750 homes is below the apportionment of 4,950 homes arrived at by the Oxfordshire Growth Board.
West Oxfordshire	Adoption due 2017 or 2018	Stage 3 of the examination hearings took place in July 2017. The Submission Plan (with post submission modifications) proposes to provide for the agreed unmet need apportionment (2,750 homes) in full through allocations in the Eynsham – Woodstock area (a strategic urban extension to the west of Eynsham and a new Garden Village near Eynsham).

Figure 6.2: Types of infrastructure examined by the OXIS study



¹⁷ Regulations 18 and 19 of the Local Planning Regulations (2012) establish the regulatory framework for Local Plan -making prior to submission to the Secretary of State for independent examination by a Planning Inspector. Requirements under Regulation 18 are flexible, but it is typical to hold at least one consultation. Regulation 19 is the formal requirement to 'Publish' the plan.

¹⁸ See <http://democratic.southoxon.gov.uk/documents/q2152/Public%20reports%20pack%20Wednesday%2013-Sep-2017%2018.30%20Scrutiny%20Committee.pdf?T=10>

Abingdon-on-Thames and Oxford Fringe Sub Area

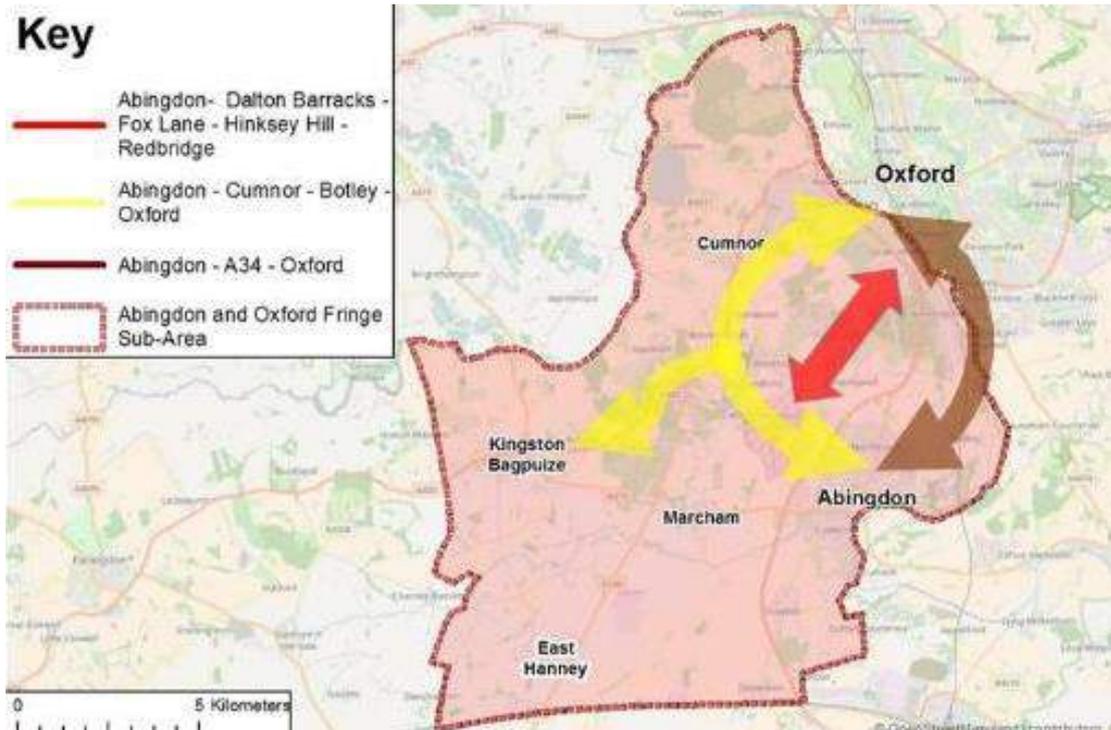
- 6.2.5 This sub area covers the northern and north eastern part of the Vale. It contains the market town of Abingdon-on-Thames, the local service centre of Botley and the larger villages of Cumnor, Drayton, East Hanney, Kennington, Kingston Bagpuize with Southmoor, Marcham, Radley, Steventon and Wootton. The sub area contains the largest range of services and facilities within the District, a good employment base and excellent public transport links to Oxford. However, there are also constraints, in particular the Oxford Green Belt,¹⁹ two sites of international biodiversity importance²⁰ and known traffic congestion hot spots.
- 6.2.6 The first point to note is that the Sub Area's location adjacent to Oxford implies a need to accommodate the 2,200 homes Oxford unmet need figure in its entirety in the sub area. The following key evidence is available -
- Oxfordshire Growth Board's Spatial Options Report (2016; see Box 6.1) found all better performing unmet need sites (i.e. 'green' and 'amber' rated) to lie within the sub area.
 - The consultation response received from Oxford City Council in 2017 encouraged provision for all of Vale's unmet need apportionment within the sub area.
- 6.2.7 LPP1 Core Policy 8 (Spatial Strategy for Abingdon-on-Thames and Oxford Fringe Sub Area) establishes the proportion of the District's 'housing target' that should be delivered within the sub area. Taking account of LPP1 Core Policy 8, and the need to provide for the 2,200 home Oxford unmet need apportionment, the housing target for the sub area is 7,512 homes.²¹
- 6.2.8 The existing supply figure - comprising completions (since the start of the plan period) and existing commitments (i.e. sites with planning permission, neighbourhood plan allocations and LPP1 allocations) - is 5,242 homes. In addition, the assumption is that 308 homes will be provided for at windfall sites (i.e. sites not allocated through a plan). As such, there is a need for LPP2 to provide for at least $7,512 - 5,242 - 308 = 1,962$ homes.
- 6.2.9 Further points to note, regarding spatial strategy within the sub area, include -
- LPP1 Core Policy 8 states that development should be in accordance with the settlement hierarchy, and that: *"Our over-arching priority for this sub area is to maintain the service and employment centre roles for Abingdon-on-Thames and Botley and ensure growth is managed to minimise pressure on the highway network, whilst protecting the... Green Belt."*
 - A Sustainable Transport Study for the Abingdon-on-Thames to Oxford Corridor has been completed (Systra, 2017), examining issues/ opportunities and infrastructure upgrade options within three transport corridors - see **Figure 6.3**.
 - Also, Government is currently considering options for an Oxford to Cambridge Expressway, with one of the shortlisted options involving a route via the A34 / Abingdon-on-Thames (other options would involve accessing Oxford from the north; the effect could be to free-up A34 capacity).

¹⁹ There is a need to demonstrate 'exceptional circumstances' when releasing land from the Green Belt for development.

²⁰ Cothill Fen Special Area of Conservation (SAC) and Oxford Meadows SAC. The latter is located just outside the District.

²¹ The Sub-Area housing requirements are adjusted so that the residual is added to ensure the plan makes provision for the agreed quantum of un-met housing need for Oxford to be addressed within the Vale.

Figure 6.3: Study transport corridors



South East Vale Sub Area

- 6.2.10 This sub area covers the southern and eastern part of the Vale. It contains the market town of Wantage, the local service centre of Grove, and the large employment sites of Harwell Campus, Milton Park and Didcot A Power Station. The town of Didcot is expanding into the eastern part of the sub area, reflecting its Garden Town status, and the sub area also contains the larger villages of Blewbury, East Hendred, Harwell, Harwell Campus, Milton and Sutton Courtenay. The North Wessex Downs AONB is an important designation within the southern part of the sub area.
- 6.2.11 LPP1 Core Policy 15 (Spatial Strategy for South East Vale Sub Area) establishes the proportion of the District’s ‘housing target’ that should be delivered within the sub area. Taking account of LPP1 Core Policy 15, the housing target for the sub area is 12,150 homes.²² The existing supply figure - comprising completions (since the start of the plan period) and existing commitments (i.e. sites with planning permission, neighbourhood plan allocations and LPP1 allocations) - is 11,478 homes. In addition, the assumption is that 484 homes will be provided for at windfall sites (i.e. sites not allocated through a plan). As such, there is a need for LPP2 to provide for at least $12,150 - 11,478 - 484 = 188$ homes.

²² The Sub-Area housing requirements are adjusted so that the residual is added to ensure the plan makes provision for the agreed quantum of un-met housing need for Oxford to be addressed within the Vale.

- 6.2.12 In addition, as discussed above (para 3.1.2), there is the need to consider the possibility of LPP2 allocations in the sub area in order to support Science Vale and Didcot Garden Town objectives. Specifically, there is a need to: achieve and maintain a balance of housing and employment across the Science Vale; deliver the Science Vale Strategic Infrastructure Package, through developer contributions; support the Oxfordshire Local Enterprise Partnership (LEP) priority to deliver housing within the Oxfordshire 'Knowledge Spine' growth corridor; and support specific growth objectives at Harwell Campus. Guidance was provided by paragraph 9.12 of the LPP1 Inspector's Interim Findings letter received on 6th June 2016. The letter confirmed the need to delete two allocations at Harwell Campus – total quantum **1,400 homes** – from LPP1, stating that the Council *"may wish to consider the need to allocate replacement sites in this area through the Part 2 plan."*
- 6.2.13 Further points to note, regarding high level spatial strategy, include -
- LPP1 Core Policy 15 also states that development should be in accordance with the established settlement hierarchy, and that: *"Our over-arching priority for this Sub Area is to secure the aligned delivery of housing and employment growth together with the infrastructure required to achieve sustainable development."*
 - A Didcot Garden Town Delivery Plan was published for consultation in summer 2017, defining a 'masterplan area' (which is assigned Core Policy status within LPP1), and a wider 'area of influence' containing settlements strongly linked to the Garden Town. The area of influence stretches as far west as Steventon, Milton Hill and Harwell Campus.

Western Vale Sub Area

- 6.2.14 This is a more rural area stretching from the North Wessex Downs AONB to the River Thames, containing the market town of Faringdon and several larger villages, including East Challow, Shrivenham, Stanford-in-the-Vale, Uffington and Watchfield.
- 6.2.15 LPP1 Core Policy 20 (Spatial Strategy for Western Vale Sub Area) establishes the proportion of the District's 'housing target' that should be delivered within the sub area. Taking account of LPP1 Core Policy 20, the housing target for the sub area is 3,098 homes.²³ The existing supply figure - comprising completions (since the start of the plan period) and existing commitments (i.e. sites with planning permission, neighbourhood plan allocations and LPP1 allocations) - is 3,516 homes. In addition, the assumption is that 308 homes will be provided for at windfall sites. As such, there is a need for LPP2 to provide for at least 3,098 - 3,516 - 308 = **-726 homes** (i.e. there is a need for nil LPP2 allocations).

²³ The Sub-Area housing requirements are adjusted so that the residual is added to ensure the plan makes provision for the agreed quantum of un-met housing need for Oxford to be addressed within the Vale.

*Box 6.1: The Oxfordshire Growth Board 'Post-SHMA' work stream²⁴***Overview**

The Growth Board is a joint committee of the six councils of Oxfordshire together (Oxford City Council, four District Councils and Oxfordshire County Council) with key strategic partners. Its role is to oversee the delivery of projects that the councils of Oxfordshire are seeking to deliver collaboratively in the fields of economic development and strategic planning.

Subsequent to publication of the Oxfordshire SHMA (2014) and the Oxfordshire Economic Forecasting Report (2014), the Growth Board designed a 'Post SHMA Work Programme' – a collection of projects to examine the spatial options for accommodating Oxford City's unmet housing needs across the County.

Five projects were completed over the period 2014-16, with the following of particular note:

- A review of the capacity of Oxford City to address its housing need - before establishing unmet housing needs there was a need to establish the capacity for housing growth within Oxford City. In light of the report, all authorities agreed a working assumption of 15,000 homes unmet need to 2031.
- Green Belt study - the Oxford Green Belt was divided into parcels with each parcel assessed against each of the five Green Belt purposes. No attempt made to aggregate performance against the five purposes, i.e. reach an overall conclusion on each parcel's contribution to the Green Belt.
- Spatial Options Assessment – see discussion below.

The Spatial Options Assessment

The County Council's Spatial Options Assessment (LUC, 2016) provided a particularly important starting point for the consideration of site options within the Vale. The report examined 36 strategic site options – eleven within the Vale - against criteria covering a broad range of sustainability issues/objectives.

A particular focus of the assessment was the application of criteria to examine how well sites are related to Oxford, with nine of the 27 criteria dealing with this matter. The general conclusion (apparent from Table 5.1 and Figures 5.1 to 5.8 of the report) was that sites in close proximity to Oxford performed better, with none of the more distant sites highlighted as being well-linked to Oxford.

Within the Vale, sites at Botley and Cumnor were found to have comfortably the best links to Oxford, with North of Abingdon-on-Thames also found to perform well once account was taken of proposed infrastructure upgrades (Lodge Hill Park and Ride and Rapid Transit Line 3), and North of Radley also having merit.

However, the study did have limitations (see discussion of 'data limitations' within the report). In particular, when reaching a conclusion on how well linked a site is via public transport, account was only taken of services defined as 'fast and frequent' (4/hr / under 30 mins journey time), despite there being other services of a very good standard. Also, with regards to future service enhancements to bus routes, account was taken only of the three proposed Rapid Transport Lines (one of which is located in the Vale), with no account taken of other opportunities that exist, including opportunities to enhance routes to 'fast and frequent' status. Equally, very limited weight was assigned to landscape and Green Belt sensitivity.²⁵

In light of the three workstreams discussed above, and also two other workstreams dealing with the implications of growth for transport and education infrastructure capacity, a report was published entitled "A Countywide Approach to Meeting the Unmet Housing Need of Oxford".²⁶ Appendix 5 of the report classified the merits of each of the 36 sites on a red/amber/green (RAG) scale, with the total capacity of sites with a green RAG status then proposed as an appropriate unmet need apportionment figure for each of the four districts surrounding Oxford City.

Within the Vale, three sites were assigned a green RAG status – Abingdon-on-Thames North (1,100 homes), Botley (550 homes) and Cumnor (550 homes) – and, on this basis, the Vale was assigned an unmet housing needs apportionment figure of 2,200 homes. Two other sites – Chawley (550 homes) and Kennington (550 homes) were assigned an amber RAG status, with five other sites – Abingdon-on-Thames South (1,100 homes), Kingston Bagpuize with Southmoor (1,100 homes), Radley (2,200 homes), Wootton (1,100 homes) and Appleford (1,100 homes) assigned a red RAG status.

²⁴ See <https://www.oxfordshire.gov.uk/cms/content/oxfordshire-growth-board>

²⁵ The assessment did not weight criteria; however, as discussed, transport issues/objectives were assigned the greatest number of criteria, which in turn had a bearing on the overall 'RAG' rating assigned to each site by the Oxfordshire Growth Board.

²⁶ See

<https://www.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/communityandliving/partnerships/GrowthBoard/PostSHMAstrategicWorkProgramme.pdf>

6.3 Examining larger site options

Introduction

6.3.1 Having established an understanding of ‘top-down’, strategic factors to account for when developing reasonable housing growth alternatives, the next step was to develop a ‘bottom-up’ understanding of site options. This is the first of two sections examining site options. This section considers larger site options, i.e. options for delivering > **200 homes**.

6.3.2 The aim of this section is to explain the work undertaken over 2016/17 to arrive at a short-list of larger site options in summer 2017, which could then be used as the ‘building-blocks’ for establishing housing growth alternatives.

Late 2016 / early 2017

6.3.3 The starting point was the list of sites identified as available, achievable and *potentially* suitable through the Housing and Economic Land Availability Assessment (**HELAA**).²⁷

6.3.4 A **shortlist** of 30 larger site options was established by the Council (working with AECOM) in late 2016. This list was established by examining sites around each settlement in turn (see further discussion within Box 6.2 and Box 6.3 within the March 2017 Interim SA Report). The shortlist comprised: 30 sites spread across 20 settlements; 7 single HELAA sites and 23 clusters of HELAA sites; and 8 of the 10 sites assessed by the Oxford Spatial Options Assessment.²⁸ Work was also undertaken at this point to place the 30 larger site options into six distinct clusters, for the purposes of Evaluation of Transport Impacts (ETI; see Figure 6.1 of the March 2017 Interim SA Report).

6.3.5 Having established a shortlist of larger site options, these were then published for informal consultation with select stakeholders in late 2016, and then subject to SA in early 2017. Appraisal findings were presented in Appendix III of the Interim SA Report (March 2017).

6.3.6 Subsequently, the following larger site options were examined further through the appraisal of housing growth alternatives: Dalton Barracks; E of Kingston Bagpuize with Southmoor; N of Marcham; S of Abingdon-on-Thames; Harwell Campus; Milton Heights; Rowstock; and NW of Grove. Appraisal findings were reported in Chapter 7, and Appendix IV, of the Interim SA Report.

6.3.7 Finally, the Council selected preferred larger site options, and published these for consultation within the Preferred Options consultation document (March 2017). Preferred larger site options (March 2017) were: Dalton Barracks; E of Kingston Bagpuize with Southmoor; N of Marcham; Harwell Campus; and NW of Grove.

²⁷ Outcomes of HELAA work undertaken in 2016 / early 2017 were published within the HELAA Report of March 2017.

²⁸ Chawley and Kennington were assigned an amber RAG status by the County, but on closer examination were found to be significantly constrained and were thus excluded.

Summer 2017

6.3.8 Subsequent to consultation on the Preferred Options document / Interim SA Report, work was undertaken to establish a **refined shortlist** of larger site options, and then subject the refined shortlist of sites to appraisal, drawing upon latest evidence/understanding. Specifically, in order to establish the refined shortlist, work was undertaken to ‘screen’: A) the 30 larger site options established in 2016 (as discussed above), taking account of latest evidence and understanding; and B) new larger site options promoted through the consultation.

6.3.9 **Figure 6.4** summarises the step-wise process of examining larger site options, undertaken to arrive at the refined shortlist. Further information on screening larger site options is presented in **Appendix III**.

N.B. The Council’s Site Selection Topic Paper discusses all larger sites (i.e. the 30 sites established in 2016, and the new sites promoted through consultation) ‘on a par’, within Appendix B. It does not screen sites out, even where it is the case that sites are not being actively promoted or are understood to be unavailable. However, for the purposes of SA, a process of screening larger site options (i.e. selecting a sub-set of the sites discussed within the Council’s topic paper) was considered appropriate, recognising that SA Guidance discusses the importance of ‘refining’ options.

6.3.10 **Table 6.4** presents the refined shortlist, whilst **Appendix IV** presents an appraisal of these sites.

Figure 6.3: Examining larger site options over 2016/17



Table 6.1: The refined shortlist of larger site options

Site	No. homes ²⁹	Sub Area	
Dalton Barracks	1,200	Ab-Ox	
Kingston Bagpuize with Southmoor	East		600
	West (south) ³⁰		400
North of Marcham	400		
North of East Hendred	1,000	SE Vale	
Grove	North West		400
	East		600
Harwell Campus	1,000		
Milton Heights	East		300
	West		300
Rowstock	800		
West of Wantage	North		800
	South		220

²⁹ In some cases the site is not being promoted for specified number of homes. In such cases the Council (working with AECOM) has determined an approximate number of homes, for the purposes of testing.

³⁰ Two sizeable sites are being promoted to the west of Kingston Bagpuize with Southmoor. The southern site is being promoted for 400 homes, whilst the northern site is being promoted for 'up to 200 homes.

6.4 Smaller site options

Introduction

6.4.1 In addition to examining larger site options that could potentially feature in housing growth alternatives, there was also a need to examine smaller site options, i.e. options for housing schemes involving **50 to 200 homes**.

6.4.2 The aim of this section is to explain the work undertaken over 2016/17 to arrive at a short-list of smaller site options in summer 2017, which could then be used as the ‘building-blocks’ for establishing housing growth alternatives.

2016 / early 2017

6.4.3 A focus of work in late 2016 / early 2017 was on larger site options more so than smaller site options. However, initial work was undertaken, to examine ‘HELAA suitable’ smaller sites and so highlight those that might be suitable for allocation through LPP2.

6.4.4 Ultimately, the housing growth alternatives presented within the March 2017 Interim SA Report reflected an understanding that there was one ‘stand out’ smaller site option, in the form of SE of Marcham (120 homes), and also an understanding that at five settlements (East Hanney, Steventon, Kingston Bagpuize with Southmoor, Cumnor, Wootton) there was the potential for one or more smaller site allocation (sites undefined).

6.4.5 Subsequent to alternatives appraisal, the Council selected preferred smaller site options, and published these for consultation within the Preferred Options consultation document (March 2017). Preferred smaller site options (March 2017) were: North of East Hanney; North East of East Hanney; South East of Marcham; and West of Harwell.

Summer 2017

6.4.6 The Council undertook further work to examine smaller site options in summer 2017, which led to a short-list of 12 being established, as discussed within Appendix B of the Council’s Site Selection Topic Paper - see **Table 6.2**. An appraisal of the 11 smaller site options is presented within **Appendix V**.

Table 6.2: Smaller site options

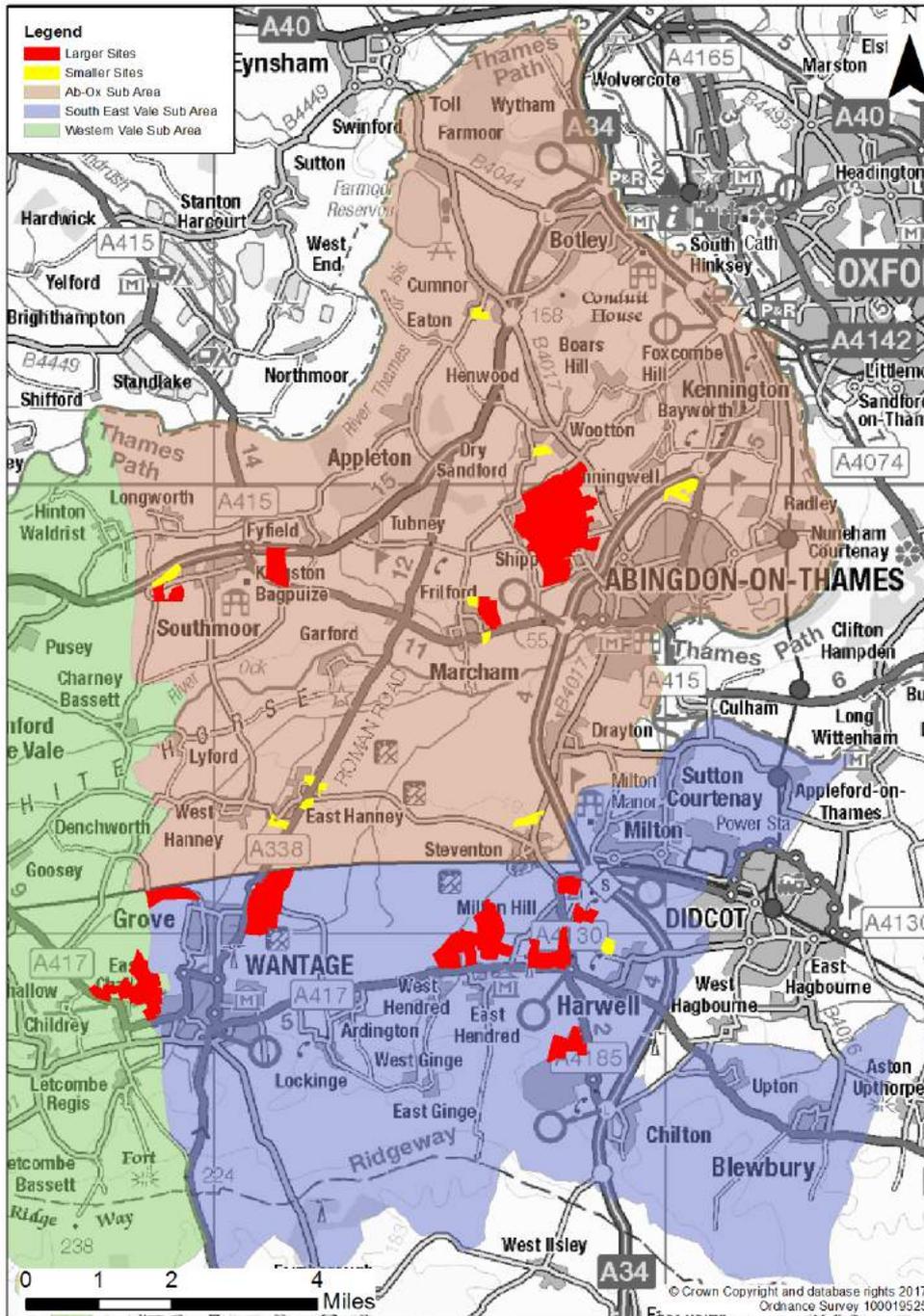
Site	No. homes	Sub Area	
North of Abingdon-on-Thames	50	Ab-Ox	
South of Cumnor	125		
East Hanney	North		80
	North East		50
	East		60
	South		100
West of Kingston Bagpuize with Southmoor	c.200		
Marcham	North East		c.100
	South East		90
North of Steventon	80		
South of Wootton	c.100		
West of Harwell	c.100	SE Vale	

6.5 Establish the reasonable alternatives

Introduction

- 6.5.1 Having given consideration to high level issues/options and site options (both larger and smaller; see **Figure 6.5**), the Council was in a position to establish reasonable housing growth alternatives, i.e. alternative approaches to site allocation through LPP2.
- 6.5.2 This section firstly concludes on options for each of the sub areas in turn, before presenting district-wide reasonable alternatives. N.B. consideration is given to how the March 2017 reasonable alternatives were 'refined' in summer 2017.

Figure 6.5: Site options



Abingdon-on-Thames and Oxford Fringe Sub Area

- 6.5.3 The reasonable alternatives presented within the March 2017 Interim SA Report varied primarily in terms of: the number of homes deliverable at Dalton Barracks in the plan period; the number of homes at North East Marcham; whether or not South of Abingdon-on-Thames should be an allocation; and the number of small sites that should be allocated, in order to ensure a good mix of housing sites (and therefore a robust housing trajectory).
- 6.5.4 In summer 2017 it became clear that, of the four variables from March 2017, the first three no longer needed to be reflected in the district-wide reasonable alternatives. Specifically, it was determined that:
- **Dalton Barracks** - allocation should be a **constant** across the reasonable alternatives, with the assumption that 1,200 homes are deliverable in the plan period. There is increased certainty regarding deliverability, reflecting detailed discussions between the Council, the MoD, the developers and stakeholders. There is also increased certainty regarding the sustainability credentials of the site, including in respect of delivering strategic infrastructure (a secondary school) and managing traffic impacts / ensuring good links to Oxford.
 - North East Marcham - *non*-allocation should be a constant across the reasonable alternatives. This conclusion reflects consultation responses received from the County Council, who object to growth at this location ahead of a Marcham Bypass, given the designated March Air Quality Management Area (AQMA), and also on the basis that Marcham is not on a strategic public transport corridor.
 - South of Abingdon-on-Thames - *non*-allocation should be a constant across the reasonable alternatives. A decision on the preferred Oxford to Cambridge Expressway route remains some way off, and allocation of the site ahead of the decision would be premature, recognising the existing traffic problems that exist, in particular within the centre of Abingdon-on-Thames, where there is a designated AQMA.
- 6.5.5 Allocation of Dalton Barracks for 1,200 homes (in the plan period) still leaves a significant shortfall against the established target of 1,962 homes (see para 6.2.8, above).
- 6.5.6 In order to meet this shortfall, the first 'port of call' is the **East of Kingston Bagpuize with Southmoor** site. This site was deemed to perform well, when examined in isolation, in 2016 / early 2017, hence its allocation, for 600 homes, was a constant across the March 2017 reasonable alternatives. A number of concerns were raised through the consultation; however, in light of the updated analysis presented in Appendix IV, in summer 2017 the decision to treat this site as a **constant** across the reasonable alternatives was confirmed.
- 6.5.7 Allocation of Dalton Barracks and East of Kingston Bagpuize with Southmoor for a total of 1,800 homes leaves a small shortfall against the established target of 1,962 homes (see para 6.2.8, above). There is feasibly the possibility of under-delivering against the target, and mitigating this by over-providing within the South East Vale Sub Area (discussed below). This approach is a **reasonable housing growth option** to examine further.
- 6.5.8 There is also clearly a need to examine housing growth options that would meet the target in full, i.e. there is a need to consider sites for allocation in addition to Dalton Barracks and East of Kingston Bagpuize with Southmoor. No other larger site options 'stand out' as having potential merit. Indeed, the only other larger site option within the sub area screened-in for detailed examination in summer 2017 was West of Kingston Bagpuize with Southmoor, and this site can be ruled-out for quite clear-cut reasons (i.e. it is relatively easy to reach a conclusion that *non*-allocation should be a constant across the reasonable alternatives). This site is sequentially less preferable to East of Kingston Bagpuize with Southmoor, and high growth at Kingston Bagpuize with Southmoor (i.e. allocation of both sites) has limited merit as an option, recognising the number of completions / existing commitments.

6.5.9 A final consideration, therefore, is the approach to **smaller sites** that should be reflected across the reasonable alternatives. The approach to smaller sites within the Ab-Ox Sub Area was a variable across the March 2017 reasonable alternatives and in summer this view - namely that smaller sites should be a variable - was reaffirmed. Two options were established:

- **Option 1** - involving allocation of three sites that 'stand out' as performing well, taking account of the analysis presented in Appendix V, namely South East of Marcham (90 homes); North West of East Hanney (80 homes) and East of East Hanney (50 homes). In total, this approach would result in allocation of smaller sites for 220 homes, which in combination with the two larger allocations would result in allocations for 2,020 homes within the sub area, i.e. a figure 1% over the target.
- **Option 2** - involving the allocation of three *additional* smaller sites (i.e. six smaller sites in total) at: South of Wootton (125 homes); South of Cumnor (125 homes); and North of Steventon (80 homes). Two of these sites are within the Green Belt, but are well located in other respects, hence there could feasibly be the potential to demonstrate the 'exceptional circumstances' necessary to justify development. In total, this approach would result in allocation of smaller sites for 550 homes, which in combination with other allocations would result in allocations for 2,350 homes within the sub area, i.e. a figure 5% over the target.

South East Vale Sub Area

6.5.10 The reasonable alternatives presented within the March 2017 Interim SA report varied primarily in terms of: the balance of housing between Harwell Campus, Rowstock and Milton Heights; the number of homes to provide for at West of Harwell; and whether or not to allocate North West Grove.

6.5.11 In summer 2017 it became clear that all three of the March 2017 variables could be ruled-out, i.e. need not feature within the district-wide reasonable alternatives. Specifically -

- **Harwell Campus** - allocation for 1,000 homes should be a **constant** across the reasonable alternatives. There is considerably increased certainty regarding the site's suitability for this number of homes, including on the basis of increased certainty on the avoidance/mitigation of AONB impacts, reflecting detailed discussions between the Council, the Campus, developers and stakeholders. It is clear that a new campus village will meet the established Science Vale objectives in a way that other sites cannot. As such, there is certainty regarding the case for demonstrating the 'exceptional circumstances' necessary to justify major development in the AONB. It is the lack of evidence for exceptional circumstances that has tended to be the concern raised in relation to the site (by the LPP1 inspector, and also through consultation responses received at the Preferred Options consultation, including from the AONB Unit and CPRE), as much or more so than concerns regarding landscape/visual impact.

Other larger sites considered within the South East Vale - namely Milton Heights; Rowstock; and North of East Hendred - could also potentially contribute to Science Vale objectives, but not to the same extent, plus all are associated with constraints. Ultimately, they are sequentially less preferable to Harwell Campus, and the allocation of more than one larger site would result in over-allocation within the sub area.

- West of Harwell - *non*-allocation should be a constant across the reasonable alternatives. This conclusion reflects consultation responses received from the County Council, who object to growth at this location on transport grounds, recognising that road infrastructure upgrades to enable the 200 home LPP1 allocation in this area are proving a challenge.

- **North West of Grove** - allocation for 400 homes should be a **constant** across the reasonable alternatives. There is now increased certainty regarding the potential for this site to deliver in the plan period, following progress with the planning application for the adjacent Grove Airfield site. The effect of allocating this site, in addition to Harwell Campus, will be to significantly over-provide across the sub area; however, a mitigating factor is that this site would not deliver until very late in the plan period. It is also the case that the site is very unconstrained, and its allocation makes considerable strategic sense, as it will deliver a section of link road, thereby aiding the ability to comprehensively masterplan the strategic expansion of Wantage/Grove, where there are LPP1 allocations for 4,885 homes. Other sites at Wantage/Grove would either deliver only more housing / not deliver strategic benefits (West of Wantage, south), or would not deliver strategic benefits to the same extent (West of Wantage, north; and East of Grove). These sites are sequentially less preferable to North West Grove, and allocation of more than one larger site in the Wantage/Grove area, through LPP2, would result in over-allocation (and would not be deliverable).

Western Vale Sub Area

- 6.5.12 The possibility of allocation within the Western Vale was reflected across the March 2017 reasonable alternatives; however, by summer 2017 it was clear that there is no necessity for LPP2 allocations within the Western Vale. As explained at para 6.2.17, there is a very robust housing land supply within the Western Vale, with the sum of completions and current commitments (i.e. sites with planning permission, neighbourhood plan allocations and LPP1 allocations) well in excess of the housing target figure for the plan period, and in addition 'windfall' homes can be assumed.

The reasonable alternatives

- 6.5.13 The discussion above leads to the identification of three reasonable alternatives - see **Table 6.3** and the subsequent **maps**.
- 6.5.14 These were determined to be the 'reasonable' alternatives following consideration of the total quantum of land that needs to be allocated and numerous distribution variables. Equally, they were determined to be reasonable on the basis that their appraisal enables and facilitates discussion of numerous important issues/opportunities.
- 6.5.15 Whilst it was recognised that there are other options that could potentially feature, there is a need to limit the number of alternatives under consideration, with a view to facilitating engagement. **Box 6.2** considers other options rejected as unreasonable.

Table 6.3: The reasonable alternatives

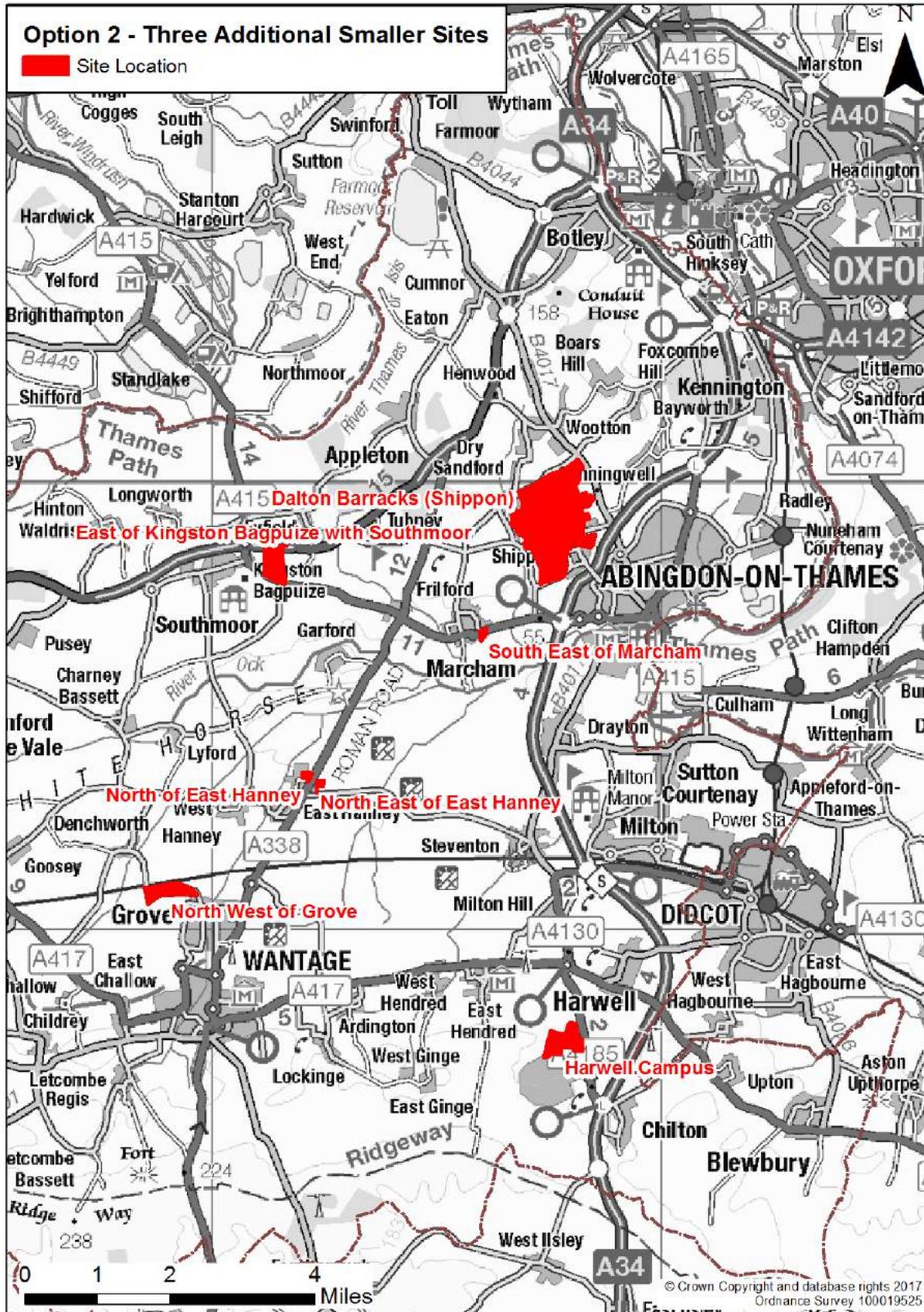
		Option 1 Do minimum	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Allocations	Dalton Barracks	1,200		
	East Kingston Bagpuize w/ Southmoor	600		
	South of Wootton			125
	South of Cumnor			125
	South East Marcham		90	
	North of East Hanney		80	
	North of Steventon			80
	North East of East Hanney		50	
Ab-Ox completions / commitments / windfall		5,550		
Ab-Ox sub-total		7,350	7,570	7,900
% buffer over-and-above target		-2%	1%	5%
Allocations	Harwell Campus	1000		
	NW of Grove	400		
SE Vale completions / commitments / windfall		11,962		
SE Vale sub-total		13,362		
% buffer over-and-above target		10%		
Western Vale allocations		0		
Western Vale completions / commitments / windfall		3,816		
Western Vale sub-total		3,816		
% buffer over-and-above target		23%		
Total housing 2011 to 2031		24,536	24,756	25,086
% buffer over-and-above the target		8%	9%	10%

Box 6.11: Unreasonable options

In order to gain an understanding of the rationale ('outline reasons') for the three reasonable housing growth alternatives **there is a need to read the chapter above as a whole**. However, it is also worthwhile giving explicit consideration here to some other options considered, but ultimately discounted as 'unreasonable':

- An option involving **lower growth in the Ab-Ox Sub Area** (i.e. lower than Option 1) - unreasonable given the sub area housing target, the plan would simply fail to address the agreed quantum of unmet housing need for Oxford within the district in locations that are demonstrably close and accessible to the city.
- An option not involving **Dalton Barracks** - unreasonable given no other larger site (>200 homes) well linked to Oxford found to have potential for allocation, let alone a site of the scale of Dalton Barracks. As such, removal of the site would necessitate numerous smaller sites to 'come in'.
- An option not involving **East of Kingston Bagpuize with Southmoor** - unreasonable given no better performing larger site. As such, removal of the site would necessitate smaller sites to 'come in'. Such sites would likely have to be outside the Green Belt, as it would be difficult to demonstrate the 'exceptional circumstances' necessary to justify removal of sites from the Green Belt in place of East of Kingston Bagpuize with Southmoor. Sites would likely be relatively dispersed, and hence less suited to supporting the maintenance, and potentially enhancement, of bus services (Kingston Bagpuize with Southmoor is well served by the existing 66 bus service which is currently 3/hr to Oxford), and there would be a high reliance on 'housing only' sites (East of Kingston Bagpuize with Southmoor will deliver a primary school).
- Any option involving an **alternative smaller site** to those included in Option 3 – unreasonable on the basis of the site options appraisal work undertaken.
- An option involving **higher growth in the Ab-Ox Sub Area** (i.e. higher than Option 3) - as per the discussion above, work to examine settlements and sites in isolation has not led to the identification of additional sites with the potential for allocation. The next best larger site is potentially West of Kingston Bagpuize with Southmoor, but high growth at Kingston Bagpuize with Southmoor is not supported.
- An option involving **lower growth in the South East Vale Sub Area** - either of the proposed allocations could feasibly be removed from the Strategy, in the sense that there is no 'hard and fast' requirement to provide for a number of homes above the sub area's housing target established by LPP1. However, on balance, removal of either site is considered 'unreasonable', for the purposes of establishing reasonable alternatives. North of Harwell Campus represents a unique opportunity that should be capitalised upon now, recognising Science Vale objectives; whilst North West Grove stands out as a relatively unconstrained site, and its allocation will support the strategic expansion of Wantage/Grove.
- An option involving **higher growth in the South East Vale Sub Area** - the proposal is already to deliver a quantum of homes 10% above the LPP1 established target figure, hence there is no rationale for considering additional allocations. Whilst Science Vale is 'ring fenced' in respect of calculating a five year housing land supply, the proposed housing trajectory should be suitably robust. This statement is made in light of a recent (April 2017) Inspector's report dealing with an appeal site at Steventon, which found there to be a five year housing land supply within the Ring Fence area (Ref: P15/V2497/FUL).
- The **March 2017 Preferred Option** - is now understood to be 'unreasonable' in light of consultation responses received and latest understanding of the technical evidence base. In particular, it is now understood that: North East of Marcham and West of Harwell are unsuitable for allocation; and South East Marcham is suited to a smaller development (thereby leaving undeveloped land safeguarded for a possible future Marcham Bypass).
- The **March 2017 reasonable alternatives** - the reasons for 'refining' the March 2017 reasonable alternatives are discussed above (within Section 6.5). Some of the sites that featured within the March 2017 reasonable alternatives are now no longer in contention, on the basis of latest evidence and understanding, whilst at others (namely Dalton Barracks and Harwell Campus) work has served to clarify understanding of the number of homes suitable, such that the number of homes need not be a variable across the reasonable alternatives.

Option 2 – Three additional smaller sites



7 APPRAISING REASONABLE ALTERNATIVES

7.1 Introduction

7.1.1 The aim of this chapter is to present summary appraisal findings in relation to the reasonable alternatives introduced above. Detailed appraisal findings are presented in **Appendix VI**.

7.2 Summary alternatives appraisal findings

7.2.1 **Table 7.1** presents summary appraisal findings in relation to the reasonable alternatives introduced above. Appraisal methodology is explained in Appendix VI, but in summary:

Within each row (i.e. for each of the topics that comprise the SA framework) the columns to the right hand side seek to both categorise the performance of each option in terms of 'significant effects' (using **red** / **green**) and also rank the alternatives in relative order of performance. Also, '=' is used to denote instances where the alternatives perform on a par.

Table 7.1: Summary alternatives appraisal findings

Summary findings and conclusions			
Objective	Categorisation and rank		
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Homes	3	2	1
Services and facilities	1	1	2
Movement	=	=	=
Health	=	=	=
Inequality and exclusion	=	=	=
Economy	2	2	1
Natural environment	1	1	2
Heritage	1	2	3
Landscape	1	2	3
Pollution	1	2	2
Climate change mitigation	=	=	=
Climate change adaptation	1	2	2

Conclusions

The appraisal shows Option 1 to perform best in terms of the greatest number of objectives, primarily because it would involve concentrating growth at a small number of sites that are relatively unconstrained in terms of environmental issues/objectives. However, Option 1 performs notably least well in terms of ‘Housing’ objectives, as there would be an over-reliance on large sites.

Option 2 outperforms Option 3 in respect of several environmental objectives, largely on the basis that one of the sites included in Option 3 (North of Steventon) is significantly constrained by a lack of capacity at the village primary school, another (South of Cumnor) is seemingly somewhat constrained in landscape/heritage terms (given contribution of the site to the setting of the Cumnor Conservation Area) and another (South of Wootton) is somewhat constrained in biodiversity terms (given proximity to Cothill Fen SAC). However, Option 3 is judged to outperform Option 2 in respect of ‘Economy’ objectives, recognising that two of the three additional smaller sites that would ‘come in’ (South of Cumnor and North of Steventon) are well located to either Oxford or Science Vale.

8 DEVELOPING THE PREFERRED APPROACH

8.1 Introduction

- 8.1.1 The aim of this Chapter is to present the Council's response to the alternatives appraisal / the Council's reasons for developing the preferred approach in-light of alternatives appraisal.

8.2 The Council's outline reasons

- 8.2.1 The following text is the Council's response to the alternatives appraisal, i.e. reasons for supporting the preferred option in-light of the alternatives appraisal.

The Council has followed an iterative approach to plan making, ensuring the plan is informed by a wide range of technical evidence, formal and informal consultation, including with key stakeholders such as Oxfordshire County Council and the Statutory Bodies, and Sustainability Appraisal (SA). The SA has informed each stage of plan making, with an 'Interim' report subject to consultation alongside the 'Preferred Options' plan in March 2017.

The Council has followed a comprehensive approach to site selection, based on the approach followed to inform the Part 1 plan and consistent with guidance. This has included assessing over 400 sites with a proportion of these being assessed in some detail through the SA, both in isolation and in combination. The Council's site selection has been informed by the SA and other wide-ranging factors. Key considerations include: minimising impacts on an already constrained highway network and seeking to maximise opportunities for supporting sustainable modes of travel; supporting housing delivery to fully meet the identified housing need for the district and for the agreed quantum of unmet housing need for Oxford to be addressed within the Vale and maintaining an up to date housing supply, which should rely, as far as possible, on allocating sites of different size, type and geography; supporting the delivery of appropriate infrastructure; and seeking to minimise any harmful consequences, such as harming the environment.

The site allocations set out in the Part 2 plan represent the Council's strategy for meeting sustainable development, having considered a range of alternatives (i.e. alternative sites, and alternative strategies). Development at Dalton Barracks, for example, provides an opportunity to: maximise use of brownfield land; minimise Green Belt impact; deliver a comprehensive package of infrastructure including new schools; connect new housing well to Oxford and Abingdon-on-Thames via sustainable modes; and facilitate a comprehensive approach to planning for the long term. Other sites seek to make use of relatively unconstrained sites, minimise harmful impacts and balance these with fully meeting the identified housing requirement. Development at Harwell Campus provides an opportunity to support highly sustainable development, maximising the opportunity for the creation of a live/work/play community, whilst also making use of brownfield land and minimising harm to the environment (particularly as the site is already allocated for development).

The alternatives appraisal summary table presented above (Chapter 7) finds the preferred option (Option 2) to have some draw-backs in environmental terms, relative to the lower growth option (Option 1). The two potentially 'significant' negative effects flagged by the appraisal relate to Wastewater Treatment Capacity and air quality (particularly within the Marcham AQMA). The Council is confident in the ability to mitigate impacts by setting a robust site-specific policy framework (which has been refined for all proposed site allocations, following consultation at the Preferred Options stage).

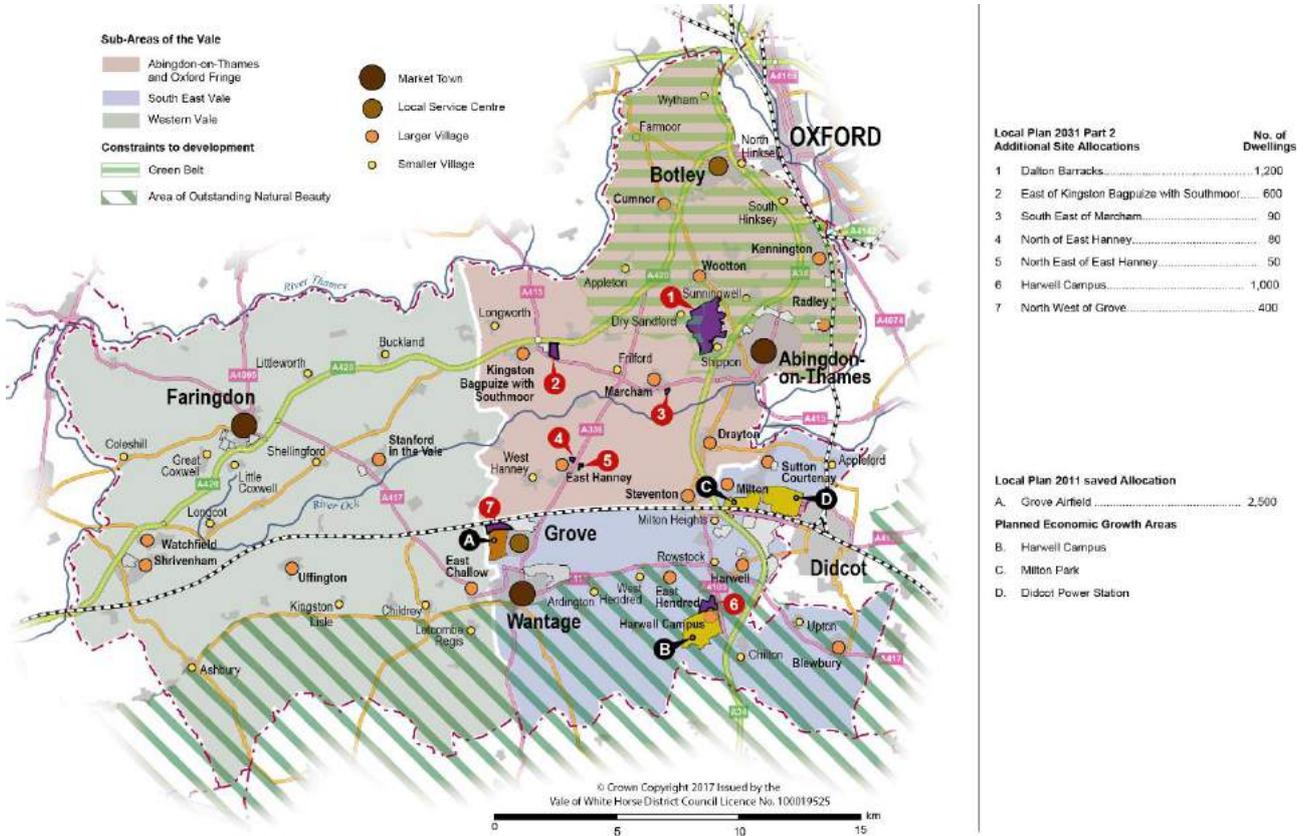
The appraisal also finds the preferred option to have some draw-backs in housing and 'movement' terms relative to the higher growth; however it is apparent that neither conclusion is clear-cut. In respect of housing objectives, the preferred option reflects best current understanding of needs (and work is ongoing outside of the Local Plan process to ensure that Oxford's affordable housing needs are addressed as fully as possible). In respect of transport objectives, the existing congestion on the A34 is a constraint to higher growth.

PART 2: WHAT ARE SA FINDINGS AT THIS CURRENT STAGE?

9 INTRODUCTION (TO PART 2)

9.1.1 The aim of this chapter is to present an appraisal of the Proposed Submission LPP2. By way of introduction, **Figure 9.1** presents the LPP2 Key Diagram.

Figure 9.1: The LPP2 Key Diagram



9.2 Appraisal methodology

9.2.1 The appraisal identifies and evaluates 'likely significant effects' of the plan on the baseline, drawing on the sustainability topics/objectives identified through scoping (see Table 4.1) as a methodological framework. The SA framework comprises 11 objectives, one of which is quite broad (covering both landscape and heritage), and hence deemed appropriate to 'split'. As such, the appraisal considers the plan under the following 12 topic headings -

- Homes
- Services and facilities
- Movement
- Health
- Inequality and exclusion
- Economy
- Natural environment
- Heritage
- Landscape
- Pollution
- Climate change mitigation
- Climate change adaptation

9.2.2 Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the policies under consideration, and understanding of the baseline (now and in the future under a 'no plan' scenario) that is inevitably limited. Given uncertainties there is a need to make assumptions, e.g. in relation to plan implementation and aspects of the baseline that might be impacted. Assumptions are made cautiously, and explained within the text (with the aim to strike a balance between comprehensiveness and conciseness/ accessibility to the non-specialist). In many instances, given reasonable assumptions, it is not possible to predict 'significant effects', but it is nonetheless possible and helpful to comment on merits (or otherwise) of the Proposed Submission Plan in more general terms.

9.2.3 Finally, it is important to note that effects are predicted taking account of the criteria presented within Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations (2004). So, for example, account is taken of the duration, frequency and reversibility of effects as far as possible. Cumulative effects are also considered, i.e. the potential for the draft plan to impact an aspect of the baseline when implemented alongside other plans, programmes and projects. These effect 'characteristics' are described within the appraisal as appropriate.

Adding structure to the appraisal

9.2.4 Whilst the aim is essentially to present an appraisal of the Proposed Submission Plan 'as a whole', it is appropriate to also give stand-alone consideration to elements of the Plan. As such, within each of the eleven appraisal narratives below, sub-headings are used to ensure that stand-alone consideration is given to distinct elements of the Plan, before the discussion under a final sub-heading concludes on the Plan as a whole.

N.B. Specific policies are referred to only as necessary within the narratives below. It is not the case that systematic consideration is given to the merits of every plan policy in terms of every sustainability topic/objective.

10 APPRAISAL OF THE PROPOSED SUBMISSION PLAN

10.1 Introduction

10.1.1 As introduced above, the aim of this chapter is to present an appraisal of the Proposed Submission Plan 'under' the SA framework.

10.2 Homes

Commentary on the spatial strategy

10.2.1 **Core Policy 4a** (Meeting our Housing Needs) proposes LPP2 allocations to provide for 3,420 homes, which in-combination with completions, commitments (inc. LPP1 allocations) and windfalls will mean providing for 24,756 homes over the plan period, or 9% above the 'target' figure of 22,760, which reflects: A) the District's Objectively Assessed Housing Need (OAHN) figure assigned by the Oxfordshire Strategic Housing Market Assessment (SHMA, 2014); and B) the District's apportionment of Oxford's unmet housing needs, as assigned by the Oxfordshire Growth Board in 2016 (see Box 6.1, above). This approach of 'over supplying' is supported, from a housing perspective, as it can be appropriate to 'buffer' housing requirements, as a contingency for unforeseen delays in delivering sites.

10.2.2 **Core Policy 8a** (Additional Site Allocations for Abingdon-on-Thames and Oxford Fringe Sub Area) makes provision for around 1,200 homes at Dalton Barracks in the plan period, whilst recognising that the longer term potential for development is potentially considerably higher (subject to further detailed work). This approach of making provision for long term housing supply is supported. There are two important points to make regarding the site -

- Certainty regarding deliverability at Dalton Barracks sites has improved significantly since the Preferred Options stage, with the MOD confirming that 1,200 homes could be delivered at the site prior to the MOD vacating the site.
- The scale of the site provides good potential to deliver a significant amount of affordable housing. However, there will be a range of significant infrastructure upgrades required; secondary school, three primary schools, a guided busway link to Lodge Hill P&R and a large country park.

10.2.3 **Core Policy 15a** (Additional Site Allocations for South East Vale Sub Area) makes provision for 1,000 homes at Harwell Campus, which is supported on the basis that this will involve addressing specific housing needs. A survey of existing Campus organisations, undertaken by CBRE for the Harwell Campus Partnership, has shown that there is predisposition towards social / community clustering among the Campus workforce. The policy also proposes 400 homes at North West of Grove, which reflects latest understanding of what is deliverable at this site. Certainty has improved significantly since the Preferred Options stage as a result of outline planning permission being granted at the adjacent Grove Airfield site; however, it remains the case that the trajectory of housing delivery in the Wantage/Grove area is inherently uncertain, given the large number of homes to be delivered (LPP1 allocations for 4,855 homes).

10.2.4 Final points to make regarding the LPP2 spatial strategy, as understood from **Core Policies 4a, 8a and 15a** are as follows -

- The spatial distribution of housing meets the Oxford City unmet needs requirement (2,200 homes) in an effective manner, in that there will be sufficient new housing in parts of the Vale that are well linked to Oxford. This is on the basis that several of the LPP1 allocations will contribute to the requirement, notably sites at Abingdon-on-Thames and Radley / Kennington. Whilst these sites were allocated within LPP1 with the primary intention of meeting the Vale's own OAHN, they are also well located to provide for Oxford's unmet need. The LPP1 Planning Inspector's Report states: "*[I]n reality, it would be all but impossible to determine if a potential occupier of this housing (Part 1 allocations) represents a Vale or Oxford 'housing need.'*" Also, the Inspector highlighted that Oxford City's unmet needs can be met by development at locations outside of the Abingdon-on-Thames and Oxford Fringe Sub Area, stating: "*[W]hilst the Abingdon-on-Thames / Oxford Fringe Sub Area is closer to Oxford, it is true that more than 3,000 dwellings proposed in the South East Vale (the two Valley Park sites) would also be close to Didcot Station with its fast and frequent rail service to Oxford.*"
- Three smaller site allocations are proposed - at East Hanney and Marcham – an approach which is supported given an assumption that these sites can deliver early in the plan period, and thereby help to ensure a robust housing delivery 'trajectory', i.e. ensure a continual five-year supply of deliverable sites over the plan period.
- No LPP2 allocations are proposed within the Western Vale; however, this is not necessarily an issue, recognising that most settlements here have high, or at least sufficient, committed development (N.B. Uffington is something of an exception to the rule, in that it is a 'larger village' in the Western Vale with just one committed site for 36 homes). The sub area as a whole has completions/commitments in place to provide for 23% above the target.

Commentary on other policies

10.2.5 **Development Policy 1** (Self Build and Custom Build) sets out the Council's approach to supporting the provision of self and custom build homes. Reference to self-build and custom-build was limited to supporting text at the Preferred Options (2017) stage, but is now located within the policy itself, in light of consultation responses and amendments to the Planning Practice Guidance (PPG). The Government has made self-build and custom housebuilding an important part of its strategy for increasing housing supply, placing a significant responsibility on LPAs to promote and manage delivery, including through "*increase[ing] awareness among landowners, builders and developers of the level and nature of demand... in the local area.*"³¹ The Council recognises through Development Policy 1 that the custom and self-build sector can make a valuable contribution to housing delivery and the diversity of new homes.

10.2.6 It is **recommended** that where policy text states "*the Council will support the provision of plots for sale to self and custom builders on major development sites*", this is amended to remove the prioritisation of major sites. The approach of the PPG is that relevant authorities should consider how they can best support self-build and custom housebuilding in their area. The PPG does not single out major scale developments, with the only site specific requirements being that development is 'suitable' and 'proportionate'. Further to this, Wessex Economic recommend that South and Vale do not complicate the delivery of new homes through mainstream development by requiring provision for custom and self-building on large sites, until there is proven evidence of demand.³²

N.B. an **earlier iteration** of this appraisal recommended that the Council might differentiate between self-build and custom housebuilding; however, this recommendation has not been actioned, as the Self-build and Custom Housebuilding Act 2015 does not differentiate.

³¹ See <https://www.gov.uk/guidance/self-build-and-custom-housebuilding>

³² Wessex Economics (2017) Housing Study: to support a Joint Housing Strategy for South Oxfordshire and Vale of White Horse

- 10.2.7 **Development Policy 2** (Space Standards) seeks to ensure internal spaces meet defined standards to reflect the needs of the community, in light of the optional building regulations, the national described space standards, and LPP1 (paragraph 6.21), which states the Council will consider the case for setting out higher accessibility, adaptability and wheelchair housing standards in LPP2. The policy reflects the recommendations of the Housing Strategy (2017), which has identified a need for the district to exceed the nationally described internal space standards for market and affordable housing.³³
- 10.2.8 **Development Policy 3** (Sub-Division of Dwellings) sets out measures to ensure sub-division of housing is appropriately designed and executed. Similarly, **Development Policy 4** (Residential Annexes) seeks to ensure that residential annexes are designed appropriately (N.B. this policy is particularly supported by the Council's Enforcement Team).
- 10.2.9 **Development Policy 6** (Rural Workers' Dwellings) sets out the Council's approach to enabling rural workers' dwellings to support rural businesses. This is important from a perspective of meeting specific housing needs. **Development Policy 5** (Replacement Dwellings in the Open Countryside) also covers rural workers dwellings.

Appraisal of the plan as a whole

- 10.2.10 The LPP2 spatial strategy performs well, in that the quantum and distribution of homes should ensure that housing needs are met at various scales (Oxfordshire Housing Market Area, Vale of White Horse District and specific areas / settlements), and help to ensure a robust housing trajectory across the plan period. Certainty regarding deliverability of Dalton Barracks has increased considerably since the Preferred Options Stage; in addition to this, the Council is committed to the preparation of Supplementary Planning Document (SPD) to aid comprehensive masterplanning and delivery of the site.
- 10.2.11 The housing focused Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policy 22 (Housing Mix) and Core Policy 26 (Accommodating Current and Future Needs of an Ageing Population). There is also a need to consider the effect of all other proposed Development Policies, in that requirements on developers can affect viability and in turn rates of housing delivery; however, a Viability Assessment has been completed, and determined that the effect of Development Policies in combination will not be to overly burden the development industry.
- 10.2.12 In **conclusion**, the Proposed Submission Plan is predicted to result in **significant positive effects**.

10.3 Services and facilities

Commentary on the spatial strategy

- 10.3.1 **Core Policies 4a, 8a and 15a** allocate sites in accordance with the broad spatial strategy established through LPP1, which has three main strands: Focus sustainable growth within the Science Vale area; Reinforce the service centre roles of the main settlements across the district; Promote thriving villages and rural communities whilst safeguarding the countryside and village character. This spatial approach reflects a desire to both concentrate and distribute housing growth, in order to maximise the benefits that housing growth can bring, in terms of maintaining and enhancing access to services / facilities / infrastructure with capacity.

³³ The Council is currently preparing a Housing Strategy in partnership with South Oxfordshire District Council

10.3.2 Sites are well located in respect of enabling easy access to a service centre or larger village centre; however, no LPP2 allocations are proposed at a market town (Abingdon-on-Thames, Wantage, Faringdon); and the North West of Grove site is the only proposal at a local service centre (the other local service centre being Botley). This approach is not necessarily problematic, recognising that all of these settlements - other than Botley, which is constrained³⁴ - are set to see considerable growth through the plan period (e.g. see LPP1 allocations in Figure 3.1, above).

N.B. The possibility of LPP2 allocations at Abingdon-on-Thames, Wantage and Botley was explored in detail (see Part 1, above) before reaching a conclusion that LPP2 allocations are not appropriate. Faringdon was examined in less detail, as its location in the Western Vale means that there is less strategic argument for an LPP2 allocation, plus the town is already set to see considerable growth over the plan period.

10.3.3 With regards to specific sites, it is notable that **Core Policy 8a** (Additional Site Allocations for Abingdon-on-Thames and Oxford Fringe Sub Area) makes provision for -

- 1,200 homes at Dalton Barracks, whilst recognising that the longer term potential for development is potentially considerably more. Part of the site could come forward without being allocated due to the previously developed nature of the site, however removing less sensitive land from the Green Belt creates more flexibility to shape and masterplan the site. There will be the potential to develop a new community that is self-sustaining to some extent, with access on-site to schools, a local centre, open space (in the form of a country park) and potentially some employment. Core Policy 8b (Dalton Barracks Comprehensive Development Framework) reflects the opportunities that exist, and in particular suggests application of 'Garden Village' principles, including: *"strong cultural, recreational and shopping facilities in walkable, vibrant, social neighbourhoods"*. Perhaps most notably, a requirement to 'contribute to a secondary school on-site' is listed as an infrastructure requirement in the Site Development Template (Appendix A of LPP2), which would help to address existing issues in the Abingdon-on-Thames area. It is noted that the ability to deliver three primary schools and a secondary school may be dependent on the number of homes delivered on the site. It is **recommended** that the matter of delivering a secondary school might be discussed within Core Policy 8b (Dalton Barracks Comprehensive Development Framework) given its strategic importance.
- 600 homes to the east of Kingston Bagpuize with Southmoor – would be expected to deliver a primary school on-site. Kingston Bagpuize with Southmoor is relatively distant from a higher order centre, but benefits from being on the main bus corridor between Swindon and Oxford (plus a bus route links Kingston Bagpuize with Southmoor to Witney and Abingdon-on-Thames). There are some existing road safety concerns, but there is confidence in the ability to address these through delivery of new roundabout access points on both the A420 and A415, plus a new link road through the site will link the two main roads, thereby reducing traffic flows through the existing village. Kingston Bagpuize with Southmoor is notable for not having a GP surgery; however, Oxfordshire Clinical Commissioning Group (OCCG) is not seeking delivery of a surgery; rather, OCCG is content for developers at Kingston Bagpuize with Southmoor to contribute funding for enhanced facilities at Faringdon (8 miles distant, but well linked by bus).
- 130 homes across two sites at East Hanney – gives rise to relatively few issues. East Hanney is close to Wantage / Grove and on strategic transport corridor linking to Oxford. The sites are close to the village centre (albeit the A338 is a barrier for one) and close to the existing bus stop. There is primary school capacity in the village, with the existing primary school (St James) expanding from 0.5 form entry to 1 form entry; however, there is a need for some further work to confirm that children from 130 homes can be accommodated. There will be sufficient secondary school capacity in the Grove/Wantage area.

³⁴ There is limited potential for expansion of Botley; however, planning permission has been granted for a major mixed use regeneration scheme in the Central Botley Area, following adoption of a Supplementary Planning Document (SPD) in January 2016; see <http://www.whitehorsedc.gov.uk/sites/default/files/1612201%20Botley%20Centre%20Final%20%20SPD.PDF>

- 90 homes at Marcham gives rise to concerns regarding primary school capacity, with the existing village school expanding to 1 form entry to meet already planned/permitted growth and there understood to be barriers to further expansion. Oxfordshire County Council objected to the Preferred Options (2017) proposal to deliver 520 homes at Marcham, on primary school grounds (see further discussion in Appendix IV). However, concerns may be somewhat allayed by the expectation that primary schools would be provided as part of the proposed Dalton Barracks scheme, including a school close to the site's southern extent, in proximity to Marcham.

10.3.4 **Core Policy 15a** (Additional Site Allocations for South East Vale) notably provides for -

- 1,000 homes at Harwell Campus – supported given potential to deliver new community infrastructure on-site. **Core Policy 15b** (Harwell Campus Comprehensive Development Framework) references the importance of *“incorporating on-site services and facilities”*; and the Site Development Template (Appendix A of LPP2) lists as a requirement: *“A new primary school will be required on the site. This should be on a 2.2 ha site to allow for future growth.”*
- 400 homes at North West of Grove - would complement the existing committed growth at Wantage and Grove and help to deliver infrastructure; however, whether there would be direct benefits in terms of community infrastructure is not clear. What is clear is that the location of this site, between the Monks Farm and Grove Airfield committed sites, will assist with delivering the North Grove Link Road, and hence will assist with strategic planning for the expansion of Grove.

Commentary on other policies

10.3.5 **Development Policy 8** (Community Services and Facilities) sets out criteria to inform proposals that would involve new provision, or the loss of an existing facility. Proposals involving the loss of an existing facility will need to provide evidence to demonstrate how the facility is no longer economically viable and/or no longer meets a local need. The effect should be to support the protection of existing community services and facilities. Similarly, **Development Policy 9** (Public Houses) sets out policy criteria for proposals that would involve the loss of a public house, recognising public houses as valued local facilities.

10.3.6 Also of relevance here are the retail policies, in particular **Development Policy 12** (Change of Use of Retail Units) which has been updated in response to the Vale of White Horse Retail and Town Centre Uses Study (2017). The Retail and Town Centre Uses Study states that *“saved frontage policies are still required in the VOWH to maintain the appropriate mix of town centres, in order to maintain the vitality and viability of centres and prevent adverse impacts on residential amenity.”* In light of this, Policy 12 specifies an approach for: Primary Shopping Frontages; Secondary Shopping Frontages; Other Town Centre Uses; Faringdon Town Centre; and Local Shopping Centres. The Council supports the change of use from retail to other uses, but recognises the need for a criteria based approach, accounting for a range of potential impacts. For example, the criteria within Development Policy 12b (Secondary Shopping Frontages) requires *“no harm... to the public amenity of the town centre”*; and Development Policy 12c (Other Town Centre Uses) seeks to ensure *“no demonstrable harm... to the living conditions of any neighbouring residents in terms of noise, cooking smells or general disturbance”*. For Primary Shopping Frontages, Development Policy 12a has been updated, since the Preferred Options stage, to further restrict loss of Class A1 uses, albeit recognising that loss of A1 uses can be justified where *“a robust marketing exercise of 12 months demonstrates that the site or premises are not reasonably capable of being used or redeveloped for these uses.”*

- 10.3.7 **Development Policy 13** (Village and Local Shops) seeks to protect existing village and local shops, and supporting text includes support for village and community halls, referencing national policy which is clear on the need to promote the retention and development of local services and community facilities in villages. Supporting text also recognises the need to plan positively for the provision of community facilities and other local services to enhance the sustainability of communities. New provision or improvements to existing facilities will be met through either the Community Infrastructure Levy (CIL), or Section 106 planning obligations.

Appraisal of the plan as a whole

- 10.3.8 The LPP2 spatial strategy performs well, in that development is directed to sites/locations where there should be good potential to support accessibility to services and facilities, and deliver new community facilities. Most notably, it is proposed that the Dalton Barracks scheme should ultimately deliver a new secondary school, and three new primary schools, thereby addressing existing issues of capacity constraint.
- 10.3.9 The community facilities and retail centre focused Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policy 7 (Providing Supporting Infrastructure and Services) and Core Policy 32 (Retail Development and other Main Town Centre Uses).
- 10.3.10 In conclusion, **significant positive effects** are predicted, particularly given support for a new secondary school.

10.4 Movement

Commentary on the spatial strategy

- 10.4.1 As discussed above, **Core Policies 4a, 8a and 15a** allocate sites in accordance with the broad spatial strategy established through LPP1, which has at its heart the need to ensure accessibility, and therefore minimise the need to travel and enable travel by 'sustainable' modes, i.e. walking, cycling and public transport. Oxfordshire County Council - the Local Highways Authority - has reservations regarding the proposed strategy, but is supportive of the proposal to reduce scale of growth at Marcham to a level significantly below that proposed at the Preferred Options (2017) stage. OCC stated through the Preferred Options consultation response that -

“With the exception of Marcham the proposed allocations are broadly located on transport corridors where there is potential for good connectivity by public transport to Oxford and Science Vale employment sites although none are within cycling and walking distance of Oxford - the sites leapfrog the Green Belt or in the case of Dalton Barracks, are located on its southern fringe.

We note that the preferred options do not include options at Botley, Cumnor or North Abingdon-on-Thames which are well related to Oxford and which were RAG rated green through the Growth Board assessment process. Not allocating housing close to the proposed Park and Ride sites at Cumnor and Lodge Hill is a missed opportunity to locate housing where it can take advantage of and support already planned strategic transport infrastructure and Rapid Transit services...

Many of the sites promoted in LPP1 require significant new highway infrastructure. Much of this is currently unfunded. LPP2 should be allocating sites for further growth which can be delivered without additional infrastructure unless such infrastructure can be directly funded by development. This will require sites being relatively close to existing urban areas and employment whereby sustainable modes can be promoted.”

- 10.4.2 Some of OCC’s concerns may still remain; however, it is important to note that progress has been made on infrastructure delivery since the Preferred Options stage (i.e. since OCC’s comments were received). Specifically, the new slips (‘diamond interchange’) at Lodge Hill are now fully funded, following the granting of planning permission for the 950 home North of Abingdon-on-Thames LPP1 allocation site. Furthermore, it is notable that unmet need is met through a combination of Part 1 and Part 2 sites with over 1,600 homes provided on sites North of Abingdon and within Radley Parish; all locations the County Council have acknowledged are suitable for this purpose. Indeed, the Dalton Barracks site is geographically close to the proposed Lodge Hill Public Transport Interchange, is capable of being highly accessible and makes use of previously developed land, thus minimising detrimental impact on the Green Belt.
- 10.4.3 The next matter to consider is the Evaluation of Transport Impacts (ETI) work completed alongside plan making. The ETI report examines the impact of various development options on the highway network, with Option 2 (1,200 at Dalton Barracks, 120 at Marcham, 600 East of Kingston Bagpuize, 120 at East Hanney, 1,000 at Harwell Campus and 400 at North West Grove) representing the option included in the Publication Version of LPP2.
- 10.4.4 The ETI found that between the 2031 Do Minimum scenario and Option 2, overall delay in the district is forecast to increase by 6% in the AM peak and 5% in the PM peak. When mitigation is assumed, the additional growth is forecast to lead to a 5% increase in delay in the AM peak and a 2% improvement in the PM peak when compared to the Do Minimum. Bus service frequency improvements, alongside the provision of a northbound bus lane on the A34 (route safeguarded within the LPP2), are examples of schemes that form part of this mitigation.
- 10.4.5 It is also important to note that a ‘Sustainable Transport Study for the Abingdon to Oxford Corridor’ has been completed, examining a number of sustainable transport options to support development at the LPP1 allocations and the proposed LPP2 allocation sites.³⁵ The study examines potential transport improvements within three main corridors (Abingdon-A34-Oxford; Abingdon-Cumnor-Botley-Oxford; and Abingdon-Dalton Barracks-Fox Lane-Hinksey Hill-Oxford) - see **Table 10.1**, and then goes on to consider which schemes represent the greatest value for money, and hence should be prioritised.

Table 10.1: Potential improvement measures to support proposed allocations

Transport improvement measure		Dalton Barracks	Marcham	Kingston Bagpuize
TM1	Capacity Improvements to Frilford Junction		✓	✓
TM2	Demand responsive traffic lights at Frilford light		✓	✓
TM3	Bus priority signals at Frilford lights		✓	✓
B1	Improve frequency of premium routes	✓		✓
B2	Dalton Barracks to Lodge Hill (Busway)	✓		
B3	Promote cashless payment systems		✓	✓
B4	Support provision of e-tickets	✓	✓	✓
B5	Improved Public Transport Information	✓	✓	✓
B6	Extend SmartZone ticket	✓		
B7	RTI at key bus stops	✓		✓
B8	Real-time tracking (Apps/Bus Stops)	✓	✓	✓

³⁵ Specifically, LPP1 allocations at Didcot (3,350 dwellings), North Abingdon (1,000); Kennington (270), Radley (240) and Kingston Bagpuize (280); and LPP2 proposed allocations at Dalton Barracks (1,200 dwellings during the Plan period and up to 3,500 dwellings in total), Marcham (520) and Kingston Bagpuize (60).

Transport improvement measure		Dalton Barracks	Marcham	Kingston Bagpuize
B9	Bus stop waiting facilities	✓	✓	✓
AT1	Pedestrian footway on Faringdon Road	✓		
AT2	Cycle lanes on Faringdon Road	✓		
AT3	Long Tow Footpath + Cycle Lanes	✓		
AT4	Oxford Road cycle route	✓	✓	
AT5	Improvements to the NCN5	✓		
AT6	Twelve Acre Drive and White's Lane (Cycling)	✓	✓	
AT7	Abingdon to Oxford (via Radley Station) (Cycling)	✓	✓	
AT8	Cumnor Hill (Cycling)	✓		
AT9	Dalton Barracks to Cumnor Hill (Cycling)	✓		
AT10	Enhance Public Rights of Way (Cycling)	✓	✓	✓
AT11	Marcham to Abingdon - Improved Signage		✓	
AT12	Dalton Barracks to Lodge Hill (Cycling)	✓		

The study also considers a range of 'smart mobility' measures, which would generally be supportive of development at all three locations.

10.4.6 With regards to proposed sites –

- Dalton Barracks - is located between the two strategic transport corridors into Oxford (A34 and A420), although the A34 junction at Abingdon-on-Thames (Lodge Hill), with its funded new slips and proposed P&R, is relatively close (c.2km); and Abingdon-on-Thames Town Centre is within easy cycling distance along an existing route. Radley station is also within cycling distance; however, there is low potential to cycle to Oxford.

The suitability of this site, from a transport perspective, very much depends on measures implemented to ensure ease of access to the proposed Lodge Hill P&R; and in this respect it is noted that a requirement to 'provide a direct public transport and cycle connection to the proposed transport interchange at Lodge Hill.' is listed as an infrastructure requirement in the Site Development Template (Appendix A of LPP2). It is noted that the ability to deliver infrastructure upgrade may be dependent on the number of homes delivered on the site. It is **recommended** that the matter of delivering a link to Lodge Hill might be discussed within Core Policy 8b (Dalton Barracks Comprehensive Development Framework) given its strategic importance.

The delivery of the Lodge Hill P&R is another consideration, with OCC striking a note of caution through their Preferred Options (2017) consultation response, stating: "Delivery of an attractive, reliable and frequent park and ride offer at Lodge Hill (and Cumnor) is dependent upon providing bus priority measures not only along the A34 as mentioned in the Part 2 Plan, but also across the wider Oxford area. Without the delivery of both, the desirability and attractiveness of the park and ride and Dalton Barracks as a sustainable location would be undermined." [emphasis added]. N.B. the Public Transport interchange at Lodge Hill is a commitment in the adopted Local Transport Plan and emerging Oxfordshire Infrastructure Plan (OXIS);

- Harwell Campus - OCC were broadly supportive, through the 2017 Preferred Options consultation, including on the basis that: the scheme would “*provide homes close to jobs, supporting growth of this nationally and locally important employment site*”; and residential development will lead to demand for bus services throughout the day and “*contribute to making 4 buses per hour between Oxford and Harwell commercially viable in the long term.*” Four buses per hour would equate to an excellent service; however, it is noted that the site is beyond 400m of the existing route. The site also benefits from direct access to National Cycle Network route 544 passes through the site, linking to Didcot and Wantage (improvements required). Finally, it is noted that Harwell Campus performs well as a location for major growth within the Science Vale, from a perspective of wishing to avoid worsened traffic congestion at the A34/A4130 Milton Interchange, and on the A34 itself. This is because the new north-facing slips at the Chilton Interchange will provide an alternative point of access onto the A34; and the new Harwell Link Road will provide an alternative route to Didcot.³⁶
- Kingston Bagpuize with Southmoor - is a larger village 10 miles from Oxford, however, the village is located on a strategic transport corridor (A420) and has a premium bus service (3/hour). The East of Kingston Bagpuize with Southmoor site is somewhat distant from the village centre, but should have good access to the bus route and can provide a new local centre on site. It would also be expected to deliver a new link road between the A420 and A415, thereby alleviating the current problem of traffic along the A415 through the village. Through the Preferred Options (2017) consultation, OCC stated: “*East of Kingston Bagpuize with Southmoor was RAG rated red mainly due to its distance from Oxford and a lack of current or proposed sustainable transport options. However, development here could take advantage of and help strengthen the business case for accelerating investment in remote Park and Ride/Rapid Transit services and improved bus services on the A420 corridor.*”
- Grove - new homes at North West Grove would be at the very western extent of the Science Vale, but Grove is ‘service centre’ in the settlement hierarchy and nearby Wantage is a ‘market town’ (indeed Wantage and Grove are the only higher order settlements in the South East Vale Sub Area). Furthermore, there is considerable committed growth in the area, which is leading to significant enhancements to transport infrastructure and bus services Milton Park and Oxford; and additional growth at Grove supports the case for a new train station (and indeed this site could potentially deliver a new station, albeit this is uncertain). Perhaps most significantly, this site would enable the completion of a link road, which will assist in ensuring successful strategic expansion of Grove. Comments received from OCC, through the Preferred Options (2017) consultation, included:
 - “*... would take advantage of planned investment in the Wantage Eastern Link Road and the bus service enhancements planned to support Grove Airfield and other developments...*”
 - *The case for the station and even further bus service improvements would be strengthened if there is significant housing growth post 2031.*
 - *It’s impossible to know at this stage what the level of service will be through the various developments in Grove and Wantage... Which buses will serve which developments will depend on a combination of what is possible in terms of development build out and bus operator’s choice... [However] it’s highly unlikely that a route on Main Street could also serve North West of Grove without making the route unattractive to those not using it from North West of Grove. It could be that the parts of the North West Grove site are too remote from a bus service and that consideration should be given to other uses than residential on those parts of the site.*”

³⁶ The Harwell Link will run from the B4493 to the A417. It is part of strategy to provide a route from housing development west of Didcot at Great Western Park and Valley Park to Harwell Oxford Campus and support delivery of planned housing growth. An aim is to relieve Harwell village of through traffic by 250 trips per hour, and also relieve congestion elsewhere on the network.

- East Hanney - is relatively remote from Oxford and the Science Vale, but is located on a strategic transport corridor (A338), along which there are set to be enhancements to the bus service given committed growth at Wantage and Grove. The bus stop is at the northern end of the village, in proximity to the two sites.
- Marcham - is located on the A415 – an east-west corridor linking to Abingdon-on-Thames, as opposed to a strategic corridor linking to Oxford and the science Vale to the south (albeit an A34 junction is under 2km distance). Housing growth to the south east will be in proximity to the village centre, and have access directly onto the A415. There may be potential for bus service enhancements, given growth at Kingston Bagpuize with Southmoor. The site is within an easy cycling distance of Abingdon-on-Thames and benefits from a shared pedestrian/cycle path; however, a barrier to easy cycling is difficulty crossing Marcham Interchange ('low level' improvements are required, according to the Sustainable Transport Study discussed above). Traffic passing through the village would be a concern, including given the existing AQMA. There could be the opportunity in the future for a bypass, and it is noted that the extent of the proposed site allocation has been reduced in order to ensure that route options are not foreclosed.

- 10.4.7 **Core Policy 8b** (Dalton Barracks Comprehensive Development Framework) establishes that the new housing will reflect 'Garden Village' principles, which is deemed appropriate given the scale and location of the site. The Town and Country Planning Association (TCPA) have developed nine Garden Village principles including: *“strong cultural, recreational and shopping facilities in walkable, vibrant, social neighbourhoods”*; and *“integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport.”*
- 10.4.8 **Core Policies 12a** (Safeguarding of Land for Strategic Highway Improvements within the Abingdon-on-Thames and Oxford Fringe Sub Area) seeks to safeguard land for strategic highway improvements. There is a focus on the A34, with provision for upgrading the A34 interchange at Lodge Hill, providing for two new Park and Ride sites for accessing Oxford (at Cumnor and Lodge Hill, both close to Dalton Barracks) and the potential for a north-bound bus lane between Lodge Hill and the Hinksey interchanges; the latter two schemes being particularly important to support growth at Dalton Barracks. Finally, land is safeguarded for the possible future provision of a Southern Marcham Bypass, with a view to addressing the Marcham Air Quality Management Area (AQMA). There will be in-combination benefits with LPP1, which safeguards land for delivery of a South Abingdon-on-Thames Bypass; a diamond interchange at the A34 Lodge Hill Junction, and improvements to Frilford Lights.
- 10.4.9 **Core Policies 18a** (Safeguarding of Land for Strategic Highway Improvements within the South-East Vale Sub Area) seeks to safeguard land for strategic highway improvements. In addition to land safeguarded for identified transport schemes set out in LPP1, CP18a safeguards land for: dedicated access to/from the A34 to Milton Park; and provision for a new pedestrian and cycle bridge across the A34 at Milton Heights.

[Commentary on other policies](#)

- 10.4.10 LPP2 transport policies set out more detailed Development Management policies on a number of specific issues, recognising that LPP1 provides a comprehensive policy framework. LPP2 policies provide additional guidance to ensure proposals adequately evaluate their transport impacts and provide safe and suitable access; and there are also two specific policies addressing local issues relating to car parking and lorry services. The LPP2 transport focused policies are as follows:

- **Development Policy 15** (Access) sets out requirements for suitable and safe access within development proposals. It builds on Core Policy 37 (Design and Local Distinctiveness), which sets out twelve criteria that all development proposals should comply with to ensure they are comprehensively planned, delivering connectivity and the safe movement / access for all users. Since the Preferred Options (2017) stage the policy has been updated to remove the following from its listed criteria: “[development will need to demonstrate that] the road network can accommodate the traffic arising from the development without causing safety and/or congestion issues”. Instead, there is an increased focus on supporting non-car modes of travel.
- **Development Policy 16** (Transport Assessments and Travel Plans) provides additional guidance on the information required within Transport Assessments or Statements and Travel Plans, building on Core Policy 35 (Promoting Public Transport, Cycling and Walking). Ensuring that proposals for development are accompanied by appropriate supporting information helps to support a comprehensive approach to their assessment and the identification of appropriate mitigation measures, should they be necessary. Since the Preferred Options (2017) stage, supporting text has been updated with a new reference to air quality. This is particularly important given the recent publication of Defra’s UK Air Quality Plan for tackling nitrogen dioxide, which states that: “It is for local authorities to develop innovative local plans that will achieve statutory NO₂ limit values within the shortest time possible”.³⁷
- **Development Policy 17** (Public Car Parking in Settlements) seeks to protect and improve the quality of car parks in appropriate settlements, building on the Design Guide Supplementary Planning Document, and Oxfordshire County Council’s Parking Standards. In a rural district like the Vale, it is important that high quality car parking continues to be made available, albeit there is a degree of tension with ‘sustainable transport’ objectives.
- **Development Policy 18** (Lorries and Roadside Services) seeks to enable and focus lorry and roadside services at appropriate locations along the two main routes: the A34 and A420. There is a road safety aspect to this.

10.4.11 A number of other Development Policies are also supportive of ‘movement’ objectives, including: **Development Policies 12 -14**, which relate to retail (see discussion above, under ‘Services and Facilities’, and below under ‘Economy’); and **Development Policies 29 – 31**, which are supportive of green infrastructure objectives (see discussion under ‘Health’ and ‘Biodiversity’).

Appraisal of the plan as a whole

10.4.12 The proposed package of site allocations at this Publication stage is an improvement on that proposed at the Preferred Options stage, as there is a significantly reduced focus of growth at Marcham. All sites are broadly supported from a transport perspective (even the small site at South East Marcham, recognising that it relates well to the village centre and the A415, with its cycle route to Abingdon-on-Thames); however, it remains the case that a spatial strategy that is preferable, from a transport perspective, can be envisaged. Specifically, such a strategy would involve significant release of land from the Green Belt, in close proximity to Oxford.

10.4.13 The ‘transport’ focused Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policies 33-36. A number of other policies also have positive implications for ‘movement’ objectives, including those that relate to retail / town centres, and those that relate to green infrastructure.

10.4.14 In **conclusion**, whilst the Publication Plan performs well, it is not possible to predict significant positive effects, recognising that Evaluation of Transport Impacts (ETI) serves to indicate that traffic congestion will worsen, in comparison to baseline (which includes LPP1 allocations). Mitigation has been identified to minimise the impact.

³⁷ Defra (2017) Draft UK Air Quality Plan for tackling nitrogen dioxide. Available [online]: <https://consult.defra.gov.uk/airquality/air-quality-plan-for-tackling-nitrogen-dioxide/>

10.5 Health

Commentary on the spatial strategy

- 10.5.1 Health determinants / issues are wide ranging. The ageing population gives rise to a number of health issues; and other health issues relate to provision of health facilities. These matters relate closely to the discussion above, under 'Housing' and 'Services/facilities'. There is also a need to consider environmental health constraints affecting sites; however, environmental health is given stand-alone consideration below, under 'Pollution'.
- 10.5.2 Another health determinant is access to open space, greenspace and outdoor recreation facilities. In this respect, development at Dalton Barracks - **Core Policy 8a** - is supported, given the opportunity to deliver a Country Park (to provide 'suitable alternative natural greenspace' (SANG) to ensure that the effect of housing is not to increase recreational pressure on nearby Cothill Fen Special Area of Conservation, SAC). **Core Policy 8b** (Dalton Barracks Comprehensive Development Framework) establishes that the new housing will reflect 'Garden Village' principles, which is deemed appropriate given the scale and location of the site. The Town and Country Planning Association (TCPA) have developed nine Garden Village principles including: *"beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food"* and *"development that enhances the natural environment, providing a comprehensive Green Infrastructure network and net biodiversity gains..."*
- 10.5.3 Marcham is one location where there is an identified deficit of accessible natural greenspace, as established by the Council's Green Infrastructure Strategy, and it is noted that there are no public footpaths in the vicinity of the site.

Commentary on other policies

- 10.5.4 Focusing on Development Policies with a bearing on access to open space and support for active lifestyles, the following are of particular note -
- **Development Policy 29** (Watercourses) seeks to ensure that watercourses are positively integrated in the design of new development from the outset. By giving consideration to watercourses in the design process from the start, it is possible to make the most of attractive riverside settings, and maximise green infrastructure and ecosystem service benefits.
 - **Development Policy 30** (Protection of Public Rights of Way, National Trails and Open Access Areas) seeks to support improvements to the Public Rights of Way Network and protect National Trails. Developers are encouraged to consider how access to rights of way can be improved for all users including provision for disabled access. It is noted that residents at the proposed Harwell Campus site (**Core Policies 15a and 15b**) would have good access to the North Wessex Downs AONB, via the Icknield Way long distance path (on-site), and the nearby Ridgeway National Trail. Since the Preferred Options (2017) stage, supporting text has been updated to reference the value of Open Access Areas, which are identified in the Countryside and Rights of Way Act 2000 as areas of open country and/or common land.
 - **Development Policy 31** (The Wilts and Berks Canal) seeks to support the long-term vision for the restoration of the Wilts and Berks Canal, which is an important historic feature in the landscape, linking the River Thames with the Kennet and Avon Canal. Once restored, the canal could form a key element of the green infrastructure network. The Council will support appropriate measure to improve access to the Canal.
 - **Development Policy 32** (Open Space) sets out measures and local standards for the provision of open space in association with new developments and the protection of existing open space. A combined standard for amenity green space, parks and gardens will apply for new developments to ensure multi-functional green space is incorporated and designed appropriately. New residential development schemes should comprise 15% open space.

- **Development Policy 33** (Leisure and Sports Facilities) sets out measures and local standards for the provision of leisure and sport facilities in association with new developments and the protection of existing leisure and sports facilities. Access to both indoor and outdoor leisure and sports facilities is clearly important to allow local communities and residents to participate in sporting activities and contribute towards their health and well-being. Developers will be expected to refer to the Council's Priority Action Plan,³⁸ which identifies future priorities for sport and leisure facilities in the Vale. The Council will also expect developers to consider how the provision of sports and leisure facilities can be coordinated locally, where more than one development is taking place.

Appraisal of the plan as a whole

- 10.5.5 The spatial strategy performs well, in the sense that allocation of Dalton Barracks should lead to delivery of a new Country Park.
- 10.5.6 The Development Policies perform well, and should appropriately compliment the Core Policies, which seeks to provide for good health through Core Policy 37 (Design and Local Distinctiveness), Core Policy 45 (Green Infrastructure) and the sustainable transport policies.
- 10.5.7 In **conclusion**, the Proposed Submission Plan performs well; however, it is not clear that there is the potential to conclude significant positive effects, recognising the wide ranging nature of health determinants.

10.6 Inequality and exclusion

Commentary on the spatial strategy

- 10.6.1 There is little potential for the LPP2 spatial strategy to have a bearing on the achievement of regeneration objectives. Areas of relative deprivation are found along the southern edge of Oxford, and within the northern part of Didcot, but none of the proposed allocations are adjacent, or close enough so that the effect of development could be to support regeneration. Central Botley is another regeneration priority, with planning permission in place for a major town centre redevelopment; however, again it is not likely that LPP2 proposals will have a bearing..
- 10.6.2 Affordable housing is another important consideration. There is good confidence regarding the ability to provide for affordable housing needs arising from Vale of White Horse; however, there is also a need to factor in Oxford's unmet affordable housing needs. The Council is engaging with Oxford City Council regarding this.
- 10.6.3 One other consideration is the need to support village vitality, and potentially help to address or avoid any issues of 'rural deprivation' in the Western Vale; however, it is not clear that the decision not to allocate sites in the Western Vale is a draw-back of the strategy. Faringdon, which is the only market town in the Western Vale, is one rural settlement with a degree of relative deprivation (it is third most deprived Lower Super Output Area in the District, out of 76); however, the town is allocated 950 homes through LPP1 across four larger sites.

³⁸ The Priority Action Plan is set out in the Council's up to date Playing Pitch Study and Leisure and Sports Facilities Study.

Commentary on other policies

- 10.6.4 A number of the Development Policies discussed above as performing well in terms of 'housing', 'services/facilities' and 'health' objectives could also have the effect of addressing any issues of inequality and exclusion that existing within communities. Perhaps most notably, **Development Policy 2** (Space Standards) seeks to ensure internal space of housing is delivered to an appropriate standard to reflect the needs of the community, including the needs of older people and the disabled. Also, **Development Policy 6** (Rural Workers' Dwellings) sets out the Council's approach to enabling rural workers' dwellings to support rural businesses. Rural housing is important from a perspective of wishing to maintain the vitality of rural settlements, and in turn avoid issues of rural deprivation.

Appraisal of the plan as a whole

- 10.6.5 The spatial strategy has few implications for the achievement of 'inequality and exclusion objectives', with affordable housing provision for Oxford being a consideration. However, the Development Policies will play an important role in this respect, in particular through their support for addressing specialist housing needs.
- 10.6.6 In **conclusion**, the Publication Plan performs well but significant effects are not predicted.

10.7 Economy

Commentary on the spatial strategy

- 10.7.1 Meeting housing needs within Oxfordshire is important from an economic growth perspective, as is the spatial distribution of growth. The Oxfordshire LEP's Strategic Economic Plan (SEP) states: *"We will maintain the principal spatial focus on Oxfordshire's Knowledge Spine – from Bicester in the north through Oxford to Science Vale in the south – as the main location for housing and employment growth."* A key issue relates to supporting strategic growth within the Science Vale, and as such the proposal to allocate additional sites for 1,400 dwellings within the South-East Vale Sub Area – **Core Policy 15a** - is supported. In total, housing growth within Science Vale envisaged through LPP1, LPP2 and the Didcot Garden Town Masterplan amounts to -
- 6,300 homes for Didcot;
 - 4,885 homes for Wantage and Grove;
 - 3,950 homes at Harwell and Milton parishes;
 - 220 homes for Sutton Courtney; and
 - provision of 16,000 new jobs by 2031.

10.7.2 Of particular note is the proposal to deliver around 1,000 dwellings at Harwell Campus - **Core Policies 15a and 15b**, with both housing and future employment development brought forward in line with a comprehensive development framework. The development of a new neighbourhood at the Campus offers the opportunity to create a purpose-built environment, tailored towards the housing needs of the Campus. This should help Harwell Campus to achieve its full potential, evolving from a Science and Innovation Park, to a world class campus environment, or 'Innovation Village'. There would be accommodation for both permanent and transient employees, fostering interconnectivity between the different individuals and organisations, and in turn engendering cooperation and cross-pollination of ideas. A survey of existing Campus organisations, undertaken by CBRE for the Harwell Campus Partnership, has shown that in addition to business sector clustering, there is predisposition towards social / community clustering among the Campus workforce. The CBRE survey equally revealed that the existing Campus organisations view accommodation costs locally and the lack of flexible (short-term) accommodation as a negative factor that is affecting their ability to attract qualified staff. Housing will be at the expense of land that could otherwise be developed for employment – and indeed land designated at an Enterprise Zone - however, it is anticipated that the Campus should still be able to accommodate at least 5,400 net additional jobs in the plan period up to 2031, as well as potentially further jobs beyond 2031, as ongoing decommissioning of the 'licensed site' takes place. Certain consultees questioned the loss of Enterprise Zone to housing development, including on the basis that there is a need for sites suited to 'Big Science Occupiers', and on the basis of OXLEP's update to the Strategy Economic Plan (2017) highlighting that: *"since 2011, employment growth in Oxfordshire has been much faster than was expected through the forecasts used as the basis for the SHMA."* However, the development of an 'Innovation Village' is strongly supported by Oxfordshire Local Enterprise Partnership (LEP), is considered, by both OXLEP and the Campus to be essential to unlock the sites economic potential,³⁹ and the site itself is sufficiently large to support projected employment growth up to 2031 and beyond, including for Big Science.

Another important factor to consider is that Harwell Campus performs best, out of the Science Vale growth options, in respect of the objective to minimise further traffic congestion. See further discussion under 'Transport'.

10.7.3 **Core Policy 8b** (Dalton Barracks Comprehensive Development Framework) establishes that the new housing will reflect 'Garden Village' principles, which is deemed appropriate given the scale and location of the site. In accordance with Garden Village principles, the option of allocating some employment land will be explored.

[Commentary on other policies](#)

10.7.4 The following employment focused Development Management Policies are proposed -

- **Development Policy 9** (Ancillary Uses on Key Employment Sites) seeks to support the provision of ancillary uses on existing employment land. The provision of facilities ancillary to the main business uses on large employment sites can support their employment function; and provision is particularly important at some of the Vale's most significant employment sites, such as the Enterprise Zone sites at Milton Park and Harwell Campus. However, it is important that any ancillary uses are appropriate to support the main employment uses of the sites. The provision of larger scale retailing, such as food superstores and non-food retail warehouses, for example, could prejudice the availability of land for other business uses.

³⁹ A Statement of Common Ground is being prepared between the parties

- **Development Policy 10** (Community Employment Plans) encourages a more localised approach to recruitment, associated with new development. The policy states: “All new developments should consider how opportunities for local employment, apprenticeships and training can be created and seek to maximize the opportunities for local sourcing and local produce, suppliers and services, during both construction and operation. The Council may require the submission of a site-specific Community Employment Plan (CEP) for the construction and operation of major development sites, using a planning condition, legal agreement, or where this is not possible, a financial contribution.”
- **Development Policy 11** (Rural Diversification and Equestrian Developments) supports proposals for rural diversification and new equestrian uses and buildings in the countryside. The policy sets out guidance to support and promote proposals for rural diversification where they are ancillary to the main use of the site, or relate to the existing enterprise, and are appropriate within the landscape.

10.7.5 Also of relevance here are the retail policies, in particular **Development Policy 12** (Change of Use of Retail Units) which has been updated in response to the Vale of White Horse Retail and Town Centre Uses Study (2017). The Retail and Town Centre Uses Study states that *“saved frontage policies are still required in the VOWH to maintain the appropriate mix of town centres, in order to maintain the vitality and viability of centres and prevent adverse impacts on residential amenity.”* In light of this, Policy 12 specifies an approach for: Primary Shopping Frontages; Secondary Shopping Frontages; Other Town Centre Uses; Faringdon Town Centre; and Local Shopping Centres. The Council supports the change of use from retail to other uses, but recognises the need for a criteria based approach, accounting for a range of potential impacts. For example, the criteria within Development Policy 12b (Secondary Shopping Frontages) requires *“no harm... to the public amenity of the town centre”*; and Development Policy 12c (Other Town Centre Uses) seeks to ensure *“no demonstrable harm... to the living conditions of any neighbouring residents in terms of noise, cooking smells or general disturbance”*. For Primary Shopping Frontages, Development Policy 12a has been updated, since the Preferred Options stage, to further restrict loss of Class A1 uses, albeit recognising that loss of A1 uses can be justified where *“a robust marketing exercise of 12 months demonstrates that the site or premises are not reasonably capable of being used or redeveloped for these uses.”*

Appraisal of the plan as a whole

10.7.6 The LPP2 spatial strategy performs well, given a focus of housing growth in the Science Vale, and at Harwell Campus in particular (albeit at the expense of some employment land. It may transpire that some small scale employment uses can be delivered at the Dalton Barracks site.

10.7.7 The ‘employment’ focused Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policies 28-32, which cover: Change of Use; Further and Higher Education; Development to Support the Visitor Economy; and New Development on Unallocated Sites and for Retail Development and other Main Town Centre Uses.

10.7.8 In **conclusion**, the Publication Plan is predicted to result in **significant positive effects**.

10.8 Natural environment

Commentary on the spatial strategy

10.8.1 A primary consideration is the potential for sites – **Core Policies 4a, 8a and 15a** – to impact on Cothill Fen Special Area of Conservation (SAC) or Oxford Meadows SAC, both of which are of international importance. The potential for impacts has been explored through a Habitats Regulations Assessment (HRA, 2017), the conclusions of which are presented within **Box 10.1**.

- 10.8.2 In terms of wider, non-SAC related biodiversity issues, the proposed sites perform as follows -
- Dalton Barracks – In addition to Cothill Fen SAC (see Box 10.1), Dry Sandford Pit SSSI is adjacent (albeit away from the likely development area), and Barrow Farm Fen SSSI is a short distance away. Also, Gozzards Ford Fen Local Wildlife Site (LWS) is adjacent.
 - Harwell Campus - contains numerous mature trees (albeit no Tree Preservation Orders) and certain areas – notably the southwest – comprise deciduous woodland priority habitat.
 - East of Kingston Bagpuize with Southmoor - Appleton Lower Common SSSI and Frilford Heath, Ponds and Fens SSSI are within c.2km of the site, and the adjacent Millennium Green is associated with a population of Great Crested Newts.
 - North West of Grove, East Hanney (both sites) and South East of Marcham – all four proposed sites appear relatively unconstrained.

Box 10.1: Conclusions of the HRA (abridged)

- New development at Dalton Barracks or South East of Marcham should be required to provide details, in line with LPP1 CP45 (Green Infrastructure), of how the project will deliver accessible natural greenspace, or where this is not possible, how it will contribute to “the delivery of new Green Infrastructure and/or the improvement of existing assets”. Such greenspace will provide added confidence that residents of the development can be recreationally self-sufficient without needing to place an undue burden on the few parts of Cothill Fen SAC that are potentially vulnerable to a significant increase in recreation. Given the proximity of the Dalton Barracks site to the SAC it will also be a useful precaution that any green infrastructure delivery or contribution fulfils the criterion of “at least one accessible 20 hectare site within two kilometres of home” and that this be in addition to Cothill Fen SAC. Core Policy 8b does provide details of project-specific measures that will aid in mitigating any potential effects of development at Dalton barracks on the SAC, including outline provision for a Country Park of 80 hectares. BBOWT have expressed a willingness to assist in the masterplanning process, and it is recommended that partnership working should take place in order to provide confidence that the delivery of the allocation is able to avoid likely significant effects on Cothill Fen SAC through increased recreational pressure.
- It is considered likely that housing across Oxfordshire will result in an increase in nitrogen deposition and NO_x concentration within a small part of the Oxford Meadows SAC as it lies adjacent to the A34 and A40. The Oxfordshire authorities are undertaking strategic studies to investigate transport scenarios and air quality effects within the SAC adjacent to the A34 and A40, which will in turn inform specific mitigation interventions. As a precaution, until that study is completed, it has been assumed in this analysis that an air quality effect may exist and appropriate plan-level measures to address the issue (as accepted for other local authorities) have been identified and are reflected in the Local Plan Part 1 which would enable a conclusion of no adverse effect to be reached (as has been the case in the Thames Basin Heaths area) for the allocations and policies contained within the Local Plan Part 2.
- It is concluded that, given the incorporation of the above recommendations and subject to development of strategic air quality studies relating to Oxford Meadows SAC, the LPP2 will not lead to likely significant effects on European sites either alone, or in combination with other plans and projects.

- 10.8.3 **Core Policy 8b** (Dalton Barracks Comprehensive Development Framework) establishes that the new housing will meet exemplar design standards and following ‘Garden Village’ principles, which is deemed appropriate given the scale and location of the site. The Town and Country Planning Association (TCPA) have developed nine Garden Village principles including: “*development that enhances the natural environment, providing a comprehensive Green Infrastructure network and net biodiversity gains...*” Furthermore, the policy requires “*necessary contributions to a comprehensive landscape plan for the whole site, including the provision of a Country Park of at least 80 hectares.*” This commitment is important, given the site’s potential capacity. There would be a need for further HRA work at the planning application stage.

Commentary on other policies

- 10.8.4 There are no dedicated biodiversity focused Development Policies proposed, recognising that LPP1 sets out to protect and enhance biodiversity through Core Policy 46, and seeks to ensure that new development contributes to green infrastructure through Core Policy 45.
- 10.8.5 However, biodiversity / green infrastructure considerations are a component of the following –
- **Development Policy 29** (Watercourses) aims to control development on land that contains or is adjacent to a watercourse where there would be a detrimental impact on the function of the watercourse, or associated biodiversity, unless the detrimental impact can be appropriately mitigated. The Policy requires buffer zones to be provided on both sides of a watercourse to create a corridor of land and water favourable to biodiversity, and indicates that proposals which involve culverting a significant section of a watercourse are unlikely to be considered acceptable.
 - **Development Policy 31** (The Wilts and Berks Canal) seeks to support the long-term vision for the restoration of the Wilts and Berks Canal. The policy also ensures that proposals for restoring the canal demonstrate that the potential impacts of restoration on the existing wildlife and natural environment have been fully considered, both locally and as part of the whole restoration scheme. The policy ensures that invasive non-native species have been considered in terms of their presence in existing reaches of the canal, and how their spread, through any newly connected reaches of the canal network, will be prevented.

Appraisal of the plan as a whole

- 10.8.6 The spatial strategy performs well in that there is a focus of growth in the South East Vale, where there are fewer biodiversity constraints; however, there are a number of site specific issues that will require further consideration. Most importantly, the HRA has been able to conclude that LPP2 will not lead to likely significant effects on Cothill Fen SAC or Oxford Meadows SAC, either alone or in combination with other plans and projects.
- 10.8.7 There are no dedicated biodiversity focused Development Policies proposed, recognising that LPP1 sets out to protect and enhance biodiversity through Core Policies 45 and 46; however, proposed policies on 'Watercourses' and 'The Wilts and Berks Canal' are supportive of biodiversity and green infrastructure objectives.
- 10.8.8 In **conclusion**, the Publication Plan performs well, although effects are mixed. There will be a need for mitigation measures, and further detailed work at the planning application stage, most notably at Dalton Barracks. Significant negative effects are not predicted.

10.9 Heritage

Commentary on the spatial strategy

- 10.9.1 Several of the sites proposed for allocation - **Core Policies 4a, 8a and 15a** - are subject to strategic heritage constraints.
- East of Kingston Bagpuize with Southmoor partially is adjacent to the Kingston Bagpuize with Southmoor Conservation Area, and would be highly visible on the approach to Kingston Bagpuize with Southmoor House (grade II*).
 - Dalton Barracks is adjacent to the village of Shippon, which has a historic centre, with listed buildings and a rural setting, although there is no designated conservation area; and also given that the airfield itself has a heritage value.
 - North of East Hanney – abuts the East Hanney Conservation Area, but is understood to be relatively contained in the landscape, and hence may contribute little to its setting.
 - South East Marcham falls within an archaeological notification area ('Prehistoric/Roman field system and Bronze Age arrowhead').

Commentary on other policies

- 10.9.2 Several heritage focused Development Policies are proposed -
- **Development Policy 35** (Heritage Assets) sets out the Council's approach to conserve and enhance heritage assets in the Vale, in the context of the social, environmental, cultural and economic significance of the assets. The supporting text explains that the Oxfordshire Historic Landscape Characterisation (HLC) prepared by Oxfordshire County Council and Historic England will be a material consideration in the determination of planning applications. In addition to the HLC, developers should refer to the HER, the National Heritage List for England, and where relevant, Conservation Area Character Appraisals. Development proposals should also take into account the principles set out in the Council's Design Guide SPD. It is **recommended** that consideration is given to historic routes, which are understood to be a feature locally, including pre-historic tracks such as the Ridgeway, Roman roads, medieval coffin ways, salt roads, droveways and later turnpike roads. Further context on local heritage assets would contribute towards providing a less generic heritage policy, focusing on key heritage issues and opportunities for the Vale.
 - **Development Policy 35** (Conservation Areas) sets out measures to ensure Conservation Areas are protected from inappropriate development. Proposals located within a designated Conservation Area will need to satisfy a number of criteria to show that the special interest of the asset and its setting will be conserved. Importantly, there is a reference to 'local character', and a requirement to *"take into account important views within, into or out of the conservation area..."*
 - **Development Policy 36** (Listed Buildings) sets out the Council's measures for assessing development proposals that affect a Listed Building or its setting. The aim is to provide guidance to ensure applicants demonstrate that proposals affecting a Listed Building would enhance their significance, whilst respecting the existing local character and distinctiveness. Proposals involving the partial or total demolition of a listed building will only be permitted in exceptional circumstances, in accordance with national policy (NPPF, para 132).
 - **Development Policy 37** (Archaeology) sets out the Council's approach to the conservation and enhancement of Scheduled Monuments, nationally important archaeological remains and other non-designated archaeological sites. Proposals will need to demonstrate that development would not have a detrimental impact on the site and/or its setting. An assessment should be undertaken that refers to records such as the Oxfordshire Historic Landscape Characterisation (HLC) and Oxfordshire County Council's Historic Environment Record (HER) to determine whether a site has or is likely to contain known archaeological remains. Depending on the outcome of this assessment, developers may be required to submit an appropriate archaeological desk-top based assessment or a field evaluation conducted by a suitably qualified archaeological organisation.
- 10.9.3 Other policies with positive implications for the achievement of heritage objectives include **Development Policy 28** (Settlement Character and Gaps) which seeks to maintain physical separation between settlements; and **Development Policy 31** (The Wilts and Berks Canal), which seeks to support the long-term vision for the restoration of the Wilts and Berks Canal. It is noted that restoration will follow the historic route of the canal as shown on the Adopted Policies Map.

Appraisal of the plan as a whole

- 10.9.4 The spatial strategy performs well, in that growth is focused primarily at locations that are relatively unconstrained; however, a large scheme to the east of Kingston Bagpuize with Southmoor gives rise to some concerns, given proximity to the conservation area.
- 10.9.5 The heritage focused Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policy 39 (The Historic Environment).

- 10.9.6 In **conclusion**, the Publication Plan performs well, although effects are mixed. There will be good potential for mitigation through masterplanning, design and landscaping measures, and on this basis significant negative effects are not likely. Historic England responded to the Preferred Options consultation (at which time all of the current proposed allocations were also proposed) stating no objection to the plan, given the suite of general and site specific policy requirements proposed.

10.10 Landscape

Commentary on the spatial strategy

- 10.10.1 Careful account of landscape capacity has informed the site selection process, and as such most of the proposed allocations - **Core Policies 4a, 8a and 15a** - are relatively unconstrained. Nonetheless, there are some site-specific issues, as follows -

- Dalton Barracks - is washed over by the Green Belt; however, it has the characteristics of a military installation, with security fencing, and built area contains large military buildings and hangars. The following are notable conclusions reached by the Green Belt Study (2017) –
 - *“If the whole site were to be developed, the separation between Abingdon and Wootton would substantially reduce, which would subsequently affect the extent of open land between Abingdon and Botley (Oxford).”*
 - *“The airfield is an open and expansive space with few physical features that could provide a robust Green Belt boundary. Should the site come forward for development, the Green Belt boundary should relate to the extent of settlement proposed within a comprehensive masterplan...”*

N.B. an **earlier iteration** of this appraisal recommended that further work should be completed, alongside masterplanning, to define a defensible / permanent Green Belt boundary. Subsequently further work has been undertaken, which amongst other things has resulted in an area of land at the eastern extent being removed from the site, in order to maintain a landscape gap between the site and the Whitecross Rd (B4071), along which are a number of homes, and also ensure a landscape gap between the site and Wootton. Additional detail will be provided in an SPD.

- East Hanney – the village falls within an open ‘vale’ landscape; however, both sites are relatively contained. In particular, the site to the northeast will ‘round-off’ the settlement edge, i.e. will not result in the settlement edge extending further into the countryside.
 - Harwell Campus - falls within the AONB; however, this is a mainly brownfield site and the entire site is a current employment allocation; hence there is good potential for redevelopment without breaching landscape capacity, also recognising that further detailed masterplanning work is programmed. See further discussion, below.
 - East of Kingston Bagpuize with Southmoor - the site contributes to the approach to the village, but has ‘high’ capacity for development, from a landscape perspective.
- 10.10.2 **Core Policy 8b** (Dalton Barracks Comprehensive Development Framework) establishes that the new housing will meet exemplar design standards and follow ‘Garden Village’ principles, which is deemed appropriate given the scale and location of the site. The Town and Country Planning Association (TCPA) have developed nine Garden Village principles including: *“beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.”*

10.10.3 **Core Policy 15b** (Harwell Campus Comprehensive Development Framework) sets out to ensure that housing and future employment development is brought forward in line with a comprehensive development framework. This is important not only to ensure that new development supports the vision for the Campus, but to ensure development is fully integrated with the Campus and reflects its location within the North Wessex Downs AONB and is developed to ensure that any further strategic infrastructure improvements are delivered in parallel. A comprehensive development framework will be adopted as a Supplementary Planning Document (SPD) and will cover: landscape and visual issues, including development of a 'heights parameters'; exemplar design; light pollution; and travel plans.

[Commentary on other policies](#)

10.10.4 **Development Policy 27** (Settlement Character and Gaps) seeks to protect against the loss of physical or visual separation between settlements, taking account of the Landscape Character Assessment. Additionally, development proposals will be subject to a set of criteria to ensure there is no loss of environmental or historic assets that contribute to local identity. This policy will compliment LPP1 Core Policy 44 (Landscape), which sets out to protect, and where possible enhance, the important landscape settings of settlements.

10.10.5 **Development Policies 5, 6 and 34** deal with specific types of development in the open countryside. Similarly, **Development Policy 11** (Rural Diversification and Equestrian Developments) supports proposals for rural diversification and new equestrian uses and buildings in the countryside, subject to criteria, including landscape related.

10.10.6 Other policies with landscape (or townscape) implications are those that deal with amenity and the public realm, including –

- **Development Policy 19** (Public Art), which seeks to support or encourage the promotion of public art in new development;
- **Development Policy 19** (External Lighting), which sets out measures to ensure that development involving external lighting is appropriately designed and located (in particular within the AONB, where development should seek to avoid and reduce light pollution, including control of lighting schemes that threaten the integrity of the night skies);
- **Development Policy 21** (Advertisements), which sets out measures to ensure that development involving advertisements is appropriately designed and located; and
- **Development Policy 22** (Impact of Development on Amenity), which sets out measures to minimise the impact of development on neighbouring amenity.

[Appraisal of the plan as a whole](#)

10.10.7 The spatial strategy performs well in that careful account of landscape capacity has informed the site selection process, and as such the majority of proposed allocations are relatively unconstrained in this respect. Nonetheless, there are some site-specific issues, including at Dalton Barracks and Harwell Campus. The latter lies within the North Wessex Downs AONB (albeit the site is an existing employment allocation, and the potential to avoid impacts through careful masterplanning and design has been established).

10.10.8 The Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policy 37 (Design and Local Distinctiveness) and Core Policy 44 (Landscape).

10.10.9 In **conclusion**, the Proposed Publication Plan performs well, and it is noted that SPDs will be prepared for the two key sites.

10.11 Pollution

Commentary on the spatial strategy

- 10.11.1 **Core Policy 8a** (Additional Site Allocations for Abingdon-on-Thames and Oxford Fringe Sub Area) makes provision for 600 homes East of Kingston Bagpuize with Southmoor and 90 homes at Marcham. Both of these sites have the potential to result in increased traffic through the Marcham Air Quality Management Area (AQMA). Indeed, the South East of Marcham site intersects the AQMA (at its eastern end), and hence any new access junction would be within the AQMA. The proposed 1,200 home Dalton Barracks scheme will also result in some trips through Marcham, although the proportion is likely to be low, and it is noted that the proposal is to link Dalton Barracks to the Lodge Hill P&R, and thereby improve public transport connectivity considerably. Kingston Bagpuize with Southmoor is also very well linked by public transport.
- 10.11.2 The March 2017 Interim SA report **recommended** that further work be undertaken to predict the increases in traffic congestion within the AQMA that would result from proposed housing growth. There remains a need for detailed work - e.g. in respect of junction arrangements at the South East Marcham site, and the risk of stationary traffic tailing back in the AQMA - however, it is noted that the quantum of growth proposed at Marcham has been reduced significantly. Specifically, whilst the Preferred Options consultation document (2017) proposed 520 homes at Marcham, the current proposal is for 90 homes. Also, on the 'plus side', it is noted that the proposed strategy performs relatively well in respect of minimising increased traffic within the Botley and Abingdon-on-Thames AQMAs: the Botley AQMA on the basis that Oxford bound trips from Kingston Bagpuize with Southmoor meet the A34 north of the AQMA; and the Abingdon-on-Thames AQMA on the basis that no allocations are proposed at Drayton, Steventon or Sutton Courtenay.
- [Commentary on other policies](#)
- 10.11.3 **Development Policy 20** (External Lighting) sets out measures to ensure that development involving external lighting is appropriately designed and located, recognising that light can be seen as a form of pollution. The list of policy criteria has been updated since the Preferred Options (2017) stage, with a new reference requiring that *"the lighting proposed is the minimum necessary to undertake the task for which it is required"*. Supporting text goes on to explain that *"in certain circumstances, applicants may be required to take appropriate measures to control the level of illumination, glare, spillage of light, angle and hours of operation."* The Council's Environmental Health Team is supportive of a policy on external lighting, particularly given the need locally to assess nuisance from sources such as floodlit sports pitches, and given increasing demand for all types of outdoor lighting.
- 10.11.4 **Development Policy 22** (Impact of Development on Amenity) sets out measures to minimise the impact of development on neighbouring amenity, supplementing the design standards required through Core Policies 37 and 38 and the Design Guide SPD. Amenity can be compromised by new development in a number of ways, for example through: loss of sunlight; loss of privacy; noise; odour; and vibration. It is **recommended** that as the policy has been updated to remove reference to 'smell', the policy (also Development Policy 23) should retain reference to odour, as per the Preferred Options consultation document (2017) and also as per the supporting text.
- 10.11.5 **Development Policy 23** (Effect of Neighbouring or Previous Uses on New Developments) requires applicants to consider any potential adverse impacts from existing and potential sources. Where proposals for new development are likely to lead to adverse impacts to occupiers by neighbouring uses, appropriate mitigation measures should be incorporated into the proposal as agreed with Council officers.

- 10.11.6 **Development Policy 24** (Noise Pollution) seeks to ensure that development proposals set out an appropriate scheme of mitigation, where noise-generating development would otherwise result in an unacceptable impact on neighbouring uses, environment or biodiversity. Noise and associated vibration can have an adverse impact on environmental amenity, health and biodiversity. Sources of noise pollution include road traffic, trains, aircraft, commercial uses and entertainment premises.
- 10.11.7 **Development Policy 25** (Air Quality) sets out measures to ensure development proposals likely to have an impact on air quality, including those located in, or within relative proximity to, existing, or potential, AQMAs are appropriately designed and mitigated. Proposals should take into account the Council's Air Quality Developers Guidance, and early engagement with the Council's Air Quality Officer is encouraged. An Air Quality Assessment will be required, where proposals are of a large scale and/or likely to significantly impact upon air quality.
- 10.11.8 **Development Policy 26** (Land Affected by Contamination) will be used by the Council to assess development proposals subject to existing contamination, to prevent unacceptable risk from pollution in the future. Where development, redevelopment or re-use is proposed on or adjacent to land that is suspected, or known to be contaminated, proposals should be accompanied by an appropriate level of information in the form of a Contaminated Land Preliminary Risk Consultant Report. This would typically consist of a desk-based study and a site walkover as a minimum.

Appraisal of the plan as a whole

- 10.11.9 The proposed package of site allocations at this Publication stage is an improvement on that proposed at the Preferred Options stage; however, the proposal to focus growth in the Abingdon-on-Thames to Oxford Fringe Sub Area at locations where there is the potential for increased car movements through the Marcham AQMA still gives rise to some concerns. Also, it is noted that the strategy performs relatively well in respect of minimising traffic within the Botley and Abingdon-on-Thames AQMAs.
- 10.11.10 The pollution, environmental quality and amenity focused Development Policies perform well, and should appropriately compliment the Core Policies. In particular, detail is added in support of Core Policies 37 (Design and Local Distinctiveness) and 43 (Natural Resources).
- 10.11.11 In conclusion, it is appropriate 'flag' **uncertain negative significant effects**, given the Marcham AQMA issue. There will be a need for further detailed work, particularly in relation to the proposed South East Marcham site.

10.12 Climate change mitigation

Commentary on the spatial strategy

- 10.12.1 There is a need to minimise per capita CO₂ emissions from transport, and the built environment. In respect of the former, there is little to add to the discussion presented above, under 'Services and facilities' and 'Movement'. In respect of the latter, a key consideration is the need to support larger developments – in excess of 500 homes – where there will be the economies of scale that make deliver of decentralised heat and power generation a possibility.
- 10.12.2 Proposals for decentralised heat and power generation have not yet been advanced for any of the schemes under consideration; however, there could well be opportunities at Dalton Barracks, given the scale of the site. There is also the possibility of exploring the option of a mixed use development, which could be supportive of decentralised heat and power, as demand would be spread more evenly across the day. It is noted that **Core Policy 8b** (Dalton Barracks Comprehensive Development Framework) establishes that the new housing will meet exemplar design standards and follow 'Garden Village' principles, which is deemed appropriate given the scale and location of the site. The Town and Country Planning Association (TCPA) have developed nine Garden Village principles including: *"development that... uses zero-carbon and energy-positive technology to ensure climate resilience."*

Commentary on other policies

- 10.12.3 No proposed LPP2 Development Policies are focused on climate change mitigation / low carbon development, recognising that a strong policy framework is provided by Core Policy 40 (Sustainable Design and Construction) and Core Policy 41 (Renewable Energy). However, the plan is set to perform well in terms of 'Movement' objectives (see discussion above), which in turn can be considered a 'positive', from a climate change mitigation perspective.

Appraisal of the plan as a whole

- 10.12.4 Focusing on the matter of minimising per capita CO₂ emissions from the built environment (as opposed to emissions from transport), the proposed spatial strategy performs well in that there is a concentration of growth at larger sites, potentially leading to opportunities to design-in low carbon infrastructure. However, there is little certainty, at this early stage. In practice it is recognised that many, if not most, large schemes will divert funds towards other matters including affordable housing and transport infrastructure upgrades, ahead of low carbon infrastructure.
- 10.12.5 No proposed LPP2 Development Policies are focused on climate change mitigation / low carbon development, recognising that a strong policy framework is provided by Core Policy 40 (Sustainable Design and Construction) and Core Policy 41 (Renewable Energy). See also the discussion above, regarding the performance of policies in terms of 'Movement' objectives.
- 10.12.6 In **conclusion**, effects are uncertain. Further work should examine the capacity of sites to deliver low carbon infrastructure. Significant effects are not predicted, recognising that climate change is a global issue (and hence local actions can have only limited effect).

10.13 Climate change adaptation

Commentary on the spatial strategy

- 10.13.1 A key climate change adaptation issue is flood risk, and in this respect there are few issues associated with the sites proposed through **Core Policies 4a, 8a and 15a**. The majority of sites are associated with a degree of surface water flood risk, although the risk is relatively minor in all instances (recognising good potential for avoidance and mitigation).
- 10.13.2 Water resource and water quality issues can also be considered here -
- In respect of water resources - A recently completed Water Cycle Study (WCS) concludes that, allowing for planned resource management measures within the Thames Water supply area, there are, and will be, adequate water resources to cater for growth over the plan period. However, the WCS identifies long term limitations on further abstraction. In order to reduce reliance on water supplies from rivers and aquifers, the WCS sets out ways in which demand for water as a result of development can be minimised (without incurring unacceptable costs or increases in energy use). The following measures are suggested by the WCS (as a 'first step' to water neutrality):
 - Encourage a programme of retrofitting and water audits of existing dwellings and non-domestic buildings.
 - Aim to move towards delivery of at least 15% of the existing housing stock, with eas y fit water saving devices; and
 - Establish a programme of water efficiency promotion and consumer education, with the aim of behavioural change with regards to water use.

- In respect of capacity at Wastewater Treatment Works (WwTWs) the WCS concludes: *“Four WwTWs (Didcot, Kingston Bagpuize, Oxford and Wantage) do not currently have sufficient flow capacity and/or have insufficient treatment processes to accept all future development proposed within the plan period. Therefore solutions are required in order to accommodate the growth to ensure that the increased wastewater flow discharged does not impact on the current quality of the receiving watercourses...”* Proposed allocations at East Hanney and North West of Grove will drain to the constrained Wantage WwTWs (although North West of Grove would deliver very late in the plan period, at the earliest, hence concerns are less). The WCS concludes that feasible solutions are possible to ensure legislative objectives are met, and recommends that the District Council, the Environment Agency, and Thames Water continue to work together to determine *“the nature of upgrades which will need to be implemented in order to conclude the timing and quantity of development that can be accommodated across the District in the early phases of the Local Plan delivery period.”* This is a typical strategy, recognising that there is a duty to provide the necessary water infrastructure, and water treatment works tend to be designed with limited headroom, but with the potential to expand in line with growth.

10.13.3 The objective of maintaining the national resource of ‘best and most versatile’ (BMV) agricultural land (i.e. that classified as grade 1, 2 or 3a) can also be considered here -

- The nationally available ‘provisional’ dataset (which is very low resolution, so much so that larger villages are not recognised as non-agricultural; and which does not differentiate between grades 3a and 3b) shows there to be a band of BMV land stretching along the foot of the North Wessex Downs, between Didcot and Wantage (and beyond), another area to the south and west of Abingdon-on-Thames, and a more narrow band stretching between Dalton Barracks to Kingston Bagpuize with Southmoor (and beyond). On the basis of this dataset, it seems likely that East of Kingston Bagpuize with Southmoor will comprise BMV land, and also the part of North of Harwell Campus that is not brownfield; however, there is no certainty in the absence of detailed survey work. The only proposed allocation that has been surveyed in detail (i.e. using the ‘post 1988 criteria, which necessitates soil samples) is North West of Grove, which is found to comprise a mixture of grades 3b and grade 4).

Commentary on other policies

10.13.4 No proposed LPP2 Development Policies are focused on flood risk, water or other climate change adaptation related issues. However, the policies discussed above as performing well in ‘Biodiversity’ terms are relevant.

10.13.5 In respect of water quality, **Development Policy 31** (The Wilts and Berks Canal) states that proposals for the restoration of the canal must take into account the status and objectives of relevant existing waterbodies in the area, as set out in the Thames River Basin Management Plan (2015). Proposals will need to identify where water will be obtained from to ensure that it will not have a detrimental impact on existing waterbodies and associated habitats.

Appraisal of the plan as a whole

10.13.6 The spatial strategy performs well in that areas at risk of flooding are set to be avoided. Other climate change adaptation issues relate to water resources and water quality, and in this respect an issue has been highlighted in respect of Wastewater Treatment Works capacity. It is also noted that some loss of ‘best and most versatile’ agricultural land is likely, but equally the proposal is to make good use of previously developed (‘brownfield’) land.

10.13.7 No proposed LPP2 Development Policies are focused on flood risk, water or other climate change adaptation related issues. However, the policies discussed above as performing well in ‘Biodiversity’ terms are relevant.

10.13.8 In conclusion, it is appropriate ‘flag’ **uncertain negative significant effects**, given the issue of WwWT capacity; however, policy is in place to ensure delivery of capacity upgrades as necessary, ahead of housing growth.

11 CONCLUSIONS AT THIS CURRENT STAGE

11.1.1 The appraisal finds the Publication Plan to perform well in terms of the majority of objectives, with 'significant positive effects' predicted in terms of: 'Housing' (as objectively assessed housing needs should be met), 'Services and Facilities' (given an expectation that the proposed Dalton Barracks scheme will lead to delivery of a new secondary school) and 'the Economy' (given the proposed high growth strategy within Science Vale). No 'significant negative effects' are predicted; however, issues/uncertainties are highlighted in respect of: 'Pollution' (given a risk of worsened air quality within the Marcham AQMA; and 'Climate change adaptation' (given some issues in respect of Wastewater Treatment Works capacity). A number of effects are dependent on the nature of the scheme at Dalton Barracks, given the site's potential capacity.

Cumulative effects

11.1.2 The SEA Regulations, which underpin the SA process, indicate that stand-alone consideration should be given to 'cumulative effects', i.e. effects of LPP2 in combination with other plans.

11.1.3 The first point to note is that LPP2 allocations will impact in-combination with LPP1 allocations and other commitments. Commitments are part of the 'baseline' situation, and hence are taken into account as part of the appraisal above. Issues/impacts include, for example -

- Settlements - the effect of the proposed North West of Grove allocation, for example, is considered in-combination with commitments in excess of 5,000 homes at Wantage/Grove.
- A34 and A420 corridors (and town centre traffic congestion, notably in Abingdon) - Evaluation of Traffic Impacts (ETI) work for LPP2 has taken into account commitments.
- Landscape and Green Belt - the Landscape and Green Belt studies completed for LPP2 consider in combination effects for landscape character areas and the Oxford Green Belt.

11.1.4 LPP2 will also impact in-combination with other local plans in the sub-region. Local plans are constantly emerging, and hence it is never possible to know the baseline situation precisely; however, the appraisal has sought to give consideration to likely issues and impacts as far as possible. Perhaps most notably, the appraisal has considered issues/impacts at the Oxfordshire Housing Market Area (HMA) scale. As part of this, there has been a need to recognise that the baseline situation is one whereby Oxford City will be able to provide for 8,000 homes only, thereby resulting in unmet needs of 15,000 homes.⁴⁰

11.1.5 The Habitats Regulations Assessment (HRA) process has also included a particular focus on the matter of LPP2 impacting in combination with other local plans. In particular, the HRA Report includes a detailed discussion of how numerous local plans will result in increased traffic on the A34, which in turn will lead to increased air pollution in the vicinity of the Oxford Meadows Special Area of Conservation (SAC).

11.1.6 In-combination impacts at the 'larger than local' scale of the North Wessex Downs Area of Outstanding Natural Beauty (AONB) are another consideration. LPP2 proposes major development in the AONB at North of Harwell Campus, and it is also noted that the baseline situation is one whereby there is a committed housing site at nearby East Hendred (which the AONB Unit lists as one of its top three 'disappointments' of 2016/17).⁴¹ Furthermore, it is understood that other local plans (the AONB straddles three unitary authorities and four district councils) are giving consideration to options involving major development in the AONB. Nonetheless, it is difficult to envisage in-combination effects. The AONB is an expansive area and there are no major viewpoints in the vicinity of Harwell Campus (see Figure H in Appendix II). Compton and Ilsley are two settlements in relative proximity, in West Berkshire District; however, neither settlement is set to expand significantly. The West Berkshire Site Allocations Plan allocates one brownfield site for 140 homes at the former, and nil sites at the latter.

⁴⁰ This situation set out in the 'Preferred Options' Oxford Local Plan (2017).

⁴¹ northwessexdowns.org.uk/uploads/File_Management/NWD_Docs/About_Us/COP_MWG_Reports/NWD_Ann_Rev_2016_2017.pdf

PART 3: WHAT HAPPENS NEXT?

12 INTRODUCTION (TO PART 3)

12.1.1 The aim of this chapter is to explain next steps in the plan-making / SA process.

13 PLAN FINALISATION

13.1.1 Subsequent to the current publication stage, the main issues raised will be identified and summarised by the Council, who will then consider whether the plan can still be deemed to be 'sound'. Assuming that this is the case, the plan (and the summary of representations received) will be submitted for Examination. At Examination a government appointed Planning Inspector will consider representations (in addition to the SA Report and other submitted evidence) before determining whether the plan is sound (or requires further modifications).

13.1.2 If found to be 'sound' the plan will be formally adopted by the Council. At the time of Adoption an 'SA Statement' will be published that sets out (amongst other things) *the measures decided concerning monitoring*.

14 MONITORING

14.1.1 At the current time, it is appropriate (in-line with Regulations) to present 'measures envisaged concerning monitoring'.

14.1.2 A proposed monitoring framework is presented within Appendices of LPP2, and links to Policy CP47a (Delivery and contingency). The plan monitoring framework should provide a good basis for monitoring the effects of LPP2.

14.1.3 The 'uncertain' effects listed at para 11.1.2 above serve to suggest that there might be a focus on monitoring indicators relating to air quality and wastewater treatment work capacity. Other issues/impacts that might benefit from increased monitoring effort include affordable housing delivery, recreational use of Cothill Fen SAC and delivery of transport improvement measures.

APPENDIX I - REGULATORY REQUIREMENTS

As discussed in Chapter 2 above, Schedule 2 of the Environmental Assessment of Plans Regulations 2004 explains the information that must be contained in the SA Report; however, interpretation of Schedule 2 is not straightforward. Table A links the structure of this report to an interpretation of Schedule 2 requirements, whilst Table B explains this interpretation.

N.B. This report is not the SA Report, but aims to present the required information nonetheless.

Table A: Questions answered by this SA Report, in-line with an interpretation of regulatory requirements

		Questions answered	As per regulations... the SA Report must include...
Introduction		What's the plan seeking to achieve?	<ul style="list-style-type: none"> • An outline of the contents, main objectives of the plan and relationship with other plans/programmes
		What's the sustainability 'context'?	<ul style="list-style-type: none"> • Relevant environmental protection objectives, established at international or national level • Any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance
	What's the SA scope?	What's the sustainability 'baseline'?	<ul style="list-style-type: none"> • Relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan • The environmental characteristics of areas likely to be significantly affected • Any existing environmental problems which are relevant to the plan including those relating to any areas of a particular environmental importance
		What are the key issues and objectives that should be a focus?	<ul style="list-style-type: none"> • Key environmental problems / issues and objectives that should be a focus of (i.e. provide a 'framework' for) assessment
Part 1	What has plan-making / SA involved up to this point?		<ul style="list-style-type: none"> • Outline reasons for selecting the alternatives dealt with (and thus an explanation of the 'reasonableness' of the approach) • The likely significant effects associated with alternatives • Outline reasons for selecting the preferred approach in-light of alternatives assessment / a description of how environmental objectives and considerations are reflected in the draft plan
Part 2	What are the SA findings at this current stage?		<ul style="list-style-type: none"> • The likely significant effects associated with the draft plan • The measures envisaged to prevent, reduce and offset any significant adverse effects of implementing the draft plan
Part 3	What happens next?		<ul style="list-style-type: none"> • A description of the monitoring measures envisaged

Table B: Questions answered by this SA Report, in-line with regulatory requirements

<u>Schedule 2</u>	<u>Interpretation of Schedule 2</u>	
<i>The report must include...</i>	<i>The report must include...</i>	
(a) an outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes;	An outline of the contents, main objectives of the plan and relationship with other relevant plans and programmes	i.e. answer - <i>What's the plan seeking to achieve?</i>
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What's the 'context'?</i>
(c) the environmental characteristics of areas likely to be significantly affected;	The relevant environmental protection objectives, established at international or national level	
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC;	The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan'	i.e. answer - <i>What's the 'baseline'?</i>
(e) the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan and the way those objectives and any environmental considerations have been taken into account during its preparation;	The environmental characteristics of areas likely to be significantly affected	
(f) the likely significant effects on the environment including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors;	Any existing environmental problems which are relevant to the plan including, in particular, those relating to any areas of a particular environmental importance	i.e. answer - <i>What are the key issues & objectives?</i>
(g) the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan;	Key environmental problems / issues and objectives that should be a focus of appraisal	
(h) an outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	An outline of the reasons for selecting the alternatives dealt with (i.e. an explanation of the 'reasonableness of the approach)	i.e. answer - <i>What has Plan-making / SA involved up to this point?</i> [Part 1 of the Report]
(i) a description of the measures envisaged concerning monitoring.	The likely significant effects associated with alternatives, including on issues such as... ... and an outline of the reasons for selecting the preferred approach in light of the alternatives considered / a description of how environmental objectives and considerations are reflected in the draft plan.	
	The likely significant effects associated with the draft plan	i.e. answer - <i>What are the assessment findings at this current stage?</i> [Part 2 of the Report]
	The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects of implementing the draft plan	
	A description of the measures envisaged concerning monitoring	i.e. answer - <i>What happens next?</i> [Part 3 of the Report]

Whilst Tables A and B signpost broadly how/where this report meets regulatory requirements, as a supplement, Table C presents a discussion of more precisely how/where regulatory requirements are met.

Table C: ‘Checklist’ of how and where (within this report) requirements have been, are and will be met.

Regulatory requirement	Discussion of how requirement is met
Schedule 2 of the regulations lists the information to be provided within the SA Report	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapter 3 (‘What’s the plan seeking to achieve’) presents this information.
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	These matters have been considered in detail through dedicated scoping work, which has involved dedicated consultation on a Scoping Report (2012) and a Scoping Update report (2016). Also, stakeholders have had the opportunity to comment on the SA scope through LPP1 and LPP2 consultations, including the LPP2 preferred Options Consultation (2017).
c) The environmental characteristics of areas likely to be significantly affected;	The ‘SA framework’ – the outcome of scoping - is presented within Chapter 4 (‘What’s the SA scope?’).
d) Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.;	Also, more detailed messages - i.e. messages established through context and baseline review - are presented within Appendix II.
e) The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation;	The SA framework is presented within Chapter 4 (‘What’s the scope of the SA’). Also, messages from the context review are presented within appendix II. With regards to explaining “ <i>how... considerations have been taken into account</i> ” - <ul style="list-style-type: none"> • Chapters 6 explains how reasonable alternatives were established in 2017 in-light of earlier consultation and SA. • Chapter 8 explains the Council’s ‘reasons for supporting the preferred approach’, i.e. explains how/why the preferred approach is justified in-light of alternatives appraisal (and other factors).
f) The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);	<ul style="list-style-type: none"> • Chapter 7 presents alternatives appraisal findings (in relation to housing growth, which is the ‘stand-out’ plan issue and hence that which should be the focus of alternatives appraisal). • Chapters 10 presents an appraisal of the Publication Plan. <p>As explained within the various methodology sections, as part of appraisal work, consideration has been given to the SA scope, and the need to consider the potential for various effect characteristics/dimensions.</p>

Regulatory requirement	Discussion of how requirement is met
g) The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;	The appraisal of the Draft Plan presented within Chapter 10 of the March 2017 Interim SA Report identified how the plan might potentially ‘go further’ in certain respects, and made a number of specific recommendations. The appraisal of the Publication Plan presented within Chapter 10 of this report does likewise.
h) An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;	Chapters 5 and 6 deal with ‘Reasons for selecting the alternatives dealt with’, in that there is an explanation of the reasons for focusing on particular issues and options. Also, Chapter 8 explains the Council’s ‘reasons for selecting the preferred option’ (in-light of alternatives appraisal). Methodology is discussed at various places, ahead of presenting appraisal findings, and limitations are also discussed as part of appraisal narratives.
i) description of measures envisaged concerning monitoring in accordance with Art. 10;	Chapter 13 presents measures envisaged concerning monitoring.
j) a non-technical summary of the information provided under the above headings	The NTS is a separate document.
The SA Report must be published alongside the draft plan, in-line with the following regulations	
authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the draft plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2)	In March 2017 an Interim SA Report was published alongside the Preferred Options document, under Regulation 18, in order to ensure informed consultation responses. At the current time, this SA Report is published alongside the Publication Plan, under Regulation 19, in order to ensure informed representations.
The SA Report must be taken into account, alongside consultation responses, when finalising the plan.	
The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.	Consultation responses made in relation to the Preferred Options document, informed by the March 2017 Interim SA Report, were taken into account when preparing the Publication Plan for publication and submission. Appraisal findings presented within this SA Report will inform a decision on whether or not to submit the plan, and then (on the assumption that the plan is submitted) will be taken into account when finalising the plan at Examination (i.e. taken into account by the Inspector, when considering the plan’s soundness, and the need for any modifications).

APPENDIX II - CONTEXT AND BASELINE REVIEW

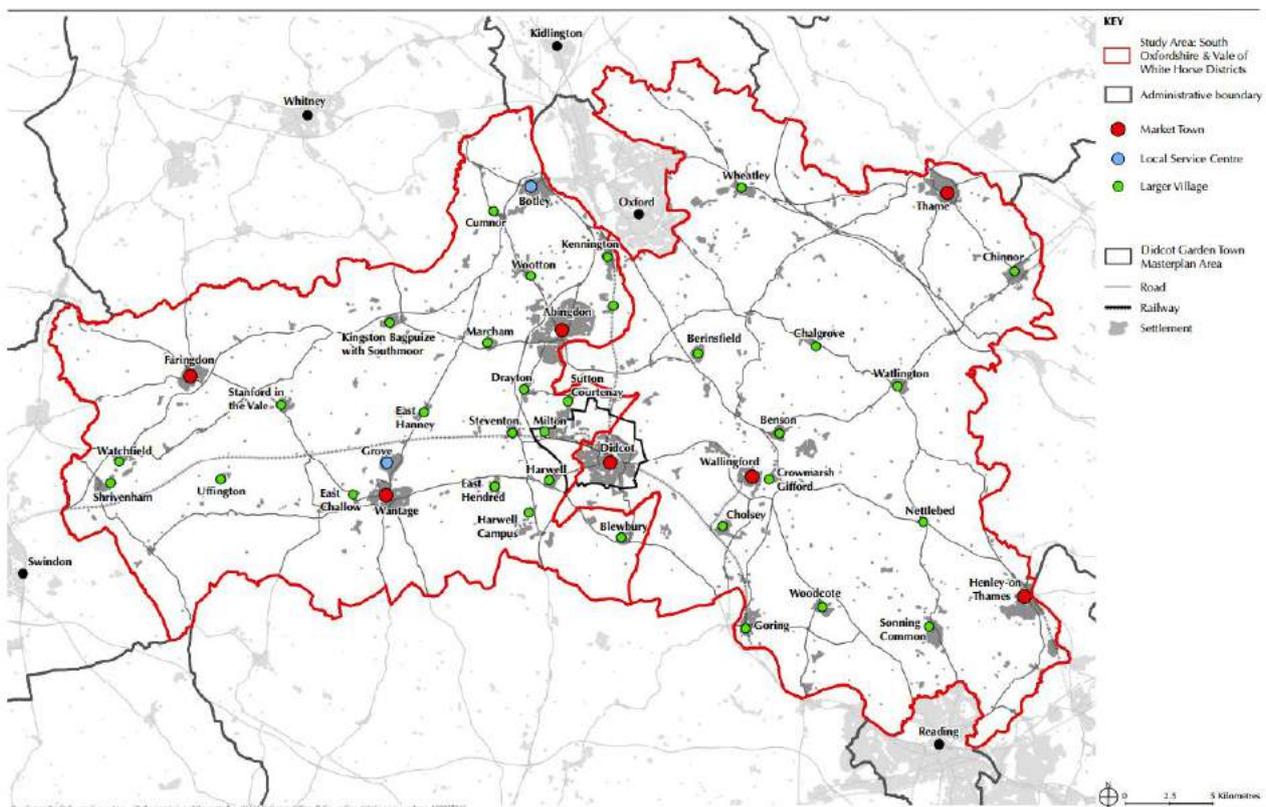
Introduction

As discussed in Chapter 4 ('What's the scope of the SA?') the SA scope is primarily reflected in a list of objectives ('the SA framework'), which was established subsequent to a review of the sustainability 'context' / 'baseline', analysis of key issues, and consultation. The aim of this appendix is to present a summary key issues emerging from context / baseline review.

Overview

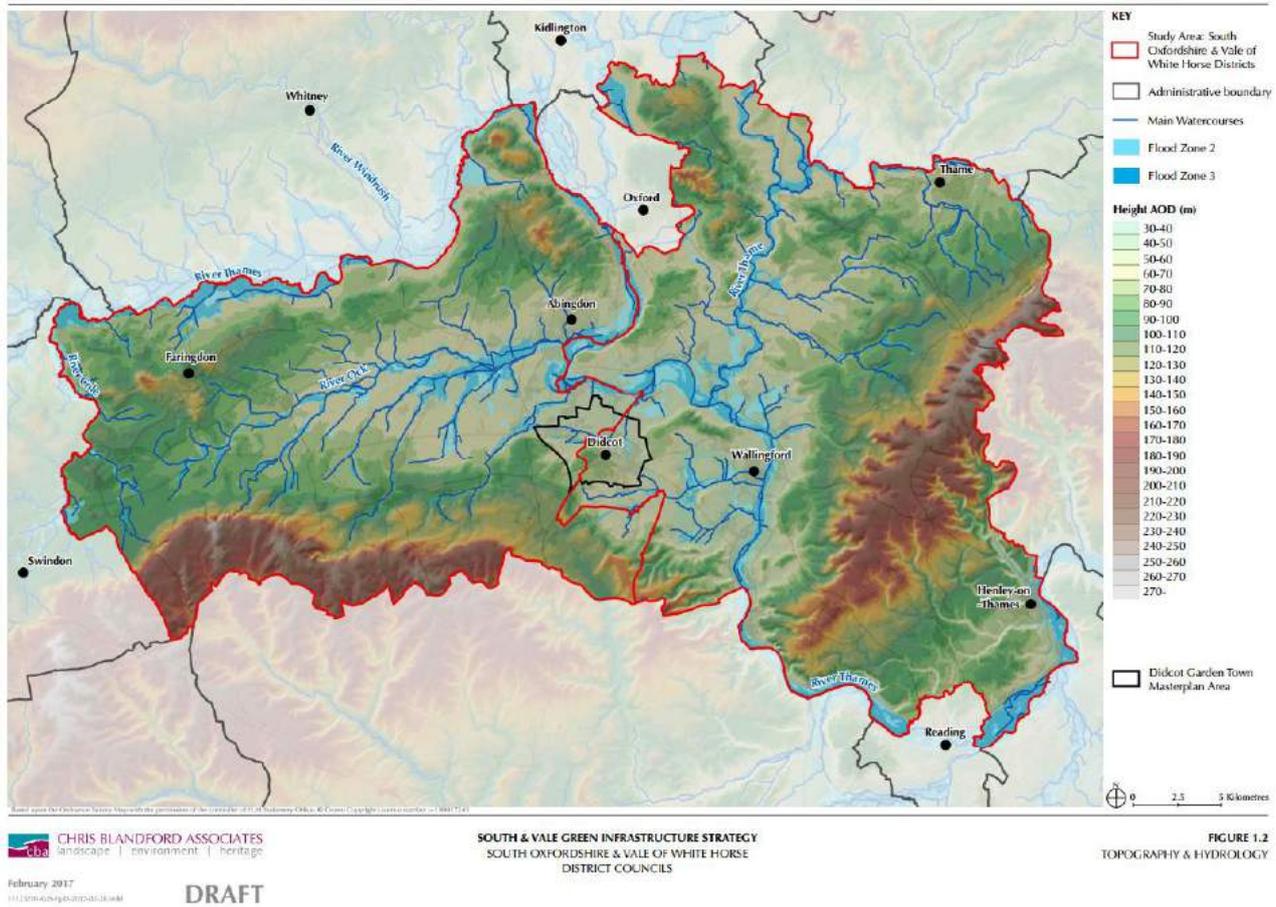
Vale of White Horse District is located in southern Oxfordshire, to the southwest of Oxford, with Swindon (Wiltshire) to the west and Reading (Berkshire) to the east. Figure A shows the main settlements within the Vale, i.e. those that fall within the top three tiers of the settlement hierarchy. It also shows settlements in neighbouring South Oxfordshire District, to the east, which is a rural district as per the Vale.

Figure A: Settlements in the Vale of White Horse and South Oxfordshire Districts



The District is covered by three of Natural England's broad scale National Character Areas - Midvale Ridge, the Upper Thames Clay Vales, and Berkshire and Marlborough Downs – which are evident in the topographical map below (moving north to south). Each of the character areas is associated with specific environmental sensitivities, with the latter partly comprising the North Wessex Downs Area of Outstanding Natural Beauty (AONB). The River Ock and its tributaries are also evident from Figure B, with areas of flood risk particularly constraining the south of Abingdon, as well Steventon and East Hanney.

Figure B: Topography and flood risk



The Vale is a relatively affluent district, performing well above the England and Wales average for a range of key socio-economic indicators – see Table A. However, the Vale does perform worse than neighbouring South Oxfordshire in terms of the latter three criteria.

Table A: Population statistics

Criteria (People aged 16 and over – 2011)	VoWH	SODC	England and Wales
Ethnicity (percentage white)	95%	96%	86%
Degree or professional qualification	44.3%	44%	31.5%
No qualifications	16.7%	16.5%	22.5%
Employed in senior positions	50%	50%	41%
Home ownership	70.3%	72.9%	
Social rented homes	13.3%	11.4%	17.7%
Car or van availability within households	86.9%	88.4%	74%

Homes

Key aims of the NPPF are to widen the choice of high quality homes (paragraph 9) and boost significantly the supply of housing (paragraph 47). Local planning authorities are required to ensure their Local Plan meets the full, objectively assessed needs for market and affordable housing in the housing market area.

The NPPF (paragraph 159) is clear that all local planning authorities are expected to prepare a Strategic Housing Market Assessment (SHMA) to assess their full housing needs, working with neighbouring authorities. The SHMA needs to identify the scale, mix and range of housing tenures required to meet needs, including the needs of specific groups such as older people and people with disabilities.

An important finding of the Oxfordshire SHMA (2014) is that the older person population of Oxfordshire is projected to increase significantly up until 2031, resulting in increased specialist housing needs, e.g. sheltered or extra care provision. Also, whilst currently 22% of households contain someone with a long-term health problem or disability, this percentage figure is set to increase significantly up to 2031. The Joint Strategic Needs Assessment (JSNA) – Needs Analysis for Older People in Oxfordshire (2016) - is another source of evidence.

Housing space standards is a related policy area. The PPG advises that local planning authorities should consider adopting the nationally established standards, but also states that local planning authorities have the option to set additional technical requirements which exceed the minimum standards. The SHMA along with any other available datasets will provide the evidence and it is then for the local planning authority to set out how it intends to approach demonstrating the need for additional requirements, including relating to accessible and adaptable dwellings and wheelchair user dwellings.

The Council, in partnership with South Oxfordshire District Council, has commissioned Wessex Economics to produce a joint Housing Strategy for the Councils. Emerging draft findings further highlight the need for housing to meet specialist and older population needs, including adaptable and flexible housing to meet the changing needs of households. The Strategy sets out some options for the Council to consider making more specific provision for specialist housing, which could include allocating specific sites to meet this need or consider opportunities as part of Didcot Garden Town. The Strategy suggests -

- all affordable homes should meet the nationally described space standards; and
- in the market sector, the Councils should apply the minimum space standard for 1 bed properties.

Finally, there is a need to consider affordable housing provision. Affordable housing provision is a particular issue in Oxford City, with the Oxford City Local Plan 'Preferred Options' consultation document (June 2017) explaining that there is a need for 1,029 affordable dwellings per annum (dpa), yet over the past ten years the City Council has been providing only 116 dpa on average, and over the past three years the City Council has been providing only 60 dpa on average.

Services and facilities

Community services and facilities play a key role in creating and sustaining healthy and inclusive communities. The quality and accessibility of community services, such as schools, places of worship, village and community halls and libraries is important as part of maintaining sustainable and viable places.

National policy is clear that development should support local services and facilities to meet local needs. Paragraph 70 of the NPPF, for example, sets out the need to plan positively for the provision of community facilities and to protect against their unnecessary loss.

The Town and Village Facilities Study Update (Feb 2014) recorded the key community services and facilities within each settlement, such as; schools, shops, places of worship, pubs, restaurants, post office, building society, medical centres, library, and community or village halls.

The Local Leisure Facilities Study (2016) included assessment of needs for village and community halls and identified standards for accessibility, quantity and quality of such provision.

Movement

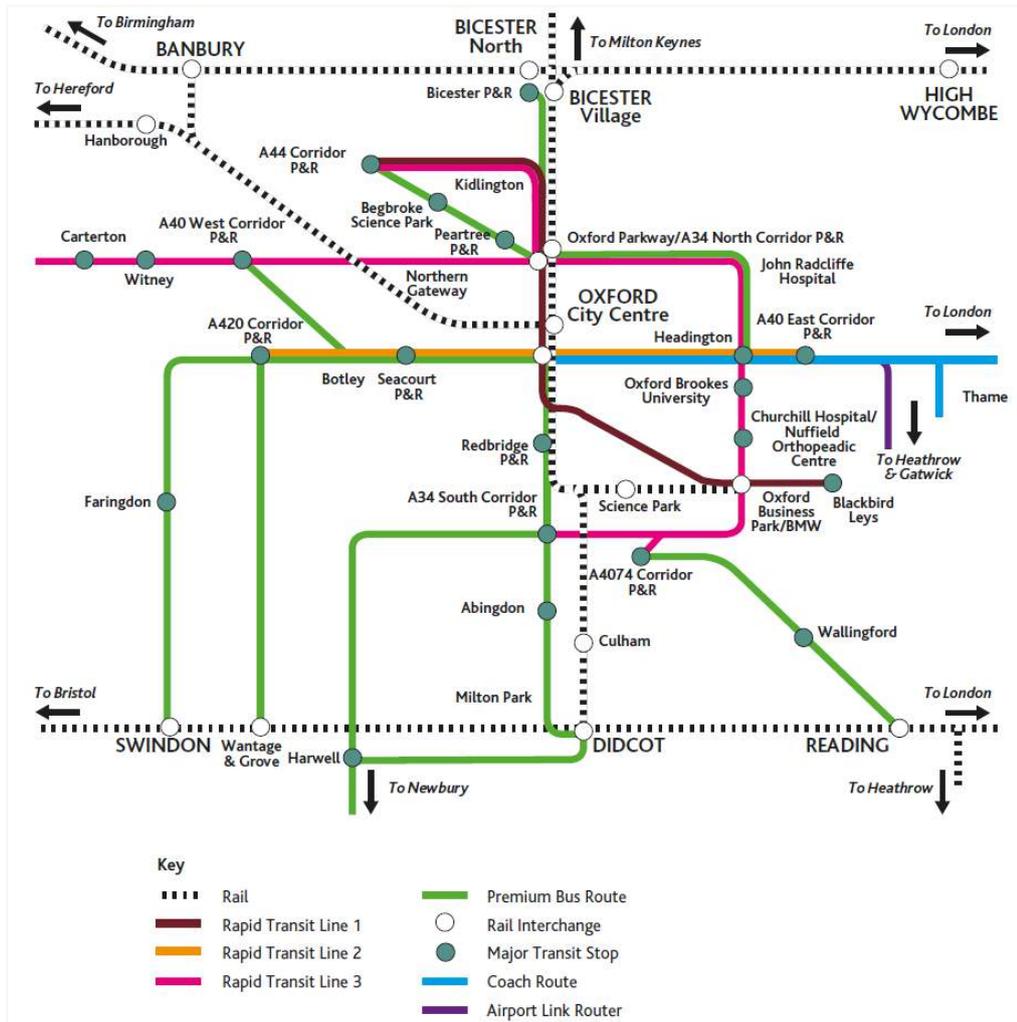
The A34 is a key transport corridor, crucial to growth within Science Vale. The A34 already suffers from severe congestion, especially during the AM and PM peak hours. However, with the exception of the A420 it remains the only suitable strategic road to provide adequate connectivity to the main growth areas within the Vale. Whilst it will be difficult to accommodate more vehicle movements within the corridor, a strategically planned public transport network will help limit further issues of congestion and road safety. Furthermore, there has been significant investment to improve key junctions of the A34 in order to enhance access to the Vale at Chilton Interchange and Milton Interchange. In addition, an upgrade to the Lodge Hill Interchange, to introduce south-facing slips, has recently been approved by the Central Government, with a provisional delivery date by 2020.

Oxford currently has one of the most highly-developed and successful commercial bus networks in the country. Through major priority improvements to the inter-urban bus network in addition to an integrated ticketing scheme, bus patronage within Oxford currently accounts for 17% of trips; 9% higher than the national average. However, in the more rural districts the bus network is much less developed. Oxfordshire County Council no longer provides financial support for bus routes, which has led to the withdrawal of most routes previously reliant on this support. These withdrawn routes tend to be less frequent local and rural routes.

Within the Vale of White Horse District, bus usage accounts for a relatively small proportion of journeys to work with only 6% of trips undertaken by bus; 2% lower than the national average and 11% lower than the average for Oxford. Notably, the data indicates that whilst a significant proportion of trips from Abingdon to Oxford (26%) are carried out by bus, only 8% of total trips to from Abingdon to Science Vale are by bus.

A focus of LPP1 is on support for sustainable modes of transport and a reduction in the need to travel. This is consistent with the objectives set out in the NPPF and the Oxfordshire Local Transport Plan 4 (LTP4, 2016). The Local Transport Plan includes Area Strategies for the Science Vale area and the A420, which are both located within the Vale of White Horse. It also includes an Active & Healthy Travel Strategy (AHTS), which covers cycling, walking and Door to Door travel (i.e. cycling or walking in combination with public transport).

Figure C: Science Vale Transit Strategy, Oxfordshire County Council, (June 2016)



LPP1 identifies a number of site-specific proposals. In particular, the spatial focus for new jobs and homes to be located in the Science Vale area is recognised by LPP1 as requiring a comprehensive package of supporting transport infrastructure, and this is set out in more detail by Core Policy 17. Core Policies 12, 18, 19 and 21 also safeguard land to support the future delivery of strategic highway improvements.

Established strategy involves diverting traffic away from the A34, including by a new Thames crossing near Culham and utilising the A415 and A4074 as alternative routes between Didcot, Oxford and Abingdon, and implementing upgrade schemes on the A420, A417, A338 and A4130, and enhanced public transport.

The Part 1 plan also identifies a number of strategic policies (Core Policies 33-36) which seek to promote sustainable transport modes and accessibility and through supporting key improvements to the transport network, including a specific policy relating to the A34. Specifically

- Core Policy 33 - sets out how the Council will work with the County Council and others to promote sustainable transport accessibility to new development, including LTP4 measures;
- Core Policy 34 - recognises that the Council will continue to work with Highways England and Oxfordshire County Council in planning for managing traffic on the A34, including addressing air quality;
- Core Policy 35 - sets out how the Council will ensure that new development promotes public transport, cycling and walking; and
- Core Policy 36 - sets out the district's intention to ensure that superfast broadband is provided in new development, which will maximise opportunities for working and accessing services at home.

Health

There is also a need to support strong, vibrant and healthy communities by creating a high quality built environment that supports health, social and cultural well-being and “*encourage multiple benefits from the use of land in urban and rural areas, recognising that open land can perform a function for recreation*” (NPPF paragraph 17). To ensure development promotes health, social and cultural well-being, local planning authorities should:

- aim to achieve places which promote safe and accessible developments containing....high quality public spaces which encourages the active and continual use of public areas (paragraph 59);
- ensure planning policies are based on robust and up-to-date assessments of the needs for open space, sports and recreation facilities and opportunities for new provision (paragraph 73); and
- protect existing open space, sports and recreational buildings and land, including playing fields subject to certain criteria (paragraph 74).

Health determinants / issues are wide ranging. The ageing population gives rise to a number of health issues; and other health issues relate to provision of health facilities. These matters relate closely to the discussion above, under ‘Housing’ and ‘Services/facilities’.

Open space, greenspace and leisure facilities

There is a good level of access to a range of open spaces across the district, although the provision of open space does vary within individual settlements. The Open Spaces Report (2016) highlights where any shortfalls in open space provision exist across the district and provides an assessment of the quantity, quality and accessibility of open spaces and identifies any future requirements.

The Green Infrastructure Strategy (2017) has examined access to accessible natural greenspace (ANG) across the Vale, considering three different classes of ANG: Sites Greater than 2 Hectares; Sites Greater than 20 Hectares; and Sites Greater than 100 Hectares. The analysis found deficits in ANG at all three size classes. The deficit varies across – see Table B.

The Vale has a good level of provision and access to a range of leisure and sports facilities. The Playing Pitch Study (2015) and the Leisure Facilities Study (2014) provide an assessment of the quality, quantity, and accessibility of each type of leisure and sport facility in the district. The Local Leisure Facilities Report (2016) then examined local leisure facilities, including community halls, outdoor bowls and outdoor tennis.

Table B: Accessible Natural Greenspace Deficits by Settlement

Settlement	2ha+ site within 300m	20ha+ site within 2km	100ha+ site within 5km
Market Towns			
Abingdon-on-Thames	Partial deficit	Partial deficit	No deficit
Faringdon	Partial deficit	Partial deficit	No deficit
Wantage	Partial deficit	No deficit	Deficit
Local Service Centres			
Botley	Partial deficit	Partial deficit	No deficit
Grove	Partial deficit	No deficit	Deficit
Larger Villages			
Blewbury	Partial deficit	Deficit	Deficit
Cumnor	Partial deficit	Partial deficit	No deficit
Drayton	Partial deficit	Deficit	Deficit
East Challow	No deficit	Partial deficit	Deficit
East Hanney	Partial deficit	Deficit	Deficit
East Hendred	Partial deficit	Deficit	Deficit
Harwell	Partial deficit	Deficit	Deficit
Harwell Campus	Partial deficit	Deficit	Deficit
Kennington	Partial deficit	No deficit	No deficit
Kingston Bagpuize with Southmoor	Partial deficit	Deficit	Deficit
Marcham	Partial deficit	Deficit	Deficit
Milton	Partial deficit	Deficit	Deficit
Radley	Deficit	No deficit	No deficit
Shrivenham	Partial deficit	Deficit	Deficit
Stanford in the Vale	Partial deficit	Deficit	Deficit
Steventon	Partial deficit	Deficit	Deficit
Sutton Courtney	Partial deficit	Partial deficit	Partial deficit
Uffington	No deficit	Deficit	Deficit
Watchfield	Partial deficit	Deficit	Deficit
Wootton	Partial deficit	Partial deficit	Partial deficit

Inequality and exclusion

As discussed above, the Vale is an affluent district. Areas of relative deprivation are found along the southern edge of Oxford, and within the northern part of Didcot; however, there is seemingly little potential to support any regeneration objectives through LPP2, beyond providing for an apportionment of Oxford's unmet housing needs, and supporting objectives for Science Vale / Didcot Garden Town.

The Index of Multiple Deprivation Dataset also indicates a degree of relative deprivation in Faringdon (it comprises the third most deprived Lower Super Output Area in the District, out of 76), which is the only market town in the Western Vale. This is potentially indicative of there being some wider issue of rural deprivation, i.e. deprivation relating from poor access to services, facilities and employment.

Focusing on the matter of 'rurality', the NPPF supports: housing located where it will enhance or maintain the vitality of rural communities (paragraph 55); the retention and development of local services and community facilities in villages (paragraph 28); and a strong rural economy, including through the sustainable growth and expansion of all types of business and enterprise in rural areas (paragraph).

LPP1 supports appropriate development to help meet the local needs of the Vale's rural communities. For example, Core Policy 28 (New Employment Development on Unallocated Sites) sets out the Council's approach for the provision of new employment development on unallocated sites, including in rural areas. This policy supports the re-use, conversion and adaptation of buildings for employment in rural areas, subject to criteria.

Economy

The NPPF (paragraph 7), identifies that the planning system plays an economic role in contributing to building a strong, responsive and competitive economy. One of the core land-use planning principles is that planning should 'proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs'.

The NPPF is clear that Local Planning Authorities should have a good understanding of business needs in their area, and should use their evidence base to assess the needs for employment land and floorspace and assess the existing supply of land (paragraph 161). The NPPF (paragraph 21) encourages consideration existing business sectors and new or emerging sectors, including support for clusters or networks of knowledge driven, creative or high technology industries.

In order to identify needs, the PPG states that authorities should work with other local authorities in their functional economic market area in line with the 'duty-to-cooperate'. There is also a need to work closely with the Local Enterprise Partnership.

The Vale of White Horse Employment Land Review 2013 Update, URS, 2013 (including Addendum 2014) identifies the amount of land that is required to be designated to enable the jobs target to be met. The report supports the retention of around 219 ha of developable employment land, comprising the following sites safeguarded through LPP1 (ahead of further information on the availability of land at Didcot A Power Station) –

- Harwell Campus (saved LP2011 allocation): 94 ha
- Milton Park (saved LP2011 allocation): 28 ha
- Other saved LP2011 allocations: 13 ha
- Didcot A Power Station: 29 ha
- North Grove Monks Farm: 6 ha
- Faringdon South Park Road: 3 ha
- Milton Hill Business and Technology Centre: 11.2 ha
- Harwell Campus (other land outside of the EZ): 35 ha

A key objective relates to employment growth within the Science Vale, which comprises the majority of land within the South East Vale Sub Area (see Figure 3.1, above). Science Vale sits at the southern end of the Oxfordshire 'Knowledge Spine'; arguably one of the most important growth corridors in the region. Science Vale is established as a key growth area by the Oxfordshire Strategic Economic Plan and is the focus of significant investment from the Oxford and Oxfordshire City Deal, announced in 2014. The City Deal seeks to support a wave of innovation-led growth. The research and development activity that takes place in Science Vale is primarily located within the three centres for science, at Harwell Campus, Culham Science Centre and Milton Park. These centres contain certain facilities that are unique to the UK, including the Diamond Light Source (the UK's national synchrotron facility), the ISIS neutron facility and the JET (Joint European Torus) facility. Outside these centres for science, there is an array of businesses, including Williams F1 headquarters at Grove.

Town centres

The NPPF sets out the Government's approach towards "Ensuring the vitality of town centres". Two of the key aims of the NPPF are the need to take account of the different roles and character of different areas and; promote vitality of urban areas (paragraph 17). The NPPF (paragraph 23) indicates that, 'in drawing up local plans, Local Planning Authorities should, amongst other things:

- recognise town centres as the heart of their communities and pursue policies to support their viability and vitality;
- define a network and hierarchy of centres that is resilient to anticipated future economic changes; and
- define the extent of town centres and primary shopping areas, based on a clear definition of primary and secondary frontages in designated centres, and set policies that makes clear which uses will be permitted in such locations.

LPP1 seeks to maintain and enhance the vitality and viability of the Vale's town centres and local shopping centres and to strengthen their service centre roles. The Spatial Strategy reinforces the service centre roles of the Vale's main settlements, by concentrating retail provision in the town centres of Abingdon-on-Thames, Wantage and Faringdon and the smaller centres of Grove and Botley. Key policies are Core Policy 10 (Abbey Shopping Centre and the Charter) and Core Policy 11 (Botley Central Area). Core Policy 32 (Retail Development and other Main Town Centre Uses) then supports proposals for new retail development and other town centre uses in the Market Towns and Local Service Centres.

The Retail and Town Centres Study Update (2017) presents an audit of the main town centre, primary and secondary shopping frontage boundaries, and updated the retail and leisure capacity predictions to accommodate the additional growth proposed in LPP2. The study indicates that previous saved policies from the 2011 Local Plan have been successful in retaining existing retail uses and preventing changes of use to non-A1 uses in the town centres. The percentages of Class A1 uses within the district's town centres are all at, or above, the national average of 56.5% and show that:

- Within the primary frontages in Abingdon the proportion of Class A1 retail uses within the primary frontages was 62.6% at the end of 2016. The equivalent figure for secondary frontages was 46.5%. The number of class A1 and other A uses has not reduced significantly and the number of vacant units has reduced.
- In Wantage the primary frontages have 59.2% Class A1 and the secondary frontages 54.2%.
- In Faringdon town centre the proportion of Class A uses is 56.8%

Natural environment

At the European level, the EU Biodiversity Strategy was adopted in May 2011 in order to deliver an established new Europe-wide target to 'halt the loss of biodiversity and the degradation of ecosystem services in the EU by 2020'.

The NPPF states that planning policy should:

- contribute to the government's commitment to halt the overall decline in biodiversity by minimising impacts and achieving net gains in biodiversity wherever possible;

- promote the ‘preservation, restoration and recreation of priority habitats, ecological networks’ and the ‘protection and recovery of priority species’; and
- plan for biodiversity at a landscape-scale, across local authority boundaries.

LPP1 seeks to protect and enhance biodiversity through Core Policy 46, and ensure that new development provides an appropriate contribution to delivering Green Infrastructure (Core Policy 45), taking account of the Council’s Green Infrastructure Strategy, which sets out a vision for the creation of an interconnected, multifunctional network of green and blue spaces and corridors in the Vale.

Concentrations of biodiversity assets are evident from Figure D. The figure shows a concentration of assets – including ancient woodland, several local wildlife sites (LWSs), several nationally important sites of special scientific interest (SSSIs), and two internationally important special areas of conservation (SAC) – to the north and west of Abingdon (Cothill Fen) and in the Western Vale (Hackpen Hill). There is also an SAC just outside the district, to the north (Oxford Meadows).

Much of this area is also designated as a Conservation Target Area (CTA), i.e. an area where there is an established opportunity to contribute to the Biodiversity Action Plan Targets in the South East Biodiversity Strategy (February 2009), through creating, restoring and enhancing priority habitats. Concentrations of habitats are more easily deciphered from Figure E; in particular, a concentration of woodland along the Corralian Ridge is evident, as are significant patches of wetland habitat associated with the River Ock.

Water courses are not evident from the figures below, despite comprising a key element of the Vale’s ecological and green (blue) network. Of specific note are the Vale’s globally rare chalk streams. There are only around 200 chalk streams in the world, and 85% of these are found in England. LPP1 recognises the contribution of waterways and river corridors to the character, biodiversity and landscape quality in the Vale.

Figure D: Biodiversity assets

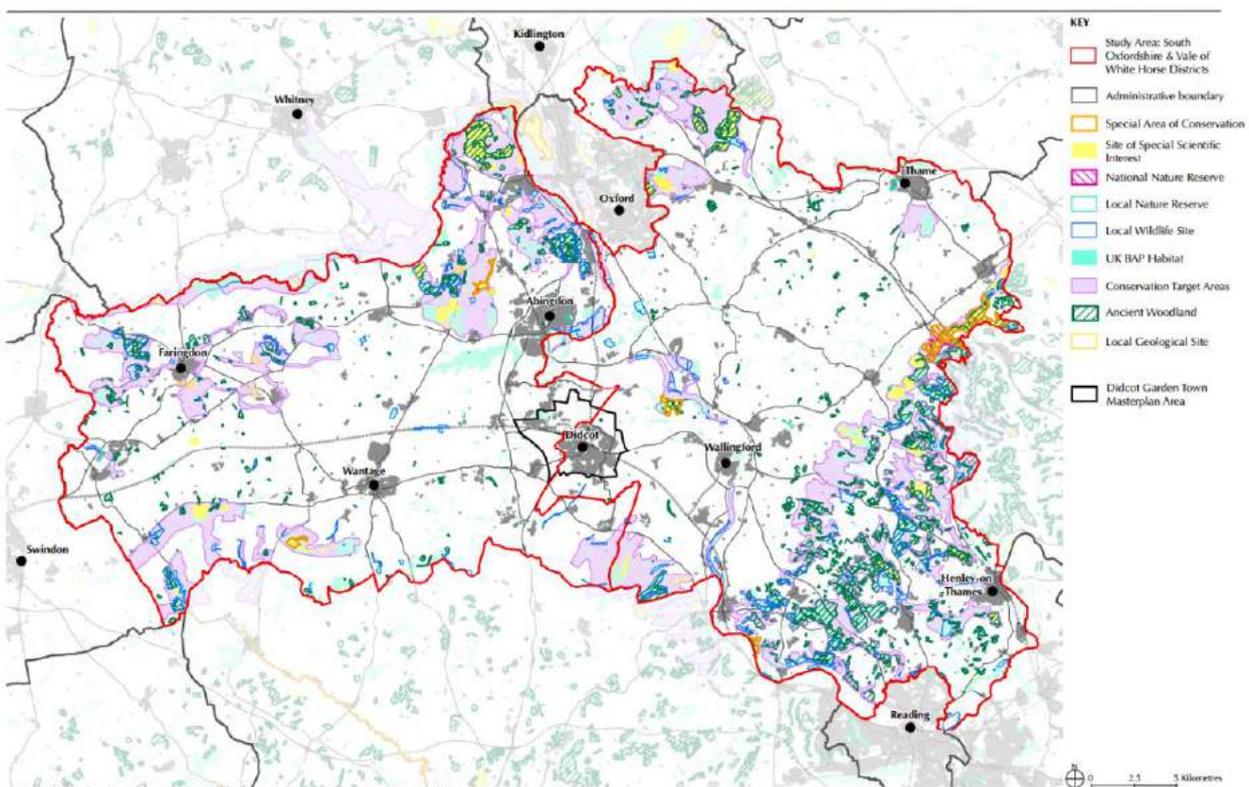
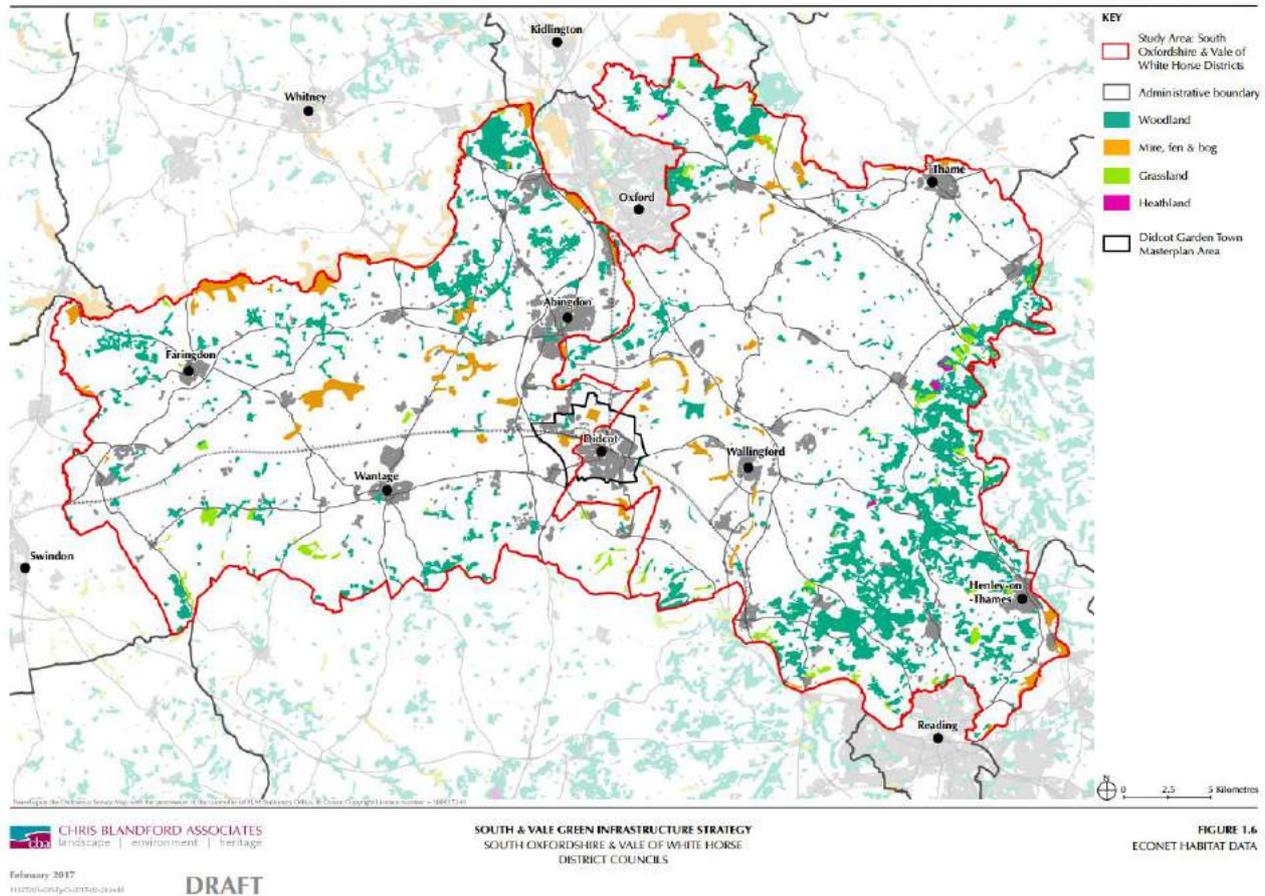


Figure E: BAP Priority Habitat



Heritage

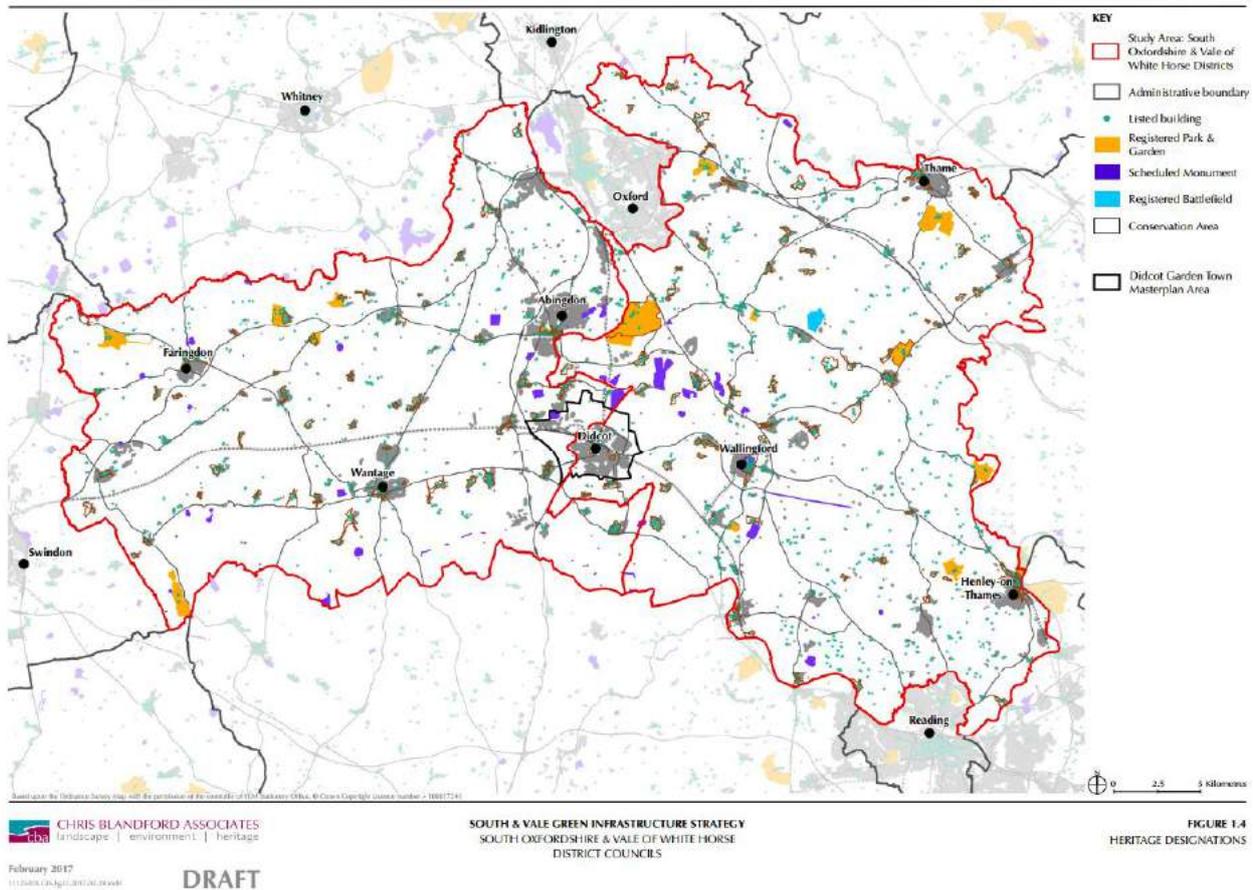
National policy and guidance places significant emphasis on the need to conserve heritage assets in a manner appropriate to their significance so they can be enjoyed and continue to contribute towards the quality of life of current and future generations. LPP1 seeks to ensure all new development conserves and enhances the natural, historic, cultural and landscape assets of the Vale. Core Policy 39 (Historic Environment) sets a framework to ensure proposals conserve and enhance heritage assets.

The Vale of White Horse benefits from substantial heritage assets that make a positive contribution towards the district's local character and distinctiveness. Assets also have wider social, cultural, economic and environmental benefits by encouraging community pride, and promoting tourism. Heritage assets may be 'designated' or 'non-designated'. Whilst difficult to decipher, there are a number of points to take from Figure F, which show heritage assets within the District. Points to note include –

- Most, but not all settlements are associated with a conservation area (there are 52 in total). Abingdon and Wantage are both associated with two conservation areas.
- There is a 'string' of historic villages with conservation areas along the springline at the foot of the downs scarp slope, either side of Wantage, with East Challow and Rowstock notable for not having a conservation area.
- Other notable settlements without conservation areas include Botley, Wootton, Radley and Kennington (N.B. settlements without conservation areas tend to be in the Abingdon and Oxford Fringe area).
- Most settlements have extended well beyond their conservation areas, although there is considerable variation. For example, Marcham has extended east beyond its conservation area.

- There are concentrations of listed buildings outside of conservation areas, for example at Shippon and Kingston Bagpuize with Southmoor. Also, there listed buildings associated with certain roads, for example through Grove and to the north of Wootton.
- There is a high concentration of scheduled monuments in the Didcot/Abingdon area, associated with ancient settlement sites.
- Large Registered Parks and Gardens are found only in the Western Vale, although there are some smaller examples in the east of the District.

Figure F: Heritage assets



Landscape

Key aims of the NPPF are the need to contribute to conserving and enhancing the natural environment, to take account of the different roles and character of different areas and recognising the intrinsic character and beauty of the countryside (paragraph 17).

The following LPP1 policies are of key relevance:

- Core Policy 44 (Landscape) ensures the Vale’s distinctive and intrinsic landscape and key features are protected from harmful development
- Core Policies 37 and 38 ensures new development responds positively to the surrounding local context, including key features and assets within the Vale’s landscape.

The Landscape Character Assessment (2017) characterises each of the following Landscape Character Types (LCTs): Downs Open Farmland, Downs with Woodland, Downs Scarp, Downs Footslopes, Corallian Limestone Ridge with Woodland, Wooded Corallian Limestone Ridge, River Floodplain, River Valley Floor, Lower Vale Farmland, Upper Vale Farmland, Upper Vale with Woodland, Former Airfield. Given the spread of sites in contention for allocation, understanding of the following LCTs is particularly pertinent (moving north to south) –

- The Wooded Corallian Limestone Ridge protrudes above the clay and alluvial landscapes to the north and south. The LCT includes extensive tracts of woodland which are predominantly ancient woodland. The Woodland is prominent in the local landscape, located on high ground including Wytham Hill to the north-west of Oxford, Boars Hill to the south-west of Oxford, and on the north side of the ridge near Appleton. The density of woodland breaks down in places, giving way to groups of low density dwellings set within surrounding tree cover, in particular around Boars Hill. This LCT is not extensive, and not likely to be a focus of housing growth, given its sensitivity.
- The Corallian Limestone Ridge wraps around the LCT discussed above, and is much more extensive, stretching east-west across the north of the District, affecting settlements including Cumnor, Wootton, Marcham and Kingston Bagpuize. The north facing slopes are relatively steep, whilst the south facing slopes are gentler and form a transition to Upper Vale to the south. It is predominantly a landscape of relatively large scale arable farmland, with areas of estate land, and pasture and smaller scale parcels of land including paddocks associated with settlement. There are dispersed blocks of significant woodland across the landscape, including areas of ancient woodland. There are nucleated settlements, of varying size, as well as scattered large country house and farmsteads, often located on high points. The eastern end of the Corallian Limestone Ridge has intervisibility with the city of Oxford.
- The Lower Vale Farmland LCT, together with the Upper Vale Farmland LCT, forms a band of low lying farmland through the centre of the District between the rising slopes of the Corallian Limestone Ridge to the north and North Wessex Downs to the south. The Lower Vale consists of large scale, intensively managed arable farmland and pasture resulting in a relatively open landscape, with views of high ground on the horizon. Lower Vale Farmland landscapes are associated with Grove, East Hanney and Drayton.
- Other settlements within the South East Vale fall within the Downs Footslopes LCT. The footslopes are formed by a shelf of rolling landscape and hills, descending gently north from the foot of the downs scarp. It consists of a medium to large scale landscape, of mainly arable farmland with some significant areas of population. A number of watercourses flow north from chalk springs towards the River Ock and Thames, and form a focus for rural settlement, including villages to the west, known as 'spring line' villages. There are views across the farmland of the prominent Downs Scarp to the south, as well as more distant glimpsed of the, often wooded, Corallian Limestone Ridge on the horizon to the north.

Pollution

The NPPF aims to reduce pollution (paragraph 17) by preventing new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land stability (paragraph 109). The NPPF also requires remediating and mitigating.....contaminated and unstable land where appropriate (para 109).

The NPPF also establishes that to ensure high quality design for new development and to provide a good standard of amenity for existing and future occupants planning policies should: Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation (paragraph 125).

The following LPP1 policies are of key relevance:

- Core Policy 43 (Natural Resources) ensures that land is of a suitable quality for development and that remediation of contaminated land is undertaken.
- Core Policy 44 (Landscape) ensures the need to protect the key landscape features of the Vale against intrusion from light pollution, noise and motion.

Noise pollution can lead to harmful impacts on health and well-being, which may be from direct or indirect sources, for example, through the loss of sleep or by affecting relaxation and social interaction. The planning process can assist by ensuring that, as far as possible, 'noise sensitive' developments, such as dwellings, schools, hospitals and nursing homes are located away from existing sources of noise. Furthermore, development types that may be associated with generating noise, can be located in areas where noise will be less likely to lead to harmful impacts.

Air quality

The NPPF is clear on the importance of taking into account the potential impacts of air quality when assessing development proposals. Furthermore, legislative limits are set for concentrations of major air pollutants that may impact on public health, amenity and local biodiversity, such as airborne particulate matter and nitrogen dioxide.

Within LPP1, criteria vi) of Core Policy 43 (Natural Resources) applies to development proposals located within an Air Quality Management Area (AQMA). LPP2 will need to consider including an additional policy to assess proposals adjacent or near to an AQMA and to setting the necessary measures to mitigate such impacts.

Air quality within the Vale of White Horse is predominantly good, although there are specific areas where air pollution exceeds the levels set by European and UK regulations. For this reason, the Council has declared three Air Quality Management Areas (AQMA), which relate to elevated levels of nitrogen dioxide (NO₂). These are located at Abingdon-on-Thames, Botley and Marcham. AQMAs are sensitive to increases in traffic, and there is also the possibility of rising average temperatures worsening air quality; however, on the other hand, a shift to electric vehicles could help to alleviate poor air quality. Also, in the case of the Abingdon AQMA, the planned new slips at Lodge Hill (creating a 'Diamond Interchange') will reduce traffic through the AQMA, once delivered, as residents approaching the north and east of Abingdon from the south will use the new slips.

Climate change mitigation

The Government has set a target under the Climate Change Act 2008 to reduce CO₂ emissions by 80% by 2050, with an interim target of 34% by 2020, both against a 1990 baseline. The Government requires local planning authorities to adopt proactive strategies to mitigate climate change. For example, the impact of new development on climate change can be reduced by locating it where possible in places where it is not entirely necessary to rely on having access to a car; and by the design of carbon neutral homes which seek to achieve energy efficiency through sustainable construction and by increased use of renewable energy.

With regards to 'sustainable design and construction', the Local Plan's more limited, following Government's withdrawal of the Code for Sustainable Homes in March 2015. There is, however, the potential to minimise carbon emissions from the built environment by supporting decentralised, low carbon heat and electricity generation/transmission.

Within LPP1 Core Policy 40 (Sustainable Design and Construction) sets out the requirement for new development to incorporate measures to ensure resilience to climate change, whilst Core Policy 41 (Renewable Energy) sets out the Council's approach to supporting proposals for renewable energy.

Climate change adaptation

The NPPF states that planning plays a key role in helping shape places to minimise vulnerability and provide resilience to the impacts of climate change. The NPPF also states that local planning authorities should adopt a proactive approach to mitigating and adapting to climate change in line with the objectives and provisions of the Climate Change Act 2008. The NPPF stipulates that local plans should take account of climate change over the long term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape.

Flood risk is a key climate change adaptation issue locally. Flooding arises from a number of sources including rivers and streams (fluvial flood risk – see Figure B, above), surface water run-off, rising groundwater and sewer overflow. Increases in peak rainfall intensity and river flow as a result of climate change, could result in more frequent and severe flood events. This could mean that a site currently in a lower risk zone (for example Zone 1) could in future be in a higher risk zone (for example Zone 2).

Water resource issues are also appropriately discussed under the banner of 'climate change adaptation'. A Water Cycle Study (WCS) has recently been completed (AECOM, 2017),

A full WCS was prepared for the VoWH LPP1 in 2014. LPP1 identified the areas that will receive growth and the number of houses that will be allocated within the district. The assessment found that Drayton, Faringdon, Kingston Bagpuize, Oxford and Shrivenham WwTWs are particularly constrained as upgrades would be required by 2021 to enable them to accommodate expected growth without failing their consents. It was recommended that improvements were made to water efficiency to ensure water resources availability in the district.

A Water Cycle Study (WCS) has recently been completed (AECOM, 2017). Four WwTWs (Didcot, Kingston Bagpuize, Oxford and Wantage) do not currently have sufficient flow capacity and/or have insufficient treatment processes to accept all future development proposed within the plan period. Therefore solutions are required in order to accommodate the growth to ensure that the increased wastewater flow discharged does not impact on the current quality of the receiving watercourses, their associated ecological sites and also to ensure that the watercourses can still meet with legislative requirements.

The WCS has concluded that feasible solutions are possible to ensure legislative objectives are met. However, this WCS recommends that the Vale of White Horse District Council, the Environment Agency, and Thames Water Utilities Limited continue to work together to determine the nature of upgrades which will need to be implemented in order to conclude the timing and quantity of development that can be accommodated across the District in the early phases of the Local Plan delivery period.

To ensure that the planned level of development within the Plan period does not result in a negative impact upon wildlife both inside and outside of designated sites, it is recommended that the Vale of White Horse District Council and Thames Water Utilities Limited use the results of this WCS to inform the Local Plan documents and asset management plans respectively. By working together, this will ensure that as developments come online there is sufficient capacity available locally to ensure all objectives of the Water Framework Directive (WFD) continue to be met.

APPENDIX III – LARGER SITE OPTIONS: SCREENING

Introduction

As explained within Chapter 6 above, as an initial step (summer 2017) to inform the development of reasonable housing growth alternatives, work was undertaken to screen larger site options. Specifically, larger site options were screened in order to establish a shortlist for appraisal (see Appendix IV).

The **aim of this Appendix** is to present further information on the screening process.

Screening outcomes

Table A lists all larger site options discussed within Appendix B of the Council’s Site Selection Topic paper (i.e. all of those that featured within the shortlist of 30 established in 2016, plus certain additional sites promoted to the Council through the 2017 Preferred Options consultation), plus a small number of additional sites / concepts. Each site is either screened ‘in’ or ‘out’.

Table A: Screening outcomes

Larger site option(s)	In or out?	Commentary
<ul style="list-style-type: none"> • Dalton Barracks • E of Kingston Bagpuize with Southmoor • N of Marcham • NW of Grove • N of Harwell Campus 	In	<ul style="list-style-type: none"> • Within the list of 30 larger site options established in late 2016. • A preferred option in March 2017. • Subsequently determined to remain in contention, on the basis that: being actively promoted; and no new evidence (from appraisal findings / consultation / technical work / engagement) that serves to justify the site being ruled-out.
<ul style="list-style-type: none"> • Milton Heights (x2)⁴³ • Rowstock 	In	<ul style="list-style-type: none"> • Within the list of 30 larger site options established in late 2016. • Included within the reasonable alternatives in March 2017. • Subsequently determined to remain in contention, on the basis that: being actively promoted; and no new evidence (from appraisal findings / consultation / technical work / engagement) that serves to justify the site being ruled-out.
<ul style="list-style-type: none"> • W of Kingston Bagpuize with Southmoor • E of Grove • W of Wantage (x2)⁴⁴ 	In	<ul style="list-style-type: none"> • Within the list of 30 larger site options established in late 2016. • <i>Not</i> within the reasonable alternatives in March 2017. • Subsequently determined to remain in contention, on the basis of new evidence/understanding, including detailed representations received from site promoters. Also, screened-in in order to enable a strategic consideration of issues/opportunities/options at Grove/Wantage and Kingston Bagpuize with Southmoor, both of which are understood to be settlements potentially suited to growth.
<ul style="list-style-type: none"> • Land north of A417, East Hendred 	In	<ul style="list-style-type: none"> • Promoted for the first time through the March 2017 consultation, i.e. not identified as an option in 2016, and indeed did not appear in the March 2017 HELAA. • Subsequently determined to be in contention. Subject to clear landscape constraint; however, the site could feasibly contribute to Science Vale growth objectives.

⁴³ In light of consultation responses received, the decision was taken to split the Milton Heights site option in two.

⁴⁴ In light of consultation responses received, the decision was taken to split the West of Wantage site option in two.

Larger site option(s)	In or out?	Commentary
<ul style="list-style-type: none"> • South of Abingdon-on-Thames 	Out	<ul style="list-style-type: none"> • Within the list of 30 larger site options established in late 2016. • Included within the reasonable alternatives in March 2017. • Subsequently ruled-out, on the basis that: not being actively promoted / no new evidence received to address the constraints to growth at the site; and a decision to support development would be premature ahead of a Government decision on the Oxford to Cambridge Expressway preferred route.
<ul style="list-style-type: none"> • N of Abingdon-on-Thames • NE of Drayton • S of Drayton • W of Drayton • E of East Hanney • S of East Hanney • Fyfield • S of Kingston Bagpuize • N of Radley • N of Steventon • N of Wootton; • Appleford • W of Harwell; • SE of Sutton Courtenay 	Out	<ul style="list-style-type: none"> • Within the list of 30 larger site options established in late 2016. • Subsequently, the March 2017 conclusion was confirmed, with none of these sites being actively promoted as a larger site / no evidence received to address the constraints to growth at the site. <p>N.B. several of these sites are examined for their potential to deliver a smaller site.</p>
<ul style="list-style-type: none"> • South West of Botley • South of Cumnor • South of Radley • South of Wootton • East of Wootton 	Out	<ul style="list-style-type: none"> • Within the list of 30 larger site options established in late 2016. • Subsequently, the March 2017 conclusion was confirmed, despite the sites being actively promoted for strategic scale development through the consultation. All benefit from good proximity to Oxford; however, all are greenfield sites within the Green Belt and generally make a significant contribution to Green Belt purposes, and hence allocation would need the Council to be able to demonstrate an ‘exceptional circumstance’. There is considerable uncertainty surrounding whether such an exceptional circumstance could be demonstrated recognising the number of homes to be provided for through LPP2 (see Section 6.2) and the non-Green Belt options that exist (and recognising the option of Dalton Barracks, which whilst within the Green Belt offers an opportunity to make use of previously developed land). <p>N.B. one of these sites (South of Cumnor) is being examined for its potential to deliver a smaller site.</p>
<ul style="list-style-type: none"> • Land at Hurst Lane, Cumnor (Botley) 	Out	<ul style="list-style-type: none"> • Promoted through the 2017 Preferred Options consultation; however, the proposal was not detailed, with the scale of development envisaged not made explicit. Within a sensitive landscape, and in very close proximity to a SSSI (Hurst Hill). Recreational space was proposed a number of years ago on part of this site and was appealed. At appeal, the Inspector considered the site to have high landscape sensitivity.

Larger site option(s)	In or out?	Commentary
<ul style="list-style-type: none"> Land north of Brick Kiln Farm, Cumnor Hill (Botley) 	Out	<ul style="list-style-type: none"> Promoted for the first time in early 2017, i.e. not identified as an option in 2016, and indeed did not appear in the March 2017 HELAA. Ruled-out due to constraints; half of the site is a Local Wildlife Site.
<ul style="list-style-type: none"> South of Harwell Campus 	Out	<ul style="list-style-type: none"> Promoted for the first time through the March 2017 consultation (although was identified by the Council as an option in 2016, and did not appear in the March 2017 HELAA). Ruled-out due to constraints; the site comprises an area of open farmland within the setting of the AONB, and indeed would be highly visible from the Ridgeway National Trail.
<ul style="list-style-type: none"> New settlement north or south of East Hanney (location unspecified) 	Out	<ul style="list-style-type: none"> An initial officer review has not identified any notable opportunity. Garford and Frilford are located to the north, but both are small settlements and are heavily constrained by flood risk and/or nature conservation designations. Grove is located to the south, but is already set to see large scale growth (with land to the north of Grove allocated for 885 homes through LPP1), hence there is no strategic argument for a new settlement in this area.
<ul style="list-style-type: none"> Garden Village (location unspecified) 	Out	<ul style="list-style-type: none"> The only site being considered as a Garden Village is Dalton Barracks, discussed above. In 2016 the Council also identified Fyfield as a potential option (area of search); however, that option was subsequently ruled out, as discussed above.
<ul style="list-style-type: none"> Further expansion of Didcot Garden Town 	Out	<ul style="list-style-type: none"> LPP1 allocated 2,550 homes at Valley Park and 800 homes at North West Valley Park, thereby allocating all of the land, within Vale of White Horse District, that falls to the west of Didcot and to the east of the A34. Larger sites are also being examined to the west of the A34 (as discussed above), on the basis of their proximity to Didcot Garden Town / location in 'Science Vale'; however, if allocated these sites would not form part of the Garden Town.

APPENDIX IV – LARGER SITE OPTIONS: APPRAISAL

Introduction

As explained within Chapter 6 above, as an initial step (summer 2017) to inform the development of reasonable alternative housing growth scenarios, a shortlist of larger site options was established – see Figure A and Table A - and subjected to appraisal.

The aim of this appendix is to present an informal appraisal of the options.

Figure A: The larger site options (2017)

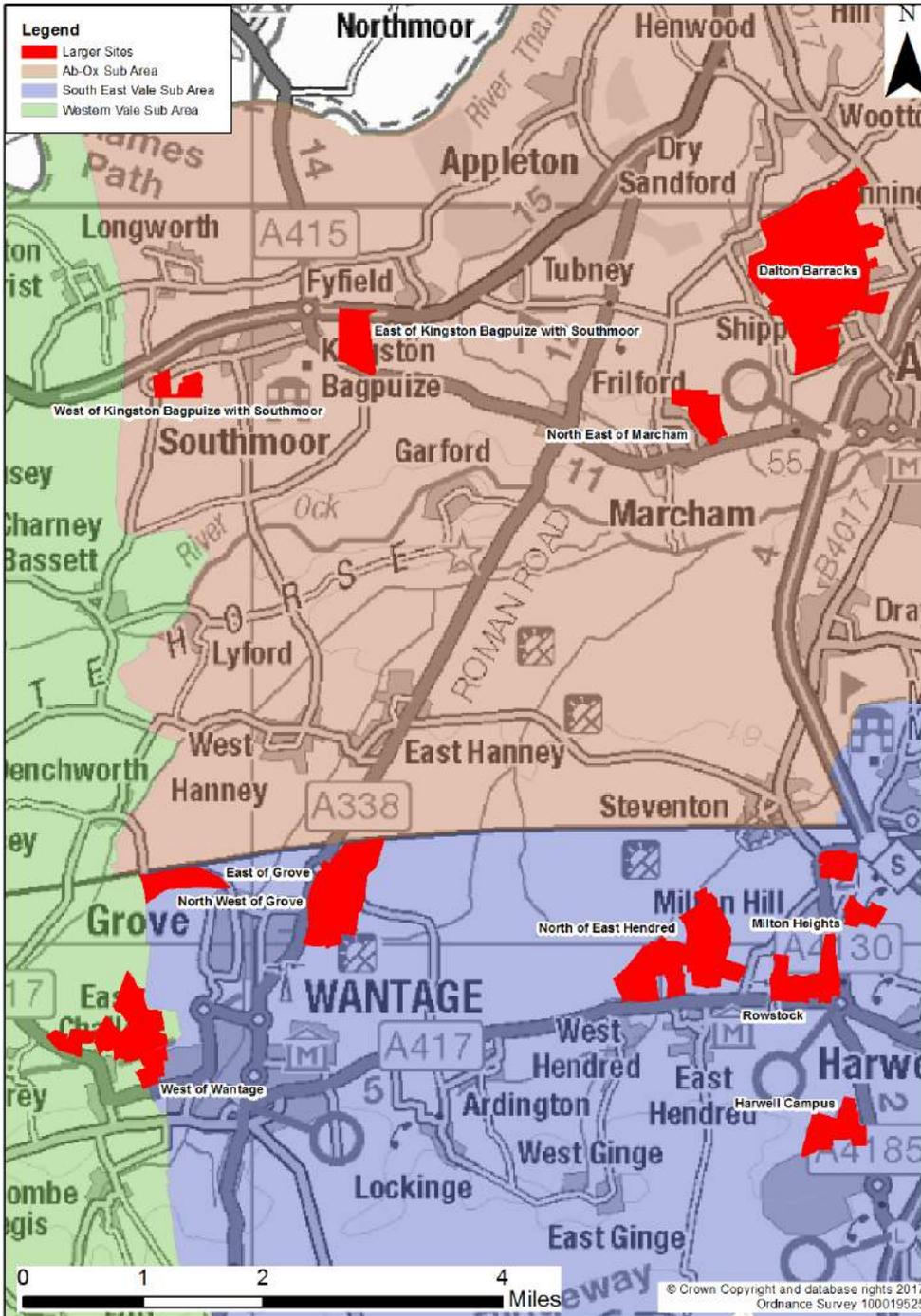


Table A: The larger site options (2017)

Site	No. homes ⁴⁵	Sub Area	
Dalton Barracks	1,200	Ab-Ox	
Kingston Bagpuize with Southmoor	East		600
	West (south) ⁴⁶		400
North of Marcham	400		
North of East Hendred	1,000	SE Vale	
Grove	North West		400
	East		600
Harwell Campus	1,000		
Milton Heights	East		300
	West		300
Rowstock	800		
West of Wantage	North		800
	South	220	

⁴⁵ In some cases the site is not being promoted for specified number of homes. In such cases the Council (working with AECOM) has determined an approximate number of homes, for the purposes of testing.

⁴⁶ Two sizeable sites are being promoted to the west of Kingston Bagpuize with Southmoor. The southern site is being promoted for 400 homes, whilst the northern site is being promoted for 'up to 200 homes'. The decision was taken to consider the northern site as a smaller site option, i.e. make the assumption that it would deliver under 200 homes.

Methodology

Table B presents a narrative on the 13 larger site options, under the following 12 headings –

- Homes
- Services and facilities
- Movement
- Health
- Inequality and exclusion
- Economy
- Natural environment
- Heritage
- Landscape
- Pollution
- Climate change mitigation
- Climate change adaptation

Within each narrative there is a discussion of sites that perform notably well, or notably poorly. The aim is not to systematically discuss each of the 13 larger site options in terms of each of the 12 SA objectives.

Each of the 12 narratives begins with a brief discussion of evidence-base and key issues, drawing upon the discussion presented within Appendix II above and site specific understanding generated through the informal consultation on larger site options (October 2016) and formal consultation on Preferred Options (March 2017).

Table B presents conclusions on each site in turn, drawing upon the analysis presented in Table B. The opportunity is also taken to briefly conclude on groups of sites.

Appraisal findings

Table B: Informal appraisal of larger site options under the SA framework headings

Sustainability Objective: Homes

It is difficult to differentiate between the site options, in terms of the potential to support the achievement of housing objectives. All sites are large enough to ensure that an appropriate housing mix can be delivered (to include a proportion of affordable housing in accordance with policy), and it is not appropriate to suggest that larger sites are preferable, given that smaller sites can be delivered in combination to the same effect.

One site that stands-out as performing well is **Dalton Barracks**, on the basis that it is the site best linked to Oxford, which is where unmet housing needs are arising from. Concerns have been raised in the past regarding Dalton Barracks links to Oxford, recognising that there are other settlements within the Green Belt that are better linked to Oxford; however, concerns are now somewhat allayed, on the basis that there is understood to be good potential to create a direct link between Dalton Barracks and the Lodge Hill Public Transport Interchange, which in turn will enable access to Oxford, via premium bus routes and on one of the three Rapid Transit Lines into the city.

Another site that stands out as performing well is **Harwell Campus** given the potential to meet particular housing needs, namely the needs of those wishing to ‘live work and play’ at the campus. There is the potential for innovative higher density housing (e.g. with shared living areas), suited to campus employees.

Finally, there is a need to consider the possibility that the deliverability of some sites is more uncertain than others, thereby leading to a risk that the intended ‘trajectory’ of housing delivery will not be achieved, with periods over the course of the plan-period where there is not a five-year supply of deliverable sites (and hence a risk either of low housing delivery, or delivery of housing via ‘planning by appeal’ in less suitable locations). Sites that stand-out as having uncertain deliverability include –

- **Dalton Barracks** – Whilst the Ministry of Defense (MOD) has indicated that the site will be released no later than 2026, and also that homes can come forward on the site ahead of the military vacating the site, albeit there may be some risk of slippage if the MOD policy were to change.
- **North West Grove** – Delivery is uncertain given the scale of committed growth at adjacent sites (Monks Farm and Grove Airfield); however, as of summer 2017 there is increased certainty, following planning permission being granted at Grove Airfield in 2017.
- **All sites at Wantage/Grove** - LPP1 allocations are in place to deliver 4,885 homes over the plan period, which equates to a very high growth strategy; as such, the housing market might not support additional

growth (i.e. there would be a risk of supply outstripping demand, leading to decreased prices, and hence a situation whereby house-builders choose to delay delivery).

- **Milton Heights** – Deliverability could well prove dependent on further upgrades to the ‘Milton Interchange’ junction of the A34 and the A4130, which are unlikely in the near future given that a major upgrade was completed in only 2016. Whilst numerous sites would lead to Oxford-bound journeys through Milton Interchange, Milton Heights is particularly reliant on the junction.

Sustainability Objective: Services and facilities

Most sites are well located in respect of enabling access to a town or larger village centre, including via walking, cycling and public transport. These settlements all contain a range of services and facilities.

Sites at **Rowstock** and **Milton Heights** are associated with a smaller village within the settlement hierarchy (LPP1 Core Policy 3); however, the assumption is that strategic development would only be acceptable alongside delivery of new community facilities.

At Rowstock the site promoters have suggested (through their response to the 2017 Preferred Options consultation) that: *“Utilising the scoring system employed to rank the Vale’s existing settlements as set out within the 2009 Settlement Study, the new village, incorporating existing facilities, scores 23. This is equal to the Vale’s three most sustainable large villages of Kennington, Wootton and Shrivenham.”* Another consultee stated (though that 2016 informal consultation) that: *“700 houses would be unable to fully fund a new 1FE primary school, let alone the preferred size of a 2FE school”*); however, as the capacity of the site has now been increased to 800 there is certainty regarding the ability to deliver a one form entry school.

At Milton Heights it is noted that there are facilities and services within a short walk equivalent to those offered by a larger village (indeed, Core Policy 4 identifies Milton Heights as standing out from other smaller villages in this respect). Also, it is noted that the LPP1 allocation (400 homes) gained full planning permission (458 homes) in 2017, and will provide land / contribute funding for an expanded primary school.

Sites also mostly benefit from good accessibility to one or more of the larger settlements (Oxford, Didcot, Abingdon-on-Thames and Wantage). **Kingston Bagpuize with Southmoor** is relatively distant from a higher order centre, but benefits from being on the main bus corridor between Swindon and Oxford (3 busses per hour; plus a less frequent bus route links Kingston Bagpuize with Southmoor to Witney and Abingdon-on-Thames). Kingston Bagpuize with Southmoor is notable for not having a GP surgery; however, Oxfordshire Clinical Commissioning Group (OCCG) is not seeking delivery of a surgery; rather, OCCG is content for developers at Kingston Bagpuize with Southmoor to contribute funding for enhanced facilities at Faringdon (8 miles distant, but well linked by bus).

With regards to primary education infrastructure, there is potential to ensure good access to primary schools with capacity at the majority of locations, with larger sites having potential to deliver a new school and certain existing schools having the potential to expand, funded by development; however, some issues have been identified at Marcham. The existing village school expanding to 1 form entry to meet already planned/permitted growth and there understood to be barriers to further expansion. Oxfordshire County Council objected to the Preferred Options (2017) proposal to deliver 520 homes at Marcham, on primary school grounds, stating: *“This scale of development would not make a new school viable or sustainable. Further development of the proposed scale would require Marcham Primary School to expand to 1.5 or 2 form entry. The current site of Marcham Primary School is only 0.9ha, which is already below the county council’s standard for a 1 form entry school and barely meets DfE minimum standards for a 1 form entry school.* However, concerns may be somewhat allayed by the expectation that primary schools would be provided as part of the proposed Dalton Barracks scheme, including a school close to the site’s southern extent, in proximity to Marcham. A new primary school is also proposed at the East of Kingston Bagpuize with Southmoor site, which may reduce pressure on Marcham primary school.

With regards to secondary education, there are capacity issues in the Abingdon-on-Thames catchment, which includes Dalton Barracks, Marcham and Kingston Bagpuize (the latter also falling within the catchment of Faringdon College); however, a new secondary school is proposed at Dalton Barracks.

Finally, it is noted that no site been identified as particularly suited to delivering a strategic medical facility. Oxfordshire Healthcare Transformation’ is ongoing (see www.oxonhealthcaretransformation.nhs.uk), with a consultation on phase two forthcoming, expected to address provision of primary care, community hospitals and maternity care.

Sustainability Objective: Movement

Traffic congestion is a major issue at certain locations on the strategic road network (A34, A420, A4130, A417, A338, A415), and so a considerable amount of work has been completed, and remains ongoing, examining how best to accommodate housing growth whilst managing the transport impacts. The County Council consulted on a draft Local Transport Plan in 2016 ('Connecting Oxfordshire'),⁴⁷ and also undertook work to assess 36 'spatial options' for strategic housing growth (ten in the Vale) with a particular focus on transport / movement criteria.⁴⁸ At the district-level, ongoing Evaluation of Transport Impacts (ETI) has involved modelling the traffic impacts of housing growth on roads and junctions. Numerous housing growth scenarios have been examined through the ETI, both with and without mitigation (i.e. infrastructure upgrades) implemented. Taking all settlements in turn -

- **Dalton Barracks** - is located between the two strategic transport corridors into Oxford (A34 and A420), although the A34 junction at Abingdon-on-Thames (Lodge Hill), with its funded new slips and proposed P&R, is relatively close (c.2km); and Abingdon-on-Thames Town Centre is within easy cycling distance along an existing route (Radley station is also within cycling distance; however, there is low potential to cycle to Oxford). The suitability of this site, from a transport perspective, very much depends on measures implemented to ensure ease of access to the proposed Lodge Hill P&R. The delivery of Lodge Hill P&R is a consideration. OCC strike a note of caution through their Preferred Options (2017) consultation response, stating: "*Delivery of an attractive, reliable and frequent park and ride offer at Lodge Hill (and Cumnor) is dependent upon providing bus priority measures not only along the A34 as mentioned in the Part 2 Plan, but also across the wider Oxford area. Without the delivery of both, the desirability and attractiveness of the park and ride and Dalton Barracks as a sustainable location would be undermined.*" [emphasis added]. The Public Transport interchange at Lodge Hill is a commitment in the adopted Local Transport Plan and emerging Oxfordshire Infrastructure Plan (OXIS).
- **Grove** - new homes would be at the very western extent of the Science Vale, but Grove is a 'service centre' in the settlement hierarchy and nearby Wantage is a 'market town' (indeed Wantage and Grove are the only higher order settlements in the South East Vale Sub Area). Links between Grove and Wantage are set to improve, in particular cycle links.⁴⁹ Furthermore, committed growth in the Wantage/Grove area is supporting significant enhancements to bus services to Milton Park and Oxford; and additional growth at Grove supports the case for a new train station. Cycling to Science Vale employment locations will not be as easy from Grove as from Wantage (see discussion below); however, the Local Transport Plan (LTP): Science Vale Cycle Strategy does state: "*Longer term, a... route possibly running in the shadow of the railway line between Grove and Steventon [and then on to Milton Park] could be created.*" Perhaps most significantly, the North West Grove site would enable delivery of a link road, and therefore support effective masterplanning of Grove's expansion. Comments received from OCC in relation to the North West Grove site, at the Preferred Options stage, included:

– "... would take advantage of planned investment in the Wantage Eastern Link Road and the bus service enhancements planned to support Grove Airfield and other developments ..."

– The case for the station and even further bus service improvements would be strengthened if there is significant housing growth post 2031.

– It's impossible to know at this stage what the level of service will be through the various developments in Grove and Wantage... [However] it's highly unlikely that a route on Main Street could also serve North West of Grove without making the route unattractive to those not using it from North West of Grove. It could be that the parts of the North West Grove site are too remote from a bus service..."

Focusing on the East Grove site, the site promoters (through the 2017 Preferred Options consultation) sought to highlight their site as a good location for a new train station, stating: "*It is acknowledged that the emerging Local Plan identifies two other potential sites that could be used to deliver a new rail*

⁴⁷ See https://consultations.oxfordshire.gov.uk/consult/ti/CO_LTP4/consultationHome

⁴⁸ See Box 6.1 of this report and <https://www.oxfordshire.gov.uk/cms/content/oxfordshire-growth-board>

⁴⁹ As stated within the Oxfordshire Local Transport Plan (LTP): Science Vale Cycle Strategy: "*Our strategy will be to create (or upgrade) a route to link Grove and Wantage. This will be essential to ensure cycling is an attractive option for residents of the existing settlements and the new housing developments. In addition this route will ensure that both Grove and Wantage are linked into the network of other Science Vale Premium Routes.*" See <https://www.oxfordshire.gov.uk/cms/content/ltp4-area-strategies>

station. However, these are not considered to be as viable... on the basis one appears to be of insufficient size to cater for a railway station that would be commercially viable (namely the Grove West Farm site) and the other being peripherally located from Station Road (namely the land to the north of the Denchworth Road site)...” The promoters also sought to highlight that: “The site is well located to the existing bus network with the closest bus stops located adjacent to the Station Road/F1 Williams roundabout.” With regards to the train station matter, latest understanding is that the east of Grove site is not suited to delivering a new station, due to a range of deliverability and engineering issues. Whilst land within the East of Grove site was safeguarded for a possible new station in LPP1 (see Appendix E: Land for Safeguarding for future transport schemes), the proposal is now to remove that safeguarding (see LPP2 Appendix B).

- **Harwell Campus** - OCC were supportive, through the 2017 Preferred Options consultation, including on the basis that: the scheme would “provide homes close to jobs, supporting growth of this nationally and locally important employment site”; and residential development will lead to demand for bus services throughout the day and “contribute to making 4 buses per hour between Oxford and Harwell commercially viable in the long term.” The existing bus service is half hourly to Wantage (westbound) and Didcot (eastbound) – of which one bus per hour continues to Abingdon-on-Thames and the other to Oxford, both via Milton Park. One *direct* bus per day operates to/from Oxford via the A34, and two to Oxford via Abingdon-on-Thames. Four buses per hour would equate to an excellent service; however, it is noted that the site is beyond 400m of the existing route. The site also benefits from direct access to National Cycle Network route 544, which passes through the site, linking to Didcot and Wantage, and improved cycle links west to Wantage are focus of the Oxfordshire Local Transport Plan (LTP): Science Vale Cycle Strategy.⁵⁰ Finally, it is noted that Harwell Campus performs relatively well as a location for major growth within the Science Vale, from a perspective of wishing to avoid worsened traffic congestion at the A34/A4130 Milton Interchange, and on the A34 itself. This is on the basis that: the new north-facing slips at the Chilton Interchange will provide an alternative point of access onto the A34; and the new Harwell Link Road will provide an alternative route to Didcot.⁵¹
- **Kingston Bagpuize with Southmoor** - is a larger village 10 miles from Oxford and without cycle links to key destinations; however, the village is located on a strategic transport corridor (A420) and has a premium bus service (3/hour). The East of Kingston Bagpuize with Southmoor site is somewhat distant from the village centre, although will provide a new local centre in site and will have good access to the bus route. It would also be expected to deliver a new link road between the A420 and A415, thereby alleviating the current problem of traffic along the A415 through the village. Through the Preferred Options (2017) consultation, OCC stated: “East of Kingston Bagpuize with Southmoor was RAG rated red mainly due to its distance from Oxford and a lack of current or proposed sustainable transport options. However, development here could take advantage of and help strengthen the business case for accelerating investment in remote Park and Ride/Rapid Transit services and improved bus services on the A420 corridor.” As for the West of Kingston Bagpuize with Southmoor site, the site would be more distant from the village centre, and as a smaller scheme there would not be the potential to deliver a new neighbourhood centre / primary school. There is also uncertainty regarding the potential for achieving road access to the eastern part of the site.
- **Marcham** - is located on the A415 – an east-west corridor linking to Abingdon-on-Thames, as opposed to a strategic corridor linking to Oxford and the science Vale to the south (albeit an A34 junction is within 2km). Housing growth to the north would be away from the transport corridor; however, the site is within an easy cycling distance of Abingdon-on-Thames, via an existing shared pedestrian/cycle path. A barrier to easy cycling is difficulty crossing Marcham Interchange; however, it is understood that ‘low level improvements’ would serve to address issues. Traffic passing through the village would be a concern, including given the existing AQMA. A southern bypass for Marcham is safeguarded although there is currently no funding available to deliver this piece of infrastructure.
- **Milton Heights** is a smaller village adjacent to Milton Interchange, a major junction that has seen recent

⁵⁰ See https://consultations.oxfordshire.gov.uk/consult/ti/CO_LTP4/consultationHome

⁵¹ The Harwell Link will run from the B4493 to the A417. It is the latest in a package of transport improvements from the Science Vale Transport Strategy to be built and aims to improve access to the Enterprise Zone and reduce local congestion. It is part of strategy to provide a route from housing development west of Didcot at Great Western Park and Valley Park to Harwell Oxford Campus and support delivery of planned housing growth. An aim is to relieve Harwell village of through traffic by 250 trips per hour, and also relieve congestion elsewhere on the network.

upgrades but still suffers from congestion issues. The village is within walking distance of employment at Milton Park and Harwell Campus, if good access can be secured. There is an existing LPP1 commitment, and further growth could potentially secure delivery of services/facilities and infrastructure upgrades. Options could include a pedestrian/cycle link over A34, and potentially even a bus only bridge. The site promoters sought to highlight, through the 2017 Preferred Options consultation, that -

“The main reason for allocation’s reduction from 1,400 homes to 400 homes was a capacity issue at the Milton Interchange. We believe that this reasoning is no longer valid in light of the fully funded bridge over the A34 (safeguarded in Local Plan Part 2), the planned Milton Slips (safeguarded in Local Plan Part 2) as well as further improvement works to the Interchange itself. Allocating further land at Milton Heights would allow financial contributions to be sought towards these various projects.”

- **Rowstock** is a small village, with very limited local facilities; however, Rowstock is in proximity to Didcot Garden Town, Milton Park and Harwell Campus (which is within walking distance). Rowstock is located on a main bus corridor, but not directly on a priority route for cycle network upgrades.⁵² According to the County Council Rowstock *“is an isolated location, not suitable for walking and cycling and not well-served by public transport although some improved bus services to Didcot/Harwell employment areas are planned on the back of growth at Wantage-Grove.”* However, the site promoters sought to highlight, (through the 2017 Preferred Options consultation) that: *“The village is uniquely located to provide walking, cycling and public transport connectivity to the largest employment centres in Science Vale, Oxford and Didcot. Milton Hill Business and Technology Park is essentially part of the village in functional terms; connected by the old Hungerford Road. Harwell Campus is accessible by this same central footpath link and Rowstock is at the heart of the County Council’s proposed Cycle Premium Route linking Milton Park and Harwell Campus with Didcot, Wantage & Grove.”* Finally, there is a need to consider that Northbound traffic would put pressure on the A34 Milton Interchange.
- **Wantage** is located at the western extent of the Science Vale, but is a ‘market town’ in the settlement hierarchy (indeed Wantage is the only market town in the South East Vale Sub Area). Furthermore, there is considerable committed growth in the area, which is leading to significantly improved bus services to Milton Park and Oxford, and a new/upgraded cycle link to Harwell Campus.⁵³ Also, additional growth at Wantage supports the case for a new train station at Grove. Growth to the West of Wantage is less well linked to Science Vale, and the sites in question are somewhat distant from the town centre; however, the larger, northern site could help to facilitate delivery of the West Wantage Link Road (WWLR), which would serve to reduce traffic through West Wantage and East Challow. The LPP1 Inspector’s Report (2016) stated: *“Policy CP17 safeguards an alignment for the West Wantage Link Road. Whilst there are some aspirations for this scheme to be implemented as soon as possible, to address existing congestion in/around Wantage, the Impacts Study does not indicate that it is currently necessary. However, the County Council contends that it is possible that it would be needed later in, or beyond, the Plan period. It has been argued that if additional housing sites to the west of Wantage were included in the plan the Link Road could be funded and delivered. However, bearing in mind the Impacts Study’s conclusions, and in the context of there not being a need for this plan to allocate more sites for housing, I conclude that the plan is not unsound in excluding these possible housing sites at this stage”.* The Inspector’s reference to additional housing sites, in the plural, is notable. It is likely that numerous sites would be necessary in order to fund the road.

Sustainability Objective: Health

The matter of access to healthcare facilities has already been discussed above, under the ‘services and facilities’ heading, with the conclusion reached that there is little potential to differentiate between the site options, although there are some constraints at Kingston Bagpuize with Southmoor.

Focusing on other health determinants, it is difficult to confidently differentiate the site options, but one factor is access to greenspace and outdoor recreation facilities. All sites should be able to ensure good

⁵² An A417 cycle path is discussed within the LTP: Science Vale Cycle Strategy under the heading of ‘Connector routes and other Schemes’, with statement: *“Study work looking at the A417 corridor has identified possible demand for a cycle path alongside the A417... Further investigative work on the possibility of a cycle path alongside the road... will be progressed through the A417 study.”*

⁵³ LTP: Science Vale Cycle Strategy states: *“National Cycle Network route 544 currently connects Wantage to Harwell Campus via an indirect route. A shorter route will make cycling more attractive on this corridor... There are a considerable number of possible route permutations when considering the possible upgrade of sections of existing rights of way to create this more direct route.”*

access, but **Dalton Barracks** potentially stands-out as performing well, given the opportunity to deliver a Country Park (to provide 'suitable alternative natural greenspace' (SANG) to ensure that the effect of housing is not to increase recreational pressure on nearby Cothill Fen Special Area of Conservation, SAC).

Both **West of Wantage** sites are also notable for having direct access to the route of the former Wilts and Berks Canal, with there being the possibility of restoration;⁵⁴ however, it is understood that there are currently funding shortfalls, such that restoration in the short to medium term is likely to be very limited.

East of Grove is notable for the proposal to deliver a new 'town park' and sports pitches, to the benefit of new and existing residents at Grove; and **Harwell Campus** has excellent access to the North Wessex Downs AONB, with the Icknield Way long distance path passing through the site, and the Ridgeway National Trail nearby.

Support for walking and cycling is another 'health' consideration; however, this subject is a focus of the discussion above, under 'Movement'.

There is also a need to consider environmental health constraints affecting sites; however, environmental health matters are given stand-alone consideration below, under the 'Pollution' heading.

Sustainability Objective: Inequality and exclusion

The County Council's Spatial Options Report (LUC, 2016) assessed 36 sites around Oxford for the potential to support regeneration of relatively deprived neighbourhoods, but was unable to identify any opportunities in respect of the ten sites within Vale, and ultimately was not able to differentiate the alternatives in terms of this criterion. Areas of relative deprivation are found along the southern edge of Oxford, and within the northern part of Didcot, but none of the site options under consideration are adjacent, or close enough so that the effect of development could be to support regeneration. Central Botley is another regeneration priority, with planning permission in place for a major town centre redevelopment, and none of the site options in question having a bearing.

Affordable housing provision is another consideration. There is a need to consider Oxford's unmet affordable housing needs.

Sustainability Objective: Economy

The development of a new neighbourhood at **Harwell Campus** offers the opportunity to create a purpose-built environment, tailored towards the housing needs of the Campus. This should help Harwell Campus to achieve its full potential, evolving from a Science and Innovation Park, to a world class campus environment, or 'Innovation Village'. There would be accommodation for both permanent and transient employees, fostering interconnectivity between the different individuals and organisations, and in turn engendering cooperation and cross-pollination of ideas. A survey of existing Campus organisations, undertaken by CBRE for the Harwell Campus Partnership, has shown that in addition to business sector clustering, there is predisposition towards social / community clustering among the Campus workforce. The CBRE survey equally revealed that the existing Campus organisations view accommodation costs locally and the lack of flexible (short-term) accommodation as a negative factor that is affecting their ability to attract qualified staff. Housing will be at the expense of land that could otherwise be developed for employment – and indeed land designated as an Enterprise Zone - however, it is anticipated that the Campus should still be able to accommodate at least 5,400 net additional jobs in the plan period up to 2031, as well as potentially further jobs beyond 2031, as ongoing decommissioning of the 'licensed site' takes place. Certain consultees question the loss of Enterprise Zone to housing development, including on the basis that there is a need for sites suited to 'Big Science Occupiers', and on the basis of OXLEP's update to the Strategy Economic Plan (2017) highlighting that: "*since 2011, employment growth in Oxfordshire has been much faster than was expected through the forecasts used as the basis for the SHMA.*" However, the development of a new neighbourhood is supported by Oxfordshire Local Enterprise Partnership (LEP).

The scale of the **Dalton Barracks** site could well enable delivery of some employment land, and this has been proposed as an option by the site promoter, albeit employment land would not benefit from having direct access to the strategic road network. Dalton Barracks is also supported on the basis of there being

⁵⁴ See <https://www.wbct.org.uk>

good potential to link the site to Oxford, including employment areas to the east of the town.

Employment land adjacent to a new train station is also proposed by the **East of Grove** site promoters; and promoters of the larger; however, as discussed above, latest understanding is that the site is not suited to being the location for a new Grove Train Station.

There is also an argument to suggest that housing in the **Science Vale** area more widely is supportive of economic growth objectives. Sites located within the Science Vale should: help to achieve and maintain a sustainable balance of housing and employment within the area; help to deliver the Science Vale Strategic Infrastructure Package through developer contributions; and support the Oxfordshire LEP priority for accelerating housing delivery within the Oxfordshire 'Knowledge Spine' growth corridor.

Sustainability Objective: Natural environment

A primary consideration is the potential for sites – either alone or in combination – to impact on Cothill Fen Special Area of Conservation (SAC) or Oxford Meadows SAC, both of which are of international importance. The potential for impacts is being explored in detail through a stand-alone Habitats Regulations Assessment (HRA), but suffice to say here that:

- sites that could potentially pose a risk to Cothill Fen are those in closest proximity, namely **Dalton Barracks**, which is almost adjacent (albeit there is an expectation that only the brownfield portion of the site, which is the furthest part from the SAC, would be developed) and **Marcham**; and
- sites that could potentially pose some risk to Oxford Meadows SAC are those that would load the greatest amount of additional traffic onto the A34 to the north of Oxford, as this road runs adjacent to the SAC and leads to air pollution impacts. It is difficult to differentiate the sites.

Focusing on biodiversity considerations other than those that relate to the SACs, a number of sites are associated with constraints. The following considers notable locations in alphabetical order -

- **Dalton Barracks** – In addition to Cothill Fen SAC (discussed above), Dry Sandford Pit SSSI is adjacent (albeit away from the likely area of development), and Barrow Farm Fen SSSI is a short distance to the southwest. Also, Gozzards Ford Fen Local Wildlife Site (LWS) is adjacent. There are also thought to be some on-site habitats of note.
- **Grove** - A short section of the eastern boundary and the southern boundary by Tulwick Lane are older routes, lined with mature hedges and ditches. This is likely to be reflective of the 'ornamental / designed landscape' categorization assigned to this land by the Oxfordshire Historic Landscape Characterisation. The ordnance survey labels this land as 'Grove Park'.
- **Harwell Campus** - the site contains numerous mature trees (albeit no Tree Preservation Orders) and certain areas – notably the southwest part of the site – are identified as deciduous woodland priority habitat.
- **Kingston Bagpuize with Southmoor** – The eastern site is constrained, to some extent, by Appleton Lower Common SSSI and Frilford Heath, Ponds and Fens SSSI, which are within c.2km; and the adjacent Millennium Green is associated with a population of Great Crested Newts.
- **Marcham** - the North of Marcham site is the only site that falls within a Conservation Target Area,⁵⁵ and Barrow Farm Fen SSSI and Frilford Heath, Ponds and Fens SSSI are in proximity (and it is noted that the former site lies in-between Marcham and Dalton Barracks, which will become a significant attractor for Marcham residents). Also, Hyde's Copse at the edge of the site is a small patch of ancient woodland.
- **Milton Heights (west) and Rowstock** – both contain areas of traditional orchard priority habitat.
- **Wantage** - Woodhill Brook passes through the larger, northern site, as does the route of the former Wilts and Berks Canal. Both features are thought to be associated with notable riparian habitat, and act as wildlife corridors. The possibility of development supporting enhancement has been mooted, particularly in respect of the canal corridor, recognising that any future restoration would disturb established habitats.

⁵⁵ See <http://www.wildoxfordshire.org.uk/biodiversity/conservation-target-areas/>

Sustainability Objective: Heritage

A primary consideration is the need to avoid impacts on the setting of designated conservation areas and clusters of listed buildings. Impacts on individual listed buildings are also a consideration, although it will often be possible to avoid or sufficiently mitigate impacts through masterplanning, design and landscaping. Having made these initial points, the following lists notable locations in alphabetical order –

- **Dalton Barracks** – Shippon has a historic centre, with listed buildings and a rural setting, although there is no designated conservation area. The airfield itself is understood to have relatively limited heritage value, as it was only used for training purposes up to and during WWII. Much of the buildings evident today stem from the cold war era and have limited heritage value, including the larger hangers. A small number of buildings (c.5 or so) are noted for their architectural value, and are likely to be retained.
- **East Hendred** – the Conservation Area stretches along Allin’s Lane as far north as the A417 (the other side of which is the proposed site); however, there are no listed buildings in proximity to the A417.
- **Grove** – there are two points to note. Firstly, the south-eastern part of the site contains the Deserted Medieval Village (DMV) of Tulwick, the earthworks of which are (barely) visible at the surface. As such, the site promoters have completed an appraisal of aerial photography and LiDAR imagery, to define the boundary of the DMV and enable development of an effective avoidance/mitigation strategy. This work has shown that the layout and extent of the DMV as depicted on OS maps, and a survey of the DMV in the 1970s, is accurate. The earthworks have been gradually levelled by ploughing since the 1970s and by 1992, the above ground earthwork features had been lost. However, it is considered that the surviving below ground features are reasonably well preserved. The remains of the DMV are considered to be of regional significance. As such, the proposal is to incorporate the DMV within a ‘town park’, which the site promoters suggest will have the effect of promoting “*a sense of place for the new local community by giving the development an additional time depth.*” The second consideration is the findings of the Oxfordshire Historic Landscape Characterisation, which shows the whole area to comprise ‘ornamental / designed landscape’. The Ordnance Survey labels this land as ‘Grove Park’.
- **Kingston Bagpuize with Southmoor** – the East of Kingston Bagpuize with Southmoor site partially abuts the Kingston Bagpuize with Southmoor Conservation Area, and would be highly visible on the approach to Kingston Bagpuize with Southmoor house (grade II*). Also, the Old Oxford Road is a bridleway and cycle path running through the site. However, it is noted that Heritage England have not raised any objections, recognising that there is good potential to sufficiently mitigate impacts through masterplanning, design and landscaping.
- **Wantage** – the two West of Wantage sites are divided by the historic route of the Wilts and Berks Canal.

Sustainability Objective: Landscape

The primary issue locally is the North Wessex Downs Area of Outstanding Natural Beauty (AONB), which extends across the southern part of the District, and also serves to constrain a significant area of land to the north that falls within its setting. However, leaving aside AONB considerations, there are landscape constraints at the majority of sites.

The following lists all locations in alphabetical order –

- **Dalton Barracks** – is washed over by the Green Belt, and the large scale open aspect across the airfield allows wide ranging views to distant higher ground; however, it has the characteristics of a military installation, with security fencing, and built area contains large military buildings and hangars. Since the Preferred Options stage the eastern boundary of the site has been ‘pulled in’ so that a Green Belt landscape gap is retained between the site and the row of homes along Whitecross Road. This change supported from a landscape perspective, although it is noted that the Council’s Landscape Capacity Study questions the landscape value of the land proposed to be removed from the site boundary / retained within the Green Belt, finding part of the land to have ‘medium/high’ capacity for development.
- **North of East Hendred** – According to the Landscape Capacity Study, the site is “*rural, open and exposed, with a strong relationship to the wider rural landscape.*” The study notes that a footpath runs through the site, and that there are long distance views to the north, including to Steventon.
- **Grove** – the East of Grove site would ‘break the boundary’ of the A338, and impinge on a landscape with intact rural character. Conversely, the North West of Grove site has ‘high’ capacity, according to the

Landscape Capacity Study.

- **Harwell Campus** – Falls within the AONB; however, this is a mainly brownfield site and the entire site is a current employment allocation; hence there may be potential for development/redevelopment without breaching landscape capacity. A site with a similar ‘red line’ boundary was proposed for allocation within LPP1, but then dismissed by the Inspector as part of the plan’s examination, on the basis of insufficient evidence to demonstrate the exceptional circumstances necessary for major development in the AONB. Subsequently a considerable amount of work has been completed to demonstrate that exceptional circumstances exist. Furthermore, the boundary has been amended to reflect landscape and visual impact concerns, with a field to the north now outside the site boundary. A field to the south has been added to the site; however, it forms part of the current employment allocation. The Landscape Capacity Study concludes ‘high/medium’ capacity.
- **Kingston Bagpuize with Southmoor** – The East of Kingston Bagpuize with Southmoor site is least constrained, with the Landscape Capacity Study concluding ‘high’ capacity. The West of Kingston Bagpuize with Southmoor site is less well related to the existing settlement (even recognising recent completions / existing permissions) and is open to the wider landscape (albeit this will change as new planting matures). It is also noted that the site wraps around a low density group of c.10 houses.
- **Marcham** - the western fields have a strong relationship to new development to the west, but land to the east is more sensitive. The Landscape Capacity Study concludes ‘medium/high’ capacity.
- **Milton Heights** - the Landscape Capacity Study concludes ‘medium/high’ capacity to the east, but ‘medium’ capacity to the west.
- **Rowstock** – adjacent to the North Wessex Downs AONB, and functioning as part of an open rural landscape. The Landscape Capacity Study concludes ‘low’ capacity.
- **Wantage** - the entire West of Wantage area acts as a landscape gap separating the settlements of Wantage, East Challow and/or Grove (recognising that the Grove Airfield scheme will extend Grove to the southwest). Promoters of the smaller, southern site highlight that an adjacent scheme (to the west, bordering the eastern edge of East Challow) recently gained permission, with only localised landscape impacts highlighted; however, the site currently in question is considerably more sensitive, because it comprises the remaining landscape gap. Promoters of both sites point to the potential for detailed landscape/visual assessment work, and careful masterplanning, to ensure maintenance of a landscape gap. Promoters of the larger, northern site state: “... due to a combination of the topography of the site, existing built development and boundary vegetation and careful Masterplanning to maintain a meaningful countryside gap between East Challow and any new development, there would be no perception of amalgamation between the proposed development and East Challow...” However, the Council’s Landscape Capacity Study Addendum (2017) concludes that both sites are unsuitable in landscape terms, for example stating, in relation to the smaller, southern site that: “The site has not been reduced sufficiently to maintain the essential separation between Wantage and East Challow.”

Sustainability Objective: Pollution

Air quality is a primary concern, particularly given the designated Air Quality Management Areas (AQMAs) in the centres of Abingdon-on-Thames, Botley and Marcham. There are also a number of other environmental health concerns, including contaminated land (which can usually be remediated, at a cost); noise from rail and roads and odour from sewage treatment works or waste facilities. Pylons crossing sites is another consideration, particularly in the vicinity of Didcot Power Station, although generally this can be addressed through development. Finally, there is a need to take into account the numerous level crossings within the District. Focusing only on sites with notable constraint -

- **Dalton Barracks** – past military uses give rise to a likelihood of contaminated land. There will be some car trips through the Marcham AQMA, although the proportion of movements in this direction will be low.
- **Grove** – the Northwest of Grove site is subject to a number of constraints that might limit capacity. Two extra high voltage power lines (33kV) intersect the site (albeit it is noted that this issue has been successfully dealt with at the adjacent Grove Farm site); the site is adjacent to the railway, leading to noise pollution concerns; and a bridle-way level crossing is in close proximity.
- **Kingston Bagpuize with Southmoor** – Housing growth at Kingston Bagpuize with Southmoor could lead to increased car movements through the Marcham AQMA; however, Kingston Bagpuize with

Southmoor has an excellent bus service, which will serve to limit car dependency / car movements.

- **Marcham** – there is a designated AQMA, although if the predominant direction of travel from North of Marcham were to be in the direction of Oxford / Abingdon-on-Thames, then, impacts would be limited.

Sustainability Objective: Climate change mitigation

There is a need to minimise per capita CO₂ emissions from transport, and the built environment. In respect of the former, there is little to add to the discussion presented above, under ‘Services and facilities’ and ‘Movement’. In respect of the latter, a key consideration is the need to support larger developments – in excess of 500 homes – where there will be the economies of scale that make deliver of decentralised heat and power generation a possibility. Proposals for decentralised heat and power generation have not yet been advanced for any of the schemes under consideration; however, there could well be opportunities at **Dalton Barracks**, recognising that the site capacity could potentially reach as high as 3,000. There is also the possibility of exploring the option of a mixed use development, which could be supportive of decentralised heat and power, as demand would be spread more evenly across the day.

Sustainability Objective: Climate change adaptation

The key issue here is flood risk. Focusing only on sites with notable constraint -

- **Dalton Barracks** - Some risk of surface water pooling (high probability) in Shippon.
- **Grove** – the Northwest of Grove site contains one notable area with the potential for pooling of surface water (high probability). The East of Grove site contains several small areas with the potential for pooling of surface water. This part of the district is also associated with high groundwater flood risk.
- **Harwell Campus** - numerous small patches of surface water flood risk (mainly low probability).
- **Rowstock** - one notable area at risk of surface water pooling (high probability) on the edge of Rowstock.
- **Wantage** – the northern part of the larger, northern West of Wantage site is constrained by the floodplain of Woodhill Brook. As such, there is a need to consider the possibility that this site is sequentially less preferable to sites with less flood risk constraint. However, it is noted that the site promoters state an intention to avoid any vulnerable built development (to include housing) within the flood risk zone.

A second consideration is water resources / quality, and in this respect it is noted that there is existing constraint at **Kingston Bagpuize with Southmoor** and **Wantage** Wastewater Treatment Works (WwTWs)

A final consideration is agricultural land quality. The nationally available, low resolution ‘provisional’ dataset shows there to be a band of BMV land stretching along the foot of the North Wessex Downs, between Didcot and Wantage (and beyond), another area to the south and west of Abingdon-on-Thames, and a more narrow band stretching between Dalton Barracks to Kingston Bagpuize with Southmoor (and beyond). On the basis of this dataset, it seems likely that the majority of sites will comprise BMV, perhaps with exception of the two Grove sites. The only sites that have been surveyed in detail (i.e. using the ‘post 1988 criteria, which necessitates soil samples) are North West of Grove (found to comprise a mixture of grades 3b and grade 4) and the two West of Wantage sites (the southern site is shown to comprise mostly grade 2 land, whilst the northern site is shown to comprise a mix of grades 3a and 3b).

Table B: Summary findings from the informal appraisal of larger site options

Site	Summary appraisal findings
Dalton Barracks	The site is well linked to Abingdon-on-Thames, and relatively well linked to Oxford, although not directly on a strategic road corridor. This is a large site that should enable delivery of significant new infrastructure, potentially to include a connection to the proposed new Lodge Hill P&R. Redevelopment would involve making use of brownfield land, with at least 80ha of the greenfield part of the site proposed as a Country Park. This is a Green Belt location, but it is likely that the existing barracks could be redeveloped with minimal adverse effect to the Green Belt. It is noted that the site’s eastern extent has been ‘pulled in’, in order to maintain a landscape (Green Belt) gap between the site and houses along Whitecross Rd; however, there are also sensitivities with development to the west. Biodiversity is a key environmental constraint, given nearby Cothill Fen SAC and other designated sites associated with the Sandford Brook.
East of Kingston Bagpuize with Southmoor	Distant from Oxford, with no potential for cycling, but good public transport connectivity. Development would deliver a new school, and a new road could divert traffic away from the existing village centre. Heritage is a constraint, given the adjacent Kingston Bagpuize with Southmoor Conservation Area; however, Heritage England has not raised an objection, recognising that there is good potential to sufficiently mitigate impacts through masterplanning, design and landscaping.
West of Kingston Bagpuize with Southmoor	Less well related to the existing village than the East of Kingston Bagpuize with Southmoor site, and would not deliver a new link road or school.
North of Marcham	Well linked to Abingdon-on-Thames, and relatively well linked to Oxford, although not on a strategic road corridor into Oxford / with limited potential for bus service upgrades. Has some capacity for development from a landscape perspective, in that it is well related to an adjacent new development. Traffic is a concern, particularly given Marcham AQMA, as is primary school capacity. Biodiversity is also a consideration given nearby designated sites.

Potential in-combination effects – Abingdon-on-Thames to Oxford Fringe Sub Area

Housing growth in this sub area is supported, from a perspective of wishing to contribute most fully to accommodating Oxford’s unmet housing needs. Dalton Barracks is notably best linked to Oxford, once account is taken of potential for transport infrastructure upgrades, but Kingston Bagpuize with Southmoor is also well linked to Oxford by bus, and Marcham is also quite well linked (at least by private car) to the proposed Lodge Hill P&R (under 5km).

Focusing on Kingston Bagpuize with Southmoor, whilst neither site is subject to constraints that would necessarily rule-out development, there is clear evidence to suggest that the East of Kingston Bagpuize with Southmoor site is sequentially preferable, and equally there is a need to limit growth at Kingston Bagpuize with Southmoor, recognising that it is not supported by the County/City Council as a location for meeting Oxford’s unmet needs, and also recognising the extent of recent completions / commitments.

Finally, there is a need to highlight the potential for in-combination effects on Cothill Fen SAC to result from growth at both Dalton Barracks and Marcham; however, it is noted that Habitats Regulations Assessment (HRA) work at the Preferred Options stage examined this matter, and did not raise major concerns, stating: *“New development at Dalton Barracks or... Marcham should be required to provide details, in line with LPP1 CP45 (Green Infrastructure), of how the project will deliver accessible natural greenspace, or where this is not possible, how it will contribute to “the delivery of new Green Infrastructure and/or the improvement of existing assets”. Such greenspace will provide added confidence that residents of the development can be recreationally self-sufficient without needing to place an undue burden on the few parts of Cothill Fen SAC that are potentially vulnerable to a significant increase in recreation.”* HRA work at the preferred options stage also examined the potential for growth at both Dalton Barracks and Marcham to result in increased traffic on the A34, with implications for NO₂ deposition at the Oxford Meadows SAC.

Site	Summary appraisal findings
North of East Hendred	Located within the Science Vale, although more limited potential to walk/cycle to employment locations than at some other locations. Comprises land that has low capacity for development from a landscape perspective.
North West of Grove	A relatively unconstrained site, and development would support the achievement of objectives for the expansion of Grove, alongside existing allocations.
East of Grove	Grove is a service centre in the settlement hierarchy, and the scheme could deliver certain benefits, including a new ‘town park’. Further growth at Grove would also help to build the case for a new train station; however, the site does not relate well to the existing village, and the landscape has low capacity to accept development.
Harwell Campus	Redevelopment would involve making use of brownfield land, although part of the site is greenfield, and there will be a need for careful masterplanning to avoid AONB impacts. Development would deliver major benefits from an economic growth perspective, albeit designated employment land within an Enterprise Zone would be ‘lost’ to residential. The site also performs very well from a sustainable transport perspective.
Milton Heights (west)	Milton Heights is a smaller village adjacent to Milton Interchange (a major junction that has seen recent upgrades but still suffers from congestion) within walking distance of employment at Milton Park and Harwell Campus. There is an existing LPP1 allocation (now with full planning permission) delivering an expanded primary school, and which may be able to deliver a new pedestrian/cycle bridge over the A34. Further growth at Milton Heights could assist with delivery of such a bridge (and the possibility of a more substantial bus bridge has also been suggested); however, it would remain the case that capacity at Milton Interchange is a major constraint.
Milton Heights (east)	
Rowstock	Rowstock is a small village, with very limited local facilities; however, it lies on the bus route between Didcot and Wantage / Harwell Campus, and employment locations are within cycling distance. Large scale development would deliver a primary school, but there are landscape concerns, particularly given the adjacent AONB.
West of Wantage (north)	Wantage is a market town with good transport links, reflecting the considerable amount of committed growth at Wantage/Grove; however, Wantage is located at the western extent of the Science Vale, and the site is some way distant from the town centre. Development would erode the important settlement gap between Wantage, East Challow and Grove.
West of Wantage (south)	

Potential in-combination effects – South East Vale

There are a number of considerations -

- Housing growth within the Science Vale is supportive of employment growth objectives within this regional/national hub. Wantage/Grove is at the edge of the Science Vale area, but is very well connected by public transport, and cycle connections are improving.
- There is a risk of negative in-combination effects on landscape, including given the proximity of the North Wessex Downs AONB to the south, and the Ridgeway National Trail. There has traditionally been a string of villages along the foot of the downs (some relating to the spring line), and there is a need to guard against amalgamation (e.g. between Harwell / Milton Heights / Rowstock / East Hendred).
- In combination traffic impact along the A417 to the east of Wantage, and at the A34/A4130 Milton Interchange, is also a concern (N.B. Harwell Campus benefits from the A34/A4185 Chilton Interchange).
- The Wantage/Grove area is also potentially subject to negative in-combination effects, recognising the very high level of committed growth through LPP1 allocations (4,885 homes); however, on the other hand, further growth would support the business case for a new train station.

Table A: The smaller site options

Site		No. homes	Sub Area
North of Abingdon-on-Thames		50	Ab-Ox
South of Cumnor		125	
East Hanney	North	80	
	North East	50	
	East	60	
	South	100	
West of Kingston Bagpuize with Southmoor		c.200	
Marcham	North East	c.100	
	South East	90	
North of Steventon		80	
South of Wootton		c.100	
West of Harwell		c.100	SE Vale

Methodology

See Appendix IV.

Appraisal findings

Table B: Informal appraisal of smaller site options under the SA framework headings

Sustainability Objective: <u>Homes</u>
<p>As per the discussion of ‘larger’ site options, above, it is difficult to differentiate between the smaller site options, in terms of the potential to support the achievement of housing objectives. The sites do vary in size to a significant extent, but it is difficult to conclude that larger sites are necessarily preferable. All sites could deliver more than 50 homes, and hence are large enough to ensure that an appropriate housing mix can be delivered (to include a proportion of affordable housing in accordance with policy).</p> <p>As smaller sites, these sites should all be ‘deliverable’, in that there is relatively little chance that issues will arise that will lead to unforeseen delay. However, it is noted that -</p> <ul style="list-style-type: none"> • North of Abingdon-on-Thames - Access to the site could be problematic, given that the existing North of Abingdon-on-Thames LPP1 allocation has not been masterplanned with access to an adjacent scheme in mind, and direct access to the A34 is untested. • West of Harwell - OCC object to growth at this location on transport grounds, recognising that road infrastructure upgrades to enable the 200 home LPP1 allocation in this area are proving a challenge. • Milton Heights – Deliverability could well prove dependent on further upgrades to the ‘Milton Interchange’ junction of the A34 and the A4130. • North of Steventon - further growth at Steventon is dependent on the ability to find a solution to the primary school capacity issue.
Sustainability Objective: <u>Services and facilities</u>
<p>Most sites are well located in respect of enabling easy access to a town or larger village centre, including via walking, cycling and public transport. These settlements all contain a range of services and facilities. With regards to <u>primary education</u> infrastructure, there is potential to ensure good access to primary</p>

schools with capacity at the majority of locations, with certain existing schools having the potential to expand, funded by development; however, there is a significant constraint at **Steventon**, where the existing village school is expanding from an admission number of 25 to an admission number of 30, to meet the needs of permitted housing, and the school's area does not support further expansion.

There are similar constraints at **Marcham** (see discussion within Appendix IV, above), although concerns are allayed by the proposal to deliver three new primary schools at Dalton Barracks.

Sustainability Objective: Movement

- North of Abingdon-on-Thames is supported by the Oxfordshire Growth Board (OGB), with the Spatial Options Report (LUC, 2016) identifying it as one of the three 'green-rated' sites in the Vale, largely on the basis of transport considerations. The site is 3-4km distant from Abingdon-on-Thames Town Centre, and development would be very close to the proposed Lodge Hill Park and Ride (P&R) and associated 'Rapid Transport Route 3'. Radley station is also easily accessible.
- South of Cumnor - is supported by the Oxfordshire Growth Board (OGB), with the Spatial Options Report (LUC, 2016) identifying it as one of the three 'green-rated' sites in the Vale, largely on the basis of transport considerations. The nearby A420 is a strategic transport corridor, with Cumnor village centre served by two half hourly services (one Oxford/Abingdon-on-Thames; one Oxford/Wantage). Cumnor is also the location for the second proposed P&R site in the Vale, which (it is proposed) will be associated with Rapid Transit Route 2' (i.e. the other Rapid Transit Route proposed within the Vale).
- East Hanney is relatively remote from Oxford and the Science Vale, but is located on the A338. The County Council stated through the Preferred Options consultation that: *"East Hanney was originally on a long list of spatial options considered in the post SHMA work but was rejected through a check and challenge process as it was considered relatively remote from Oxford. However, we acknowledge the village is on the A338 public transport corridor from Wantage-Grove to Oxford, with bus service frequency proposed to be increased as a result of already planned development and which would be supported by further development at this location... The two proposed allocations at East Hanney are relatively well located for public transport and the primary school is being expanded to accommodate growth, therefore any County Council issues in respect of these two sites will be localised ones."* Development at East Hanney would also be close to, and support the business case for Grove rail station; however, the quantum of development proposed would not be sufficient to fund meaningful cycle infrastructure to Grove / Wantage or Steventon. The site option to the south of the village is more distant from the existing bus stop (but closer to Grove, which is accessible via a bridleway).
- West of Harwell - is well located in relation to Didcot Garden Town and employment sites in the Science Vale, and is located on the strategic bus corridor between Didcot and Wantage / Harwell Campus; however, the site is beyond 400m of the existing route (with new routes unlikely). Car movements north will pass through Milton Interchange, and there are also significant local road infrastructure constraints. The County Council objected to a proposed allocation at the Preferred Options stage on transport grounds, stating: *"The proposed development on the Local Plan Part 1 allocation site West of Harwell brought up numerous issues regarding access. Additional development in this location may be unable to be catered for on Grove Road due to its alignment, width and junctions. Necessary improvements, if possible, may not be able to be reasonably funded by development. We note that the Inspector referred at paragraph 130 to the Part 1 allocation as representing the appropriate scale of development at Harwell village and consider that an additional allocation in this location is not justified. Problems have still not been resolved from LPP1 site in terms of accommodating all users at what is a narrow junction. Segregated footways are simply not possible in the space available. It is strongly recommended that this site is not progressed. The existing bus service is as for Harwell Campus but without the direct peak buses. There is no potential for a high frequency direct bus service between Harwell village and Oxford – the means to reach Oxford will be via Didcot, either changing to train, or a through bus (as now). Potentially, should there be a direct Harwell Campus to Oxford service, changing buses at the Campus to reach Oxford would become another option."*
- West of Kingston Bagpuize with Southmoor - is a larger village relatively distant from Oxford and the Science Vale, and without cycle links to key destinations; however, the village is located on a strategic transport corridor (A420) and has an excellent bus service (3/hour). Through the Preferred Options (2017) consultation, OCC highlighted that development *"could take advantage of and help strengthen the*

business case for accelerating investment in remote Park and Ride/Rapid Transit services and improved bus services on the A420 corridor.”

- Marcham - is located on the A415 – an east-west corridor linking to Abingdon-on-Thames, as opposed to a strategic corridor linking to Oxford and the Science Vale to the south (albeit an A34 junction is within 2km). The South East site is within easy walking distance of the Marcham village centre, and is within an easy cycling distance of Abingdon-on-Thames (along a shared pedestrian/cycle path); however, there is a need to cross Marcham Interchange. A recent Sustainability Transport Study concluded the need for ‘low level improvements’ to the route.
- North of Steventon - is within walking/cycling of two key Science Vale employment sites (Harwell Campus and Milton Park), but walking and cycling infrastructure is limited. Steventon is not on a main road / strategic bus corridor, and traffic movements north may tend to be along the B4017/Marcham Road corridor to the north, via Drayton and Abingdon on route to Marcham Interchange.
- South of Wootton - is not on a strategic transport corridor, being equidistant between the A34 and the A420. There are currently two busses per hour during the day, and there is limited potential to secure a more frequent service (although Dalton Barracks could lead to opportunities). In the absence of a high quality bus service there would be a risk of cars worsening congestion on route to Oxford. Wootton is beyond easy cycling distance of Oxford, with Abingdon-on-Thames Town Centre c.4-5km along a B-road. The site would be within walking distance of the proposed Dalton Barracks scheme, which will include a secondary school and neighbourhood centre.

Sustainability Objective: Health

It is difficult to differentiate the site options. Opportunities to reach key destinations by walking/cycling is one consideration; however, this is covered above, under the ‘movement’ heading. It is noted that Cumnor and the North of Abingdon site both have good access to long distance footpaths; and that South of Wootton would benefit from very good access to the proposed new Country Park, associated with the proposed Dalton Barracks scheme.

N.B. There is also a need to consider environmental health constraints affecting sites; however, environmental health is given stand-alone consideration below, under ‘Pollution’.

Sustainability Objective: Inequality and exclusion

As per the equivalent discussion examining larger site options, within Appendix IV, it is difficult to differentiate the site options. One consideration is affordable housing delivery, which potentially indicates that the South of Cumnor site has some merit, given its proximity to Oxford. The site is also large enough (perhaps 125 homes) such that there is confidence in the ability to deliver 35% affordable housing, in accordance with LPP1 policy.

Sustainability Objective: Economy

None of the site options are being promoted for mixed use development; however, it could be argued that West of Harwell is supported due to its location in the Science Vale. Equally, North of Steventon is very close to Milton Park, which is one of the main Science Vale employment sites. It might also be argued that sites well linked to Oxford are supported (notably South of Cumnor and North of Abingdon), given that Oxford is a major centre of employment. The Oxfordshire LEP’s Strategic Economic Plan (SEP) states: *“We will maintain the principal spatial focus on Oxfordshire’s Knowledge Spine – from Bicester in the north through Oxford to Science Vale in the south – as the main location for housing and employment growth.”*

Sustainability Objective: Natural environment

South of Wootton is notably constrained by its proximity to Cothill Fen Special Area of Conservation (SAC), which is associated with Sandford Brook (which runs along the western edge of Wootton, south to the Thames at Abingdon). The site is c.220m distant from the SAC ‘as the crow flies’, however, there is no direct access, and the site is thought to be relatively non-susceptible to recreational pressure. The Council’s Habitats Regulations Assessment (HRA) Report (2017) explains that –

“... fenland sites are less likely to attract significant free-roaming visitor numbers than other types of

habitat because the terrain is generally more difficult and less safe for visitors to negotiate... Cothill Fen comprises terrain that on the whole is of an inaccessible nature away from designated paths. A site visit indicated that at Parsonage Moor the habitat is extremely wet off-path, whilst footpaths through other parts of the SAC are lined by dense growth of reedbeds. The SAC is part designated for its 'alder woodland on floodplains' and theoretically in places visitors and dogs could stray from the designated paths into this habitat... However, access overall is limited by a minimal number of off-road parking spaces... Where footpaths exist at Parsonage Moor and Lashford Lane, off-path access is restricted in places by fencing, whilst Parsonage Moor has signs and gates/stiles restricting access for dog walkers. Parsonage Moor also lacks a circular walk, with only a small section of board walk over marshy ground which again limits the number of people likely to enter the Fen. Part of the SAC is a National Nature Reserve so access is managed. Natural England and the Oxford Conservation Volunteers undertake footpath management/improvement specifically to ensure that people are discouraged from travelling 'off-track'... Recreational pressure is not recognised as a threat to the site under its Site Improvement Plan. Nonetheless, BBOWT have identified that dog walking, dogs off leads, dog fouling and scaring of livestock do contribute to management difficulties on nature reserves including those at Cothill Fen."

There is also the need to consider the possibility of a hydrological 'impact pathway', recognising that the site drains to Sandford Brook; however, the southern edge of Wootton is preferable to the northern and western edges of Wootton, in this respect. Furthermore, there is the need to consider the possibility of 'in-combination effects' recognising that growth at other locations, under Option 3, will also potentially result in some increase in recreational pressure on the site. However, it is not clear that there are notable concerns, recognising the HRA findings (including findings of HRA at the Preferred Options stage, at which time the proposal was to deliver 600 homes at North East of Marcham).

Other site options are mostly quite unconstrained -

- South of Cumnor – is associated with quite a high density of field boundaries, potentially to include ancient hedgerows. Within these boundaries are three areas with Tree Preservation Orders (TPOs).
- East Hanney – South of East Hanney is adjacent to Letcombe Brook (a chalk stream, with water vole records) and Cowslip Meadows LWS is adjacent. Also a small patch of traditional orchard priority habitat is on site.
- North of Marcham - falls within a Conservation Target Area,⁵⁶ and Barrow Farm Fen SSSI and Frilford Heath, Ponds and Fens SSSI are in proximity (and it is noted that the former site lies in-between Marcham and Dalton Barracks, which will become a significant attractor for Marcham residents). Also, Hyde's Copse at the edge of the site is a small patch of ancient woodland.

Sustainability Objective: Heritage

Several of the site options are sensitive in heritage terms to some extent. Specifically –

- South of Cumnor partially abuts Cumnor Conservation Area, and two footpaths cross the site. The Conservation Area Character Appraisal identifies a number of important views across the potential site. The presence of TPOs potentially serves to indicate historic field boundaries / a historic field pattern.
- East Hanney – All sites other than the site to the north east are in proximity to the East Hanney Conservation Area. East of East Hanney is likely to contribute to the setting of the conservation area to the most significant extent, and the South of East Hanney site is notable for being in proximity to a listed building. North of East Hanney abuts the East Hanney Conservation Area; however, there are no listed buildings associated with this part of the conservation area, and there is some existing screening; furthermore, there are limited views into the conservation area that would be impacted by the development, with views into the conservation area from the A338 being somewhat distant (at least 200m) and partially screened.
- South East Marcham falls within an archaeological notification area - Prehistoric/Roman field system and Bronze Age arrowhead.
- North of Steventon – in proximity to the Steventon Conservation Area, however, intervening buildings and vegetation, and no listed buildings in proximity.

⁵⁶ See <http://www.wildoxfordshire.org.uk/biodiversity/conservation-target-areas/>

Sustainability Objective: Landscape

Most of the site options are sensitive in landscape terms to some extent. Taking each site in turn –

- North of Abingdon-on-Thames - The Oxford Greenbelt Way runs through the centre of the site, along the top of the ridge, with occasional long views over the wider landscape. Redevelopment within the brownfield areas of the site could be beneficial to landscape character; however, development on the ridge and open slopes could have significant adverse effects. The Landscape Capacity Study concludes 'medium' capacity.
- South of Cumnor – is located within the Green Belt; however, comprises small enclosed agricultural fields with mature hedgerows that offer good screening from both the immediate and wider landscape. The Landscape Capacity Study concludes 'medium' capacity.
- North of East Hanney - is generally well contained from the wider landscape and development within the site would fit in with the existing settlement pattern. Any development within the site would need to respect the setting of the adjacent Conservation Area, mitigate any views from the north with additional planting. The Landscape Capacity Study concludes 'medium/high' capacity.
- North East of East Hanney – has high landscape capacity.
- East of East Hanney - The site is separated from the existing village and as feels part of the wider rural landscape. The Landscape Capacity Study concludes 'low' capacity.
- South of East Hanney - The site is open to the east and the remnant orchard is a key landscape feature to the west of the site. Development of the site would extend the village into the wider rural landscape. The Landscape Capacity Study concludes 'low' capacity.
- Harwell Village – the site is constrained by the adjacent AONB, and also gives rise to concerns in respect of coalescence with Rowstock. The part of the site north of Grove Road is considerably less constrained in landscape terms, although integration with the existing village could be a challenge. The Landscape Capacity Study concludes 'low' capacity to the south, but 'medium/high' capacity to the north.
- West of Kingston Bagpuize with Southmoor - The site is separated from the main settlement of Kingston Bagpuize with Southmoor and existing facilities, but is also contained from the wider landscape by the A420 to the north and tree belts to the east and west. The high level of containment means that there is some scope for development to the east of the site, without harm to the wider landscape. The Landscape Capacity Study concludes 'medium' capacity'.
- South East of Marcham - has a strong relationship to the new development to the south of Marcham and some relationship to the existing village to the north of the site. Development of the site would be consistent with the existing settlement pattern of Marcham, assuming some landscaping. The site is low lying and bound by hedgerows and trees, which contain views from the wider landscape. There are no footpaths in close proximity to the site and no public rights of way with views of the site. The hedgerow at the northern site boundary screens views from the A415 Marcham Road, however pedestrians and cyclists using the adjacent pavement have partial views into the site and open views at the two field gates. The Landscape Capacity Study concludes 'medium/high' capacity.
- North of Steventon – the site is bounded by existing development to the east and new development to the south. The northern part is more sensitive and exposed to views from the north. A line of mature trees lining the access road to the west of the site provide good screening of views from the west. The Landscape Capacity Study concludes 'medium/high' capacity.
- South of Wootton - is the least constrained site at Wootton. The site is generally well contained by hedgerows and trees with few available open views. The rights of way at the eastern and southern site boundaries have limited intervisibility with the site, however there are partial views into the site through gaps in the boundary vegetation, from the bridleway to the north. The Landscape Capacity Study concludes 'high' capacity.

Sustainability Objective: Pollution

Air quality is a primary concern, particularly given the designated Air Quality Management Areas (AQMA) in the centres of Abingdon-on-Thames, Botley and Marcham. South East of Marcham is adjacent to the AQMA (albeit the predominant direction of travel may be east, away from the AQMA), and hence any new

junction could be within the AQMA, potentially leading to stationary traffic and hence increased pollution. Sites at East Hanney and/or Kingston Bagpuize with Southmoor would also lead to some traffic through the Marcham AQMA.

There are also a number of other environmental health concerns, e.g. contaminated land.

- North of Abingdon-on-Thames - is notably constrained, given a road haulage business / garage on-site, which is likely to be associated with a degree of contaminated land. It is likely that any contaminated land could be remediated; however, this will impact on development viability.
- North of Steventon - is constrained by power lines, and also an intermediate pressure gas main. No mechanical excavations should take place within 3m of this line.

Sustainability Objective: Climate change mitigation

There is a need to minimise per capita CO2 emissions from transport, and the built environment. In respect of the former, there is little to add to the discussion presented above, under ‘Services and facilities’ and ‘Movement’. In respect of the latter, a key consideration is the need to support larger developments – in excess of 500 homes – where there will be the economies of scale that enable delivery of decentralised heat and/or power infrastructure. However, all of the sites in question are smaller sites, and hence there will be little or no potential to deliver low carbon infrastructure.

Sustainability Objective: Climate change adaptation

Part of the North of East Hanney site is constrained by flood risk, but there is confidence in the ability to avoid built development within this part of the site. The majority of sites are associated with a degree of surface water flood risk, although the risk is relatively minor in all instances (recognising good potential for avoidance and mitigation). Notably -

- Cumnor – a ditch runs through the centre of the South of Cumnor site, associated with a notable area at risk of surface water pooling.
- East Hanney - notable area of surface water flood risk along the northern edge of East of East Hanney.
- Harwell Village - a ditch runs through the northern part of the West of Harwell Village site, associated with surface water flows, and an area of surface water pooling is downstream.

A second consideration is water resources / quality, and in this respect it is noted that there is existing constraint at **Kingston Bagpuize with Southmoor** and **Wantage** Wastewater Treatment Works (WwTWs). Sites at East Hanney would drain to Wantage WwTW.

A final consideration is agricultural land quality. The nationally available, low resolution ‘provisional’ dataset shows there to be a band of BMV land stretching along the foot of the North Wessex Downs, between Didcot and Wantage (and beyond), another area to the south and west of Abingdon-on-Thames, and a more narrow band stretching between Dalton Barracks to Kingston Bagpuize with Southmoor (and beyond). The only site that has been surveyed in detail (i.e. using the ‘post 1988 criteria, which necessitates soil samples) is West of Kingston Bagpuize with Southmoor (found to comprise a mixture of grade 2 (BMV) and grade 3b (non-BMV) land).

Table B: Summary findings from the informal appraisal of smaller site options

Site	Summary appraisal findings
North of Abingdon-on-Thames	Very well linked to Oxford, relative to other sites, and Abingdon-on-Thames is the largest settlement in the Abingdon-on-Thames and Oxford Fringe Sub Area. However, the site lies within the Green Belt and is very constrained in landscape terms. Opportunity could be limited to the previously developed part of the site.
South of Cumnor	Very well linked to Oxford, relative to other sites, and well related to the larger village of Cumnor. However, the site lies within the Green Belt, and contributes to the setting of the Cumnor Conservation Area.

Site	Summary appraisal findings
North of East Hanney	East Hanney is relatively remote from Oxford and the Science Vale, but there is a good bus service on the A338, given committed growth at Wantage and Grove. This site abuts the conservation area, but it is not clear that it contributes significantly to setting.
North East of East Hanney	East Hanney is relatively remote from Oxford and the Science Vale, but there is a good bus service on the A338, given committed growth at Wantage and Grove. This site is largely unconstrained, amounting to a 'rounding-off' of the village edge.
East of East Hanney	East Hanney is relatively remote from Oxford and the Science Vale, but there is a good bus service on the A338, given committed growth at Wantage and Grove. There are landscape and heritage concerns associated with this site, which would involve expanding into an open landscape.
South of East Hanney	East Hanney is relatively remote from Oxford and the Science Vale, but there is a good bus service on the A338, given committed growth at Wantage and Grove. The bus stop is at the northern end of the village, distant from the site to the south. There are landscape, heritage and biodiversity concerns associated with this site, including given the adjacent chalk stream and Local Wildlife Site.
West of Kingston Bagpuize with Southmoor	Not very well related to the existing village and judged to have only 'medium' landscape capacity. Otherwise fairly unconstrained; however, there is a need to consider in-combination effects at the Kingston Bagpuize with Southmoor scale, recognising committed growth and the possibility of a larger LPP2 allocation.
North East of Marcham	Well linked to Abingdon-on-Thames, and relatively well linked to Oxford, although not on a strategic road corridor. Part of the site has been identified as having capacity for development from a landscape perspective, in that it is well related to an adjacent new development. Traffic is a concern, particularly given Marcham AQMA, as is primary school capacity. Biodiversity is also a consideration given nearby designated sites.
South East of Marcham	Well linked to Abingdon-on-Thames, and relatively well linked to Oxford, although not on a strategic road corridor. Traffic is a concern, particularly given Marcham AQMA, as is primary school capacity. Otherwise relatively unconstrained.
North of Steventon	Steventon is not on a main road / strategic bus corridor; however, within walking/cycling distance of two key Science Vale employment sites (albeit walking and cycling infrastructure is limited). Fairly well related to the large village of Steventon and limited on-site constraints; however, primary school capacity at Steventon is a constraint.
South of Wootton	Relatively well linked to Oxford, although not on a strategic road corridor. Within the Green Belt; however, this is a contained site with high landscape capacity. Proximity to Cothill Fen SAC is potentially a concern, which would necessitate closer examination. The site could benefit from proximity to the proposed Dalton Barracks scheme.
West of Harwell	Harwell is well located in relation to employment opportunities in the Science Vale, and is located on the strategic bus corridor between Didcot and Wantage / Harwell Campus. However, there are significant local highways constraints.

Potential in-combination effects

There are relatively few potential in-combination effects, although there is of course a need to consider the potential for in-combination effects to result from development of more than one site at East Hanney (four site options are presented). The sites are spread around the village edge, which potentially reduces concerns; however, there would clearly be a need to consider capacity at the village primary school. It is understood that the school has recently expanded, and so further expansion in the short-term could be non-ideal. On the other hand, focused growth at East Hanney could assist with supporting the maintenance and potentially enhancements of bus services along the A338, and would also assist with the business case for a new train station at Grove. There might also be the potential to fund walking/cycling infrastructure, such that East Hanney is better linked to Grove.

APPENDIX VI – HOUSING GROWTH ALTERNATIVES: APPRAISAL

Introduction

As explained within ‘Part 1’ above, a focus of work has been on the development and appraisal of ‘reasonable’ housing growth alternatives, with a view to informing determination of the preferred strategy.

The following reasonable housing growth alternatives were established in summer 2017, and remain the reasonable alternatives at the current time -

		Option 1 Do minimum	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Allocations	Dalton Barracks	1,200		
	East Kingston Bagpuize w/ Southmoor	600		
	South of Wootton			125
	South of Cumnor			125
	South East Marcham		90	
	North of East Hanney		80	
	North of Steventon			80
	North East of East Hanney		50	
Ab-Ox completions / commitments / windfall		5,550		
Ab-Ox sub-total		7,350	7,570	7,900
% buffer over-and-above target		-2%	1%	5%
Allocations	Harwell Campus	1000		
	NW of Grove	400		
SE Vale completions / commitments / windfall		11,962		
SE Vale sub-total		13,362		
% buffer over-and-above target		10%		
Western Vale allocations		0		
Western Vale completions / commitments / windfall		3,816		
Western Vale sub-total		3,816		
% buffer over-and-above target		23%		
Total housing 2011 to 2031		24,536	24,756	25,086
% buffer over-and-above the (notional)⁵⁷ target		8%	9%	10%

⁵⁷ As discussed at para 6.2.3, the sub area targets are more meaningful and helpful than the district-wide target.

Appraisal methodology

For each of the options, the assessment examines **likely significant effects** on the baseline, drawing on the sustainability objectives identified through scoping (see Table 4.1) as a methodological framework. **Green** is used to indicate significant positive effects, whilst **red** is used to indicate significant negative effects. Every effort is made to predict effects accurately; however, this is inherently challenging given the high level nature of the policy approaches under consideration. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). In light of this, there is a need to make considerable assumptions regarding how scenarios will be implemented 'on the ground' and what the effect on particular receptors would be. Where there is a need to rely on assumptions in order to reach a conclusion on a 'significant effect' this is made explicit in the appraisal text.

Where it is not possible to predict likely significant effects on the basis of reasonable assumptions, efforts are made to comment on the relative merits of the alternatives in more general terms and to indicate a **rank of preference**. This is helpful, as it enables a distinction to be made between the alternatives even where it is not possible to distinguish between them in terms of 'significant effects'.

Finally, it is important to note that effects are predicted taking into account the criteria presented within Regulations.⁵⁸ So, for example, account is taken of the duration, frequency and reversibility of effects. Cumulative effects are also considered (i.e. where the effects of the plan in combination with the effects of other planned or on-going activity that is outside the control of the LPP2).

Appraisal findings

Appraisal findings are presented below within 12 separate tables (each table dealing with a specific sustainability objective) with a final table drawing conclusions.

The appraisal methodology is explained above, but to reiterate: For each sustainability topic the performance of each scenario is categorised in terms of 'significant effects (using **red** / **green**) and also ranked in order of preference. Also, '=' is used to denote instances of all alternatives performing on a par.

⁵⁸ Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations 2004.

Sustainability Objective: <u>Homes</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	3	2	★1
Significant effects?	No	Yes	
Discussion	<p>Options 2 and 3 perform well, as all of the sub area targets assigned by LPP1 would be provided for, and at least an additional 2,200 homes would be provided for within the Abingdon-on-Thames and Oxford Fringe (Ab-Ox) Sub Area, thereby ensuring that Vale’s apportionment of Oxford’s unmet need is provided for within locations well linked to Oxford (once account is taken of LPP1 allocations that will contribute, notably at Abingdon and Radley/Kennington).</p> <p>Indeed, Option 3 would involve allocating land sufficient to deliver 5% above the target. This approach of providing for a ‘buffer’, as a contingency for unforeseen delays in delivering sites, is supported from a ‘Housing’ perspective. Also, ‘flexibility’ is supported on the basis that there is inherently some uncertainty regarding precisely how many homes should be provided for within the Vale, in order to effectively provide for Oxford’s unmet needs. Option 3 would also provide for marginally more affordable housing.</p> <p>Option 1 would involve a small shortfall against the ‘target’ figure (as calculated by summing the LPP1 target figure and the 2,200 home Oxford unmet need figure). This could arguably be acceptable, recognising that the LPP1 allocations that will contribute to the requirement, and also recognising that South East Vale Sub Area sites may contribute. With regards to LPP1 allocations in the Ab-Ox Sub Area, the LPP1 Planning Inspector’s Report states: “[I]n reality, it would be all but impossible to determine if a potential occupier of this housing represents a Vale or Oxford ‘housing need.’” With regards to sites in the South East Vale Sub Area, the Inspector stated: “[W]hilst the Abingdon-on-Thames / Oxford Fringe Sub-Area is closer to Oxford, it is true that more than 3,000 dwellings proposed in the South East Vale (the two Valley Park sites) would also be close to Didcot Station with its... rail service to Oxford.”</p> <p>However, a notable draw-back to Option 1 relates to the proposed housing mix. All allocations would be larger sites, which are inherently at some risk of delayed delivery, due to unforeseen circumstances (e.g. relating to infrastructure delivery). Conversely, Option 2 would involve three smaller sites, all of which are thought to be capable of delivery early in the plan period, and Option 3 would involve an additional three smaller ‘deliverable’ sites. A good housing mix is important from a perspective of wishing to ensure a robust housing delivery ‘trajectory’, i.e. ensure a continual five-year supply of deliverable sites over the plan period. If at any point there is a dip in the trajectory, such that there is not a five year supply, then there could be a risk of ‘planning by appeal’, i.e. a situation whereby speculative applications (i.e. applications at non-allocated sites) gain planning permission at appeal, in accordance with the ‘presumption in favour of sustainable development’ (NPPF para 14).</p> <p>In conclusion, the performance of the alternatives relates to the quantum of homes provided for, and also the mix of sites. Options 2 and 3 would result in significant positive effects.</p>		

Sustainability Objective: <u>Services and facilities</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	★ 1	★ 1	2
Significant effects?	Yes		Yes
Discussion	<p>None of the sites in question (i.e. those that are a variable across the alternatives) would deliver new community infrastructure; however, all are within walking distance of a 'larger village' centre (albeit North East of East Hanney is separated from the village centre by the A338), and several are well connected by public transport.</p> <p>With regards to <u>primary education</u> infrastructure, there is potential to ensure good access to primary schools with capacity at the majority of locations, with certain existing schools having the potential to expand, funded by development; however, there is a significant constraint at Steventon (Option 3), where the existing village school is expanding from an admission number of 25 to an admission number of 30, to meet the needs of permitted housing, and the school's area does not support further expansion. Planning permission was recently refused on primary school capacity grounds, with reasons for refusal (Ref: P16/V1954/O) including -</p> <p><i>"Children who might otherwise have been able to attend St Michael's Primary School would be displaced to other schools, chiefly St Blaise CE Primary School and Drayton Primary School, increasing the need for their expansion. Children moving into the village already of school age may not be able to secure a place at the school, and have to travel to an alternative, which is unsustainable in transport terms. Future families living outside the catchment area would be unlikely to be able to secure a place at the school. In some cases this may result in siblings having to attend different schools, which will increase traffic. The proposal therefore represents an unsustainable form of development, both in social and traffic impact terms, brought about through the lack of the necessary social and physical infrastructure needed by future occupants of the site, which does not accord with the District's strategy for growth. This social and traffic impact cannot currently be mitigated through the provision of a financial contribution, because the village school is at capacity, not capable of further expansion, and no new school site has been identified in the village."</i></p> <p>An allocation at Marcham (Options 2 and 3) also gives rise to concerns regarding primary school capacity, with the existing village school expanding to 1 form entry to meet already planned/permitted growth and there understood to be barriers to further expansion. Oxfordshire County Council objected to the Preferred Options (2017) proposal to deliver 520 homes at Marcham, on primary school grounds; however, concerns are allayed by the knowledge that primary schools would be provided as part of the proposed Dalton Barracks scheme, including a school close to the site's southern extent, in proximity to Marcham.</p> <p>In conclusion, it Option 3 performs poorly due to the issue of primary school capacity at Steventon, and it is appropriate 'flag' the potential for significant negative effects. Other options would result in significant positive effects, recognising that a secondary school is proposed to be delivered at Dalton Barracks under all options.</p>		

Sustainability Objective: Movement

	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	=	=	=
Significant effects?	No		

There is considerable potential to differentiate between the sites/locations, and therefore the alternatives, in respect of the potential to minimise the need to travel, support travel walking/cycling and public transport rather than by the private car, and minimise increased traffic at known congestion hotspots. Taking each of the sites in question (i.e. those that are a variable across the alternatives) in turn -

- South of Cumnor - is supported by the Oxfordshire Growth Board (OGB), with the Spatial Options Report (LUC, 2016) identifying it as one of the three 'green-rated' sites in the Vale, largely on the basis of transport considerations. The nearby A420 is a strategic transport corridor, with Cumnor village centre served by two half hourly services (one Oxford/Abingdon-on-Thames; one Oxford/Wantage). Cumnor is also the location for the second proposed P&R site in the Vale, which (it is proposed) will be associated with Rapid Transit Route 2' (i.e. the other Rapid Transit Route proposed within the Vale).
- East Hanney - is relatively remote from Oxford and the Science Vale, but committed growth at Wantage/Grove means that there is a good, and improving, bus service along the A338. Both sites in question are located at the northern end of the village, in proximity to the existing bus stop. Development at East Hanney would also be close to, and support the business case for Grove rail station; however, there is currently no walking or cycling connection between East Hanney and Grove, other than a bridleway. At the Preferred Options stage, OCC stated: *"The two proposed allocations at East Hanney are relatively well located for public transport and the primary school is being expanded..., therefore any County Council issues in respect of these two sites will be localised ones."*
- Marcham - is located on the A415 – an east-west corridor linking to Abingdon-on-Thames, as opposed to a strategic corridor linking to Oxford and the Science Vale to the south (albeit an A34 junction is within 2km). The site is within easy walking distance of the Marcham village centre, and is within an easy cycling distance of Abingdon-on-Thames (along a shared pedestrian/cycle path); however, there is a need to cross Marcham Interchange. A recent Sustainability Transport Study concluded the need for 'low level improvements' to the route.
- North of Steventon - is within walking/cycling of two key Science Vale employment sites, but walking and cycling infrastructure is limited. Steventon is not on a main road / strategic bus corridor, and traffic movements north may tend to be along the B4017/Marcham Road corridor to the north, via Drayton and Abingdon on route to Marcham Interchange.
- Wootton - is not on a strategic transport corridor, being equidistant between the A34 and the A420. There are currently two busses per hour during the day, and there is limited potential to secure a more frequent service (although Dalton Barracks could lead to opportunities). In the absence of a high quality bus service there would be a risk of cars worsening congestion on route to Oxford. Wootton is beyond easy cycling distance of Oxford, with Abingdon-on-Thames Town Centre c.4-5km along a B-road. The site would be within walking distance of the proposed Dalton Barracks scheme, which will include a secondary school and neighbourhood centre.

In **conclusion**, it is difficult to differentiate the alternatives. Option 3 is arguably preferable, recognising that South of Cumnor would be within easy walking distance of a proposed Rapid Transit Line; however, the other two sites (South of Wootton and North of Steventon) are less well located. Furthermore, higher growth under Option 3 would lead to increased car movements, and therefore worsened traffic congestion, on the A420 and/or the A34. In the absence of transport modelling work, significant positive effects are not predicted.

Sustainability Objective: <u>Health</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	=	=	=
Significant effects?	No		
Discussion	<p>The matter of access to healthcare has already been discussed above. Another health determinant is access to greenspace and outdoor recreation facilities; however, there is little potential to differentiate the alternatives in this respect. None of the sites in question (i.e. those that are a variable across the alternatives) would deliver significant open space; however, it is noted that the South of Wootton site would benefit from very good access to the proposed new Country Park, associated with the proposed Dalton Barracks scheme.</p> <p>In conclusion, the alternatives perform on a par and significant effects are not predicted.</p> <p>N.B. There is also a need to consider environmental health constraints affecting sites; however, environmental health is given stand-alone consideration below, under 'Pollution'.</p>		

Sustainability Objective: <u>Inequality and exclusion</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	=	=	=
Significant effects?	No		
Discussion	<p>There is little or no potential to differentiate between the various sites/locations, in respect of the potential to support regeneration of relatively deprived neighbourhoods. Equally, there is no potential to differentiate the alternative scenarios, as it is not clear that any sites will act in combination to support regeneration. Areas of relative deprivation are found along the southern edge of Oxford, and within the northern part of Didcot, but none of the site options under consideration are adjacent, or close enough so that the effect of development could be to support regeneration. N.B. the matter of affordable housing has been discussed above, under the 'Housing' heading.</p> <p>In conclusion, the alternatives perform on a par and significant effects are not predicted.</p>		

Sustainability Objective: <u>Economy</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	2	2	★1
Significant effects?	Yes		
Discussion	<p>None of the sites in question (i.e. those that are a variable across the alternatives) would deliver employment land; however, it can be argued that sites well linked to Oxford are supported, given that Oxford is a major centre of employment. The Oxfordshire LEP’s Strategic Economic Plan (SEP) states: <i>“We will maintain the principal spatial focus on Oxfordshire’s Knowledge Spine – from Bicester in the north through Oxford to Science Vale in the south – as the main location for housing and employment growth.”</i></p> <p>In conclusion, Option 3 is preferable, on the basis that the South of Cumnor and North of Steventon sites are particularly well linked to key employment locations. All of the alternatives would result in significant positive effects, recognising that all would support a high growth strategy in the South East Vale, and specifically the Science Vale.</p>		

Sustainability Objective: <u>Natural environment</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	★1	★1	2
Significant effects?	No		Uncertain
Discussion	<p>Of the sites in question (i.e. those that are a variable across the alternatives), it is only South of Wootton (Option 3) that is notably constrained. Specifically, the site is constrained by its proximity to Cothill Fen Special Area of Conservation (SAC), which is associated with Sandford Brook (which runs along the western edge of Wootton, south to the Thames at Abingdon). The site is c.220m distant from the SAC ‘as the crow flies’, however, there is no direct access, and the site is thought to be relatively non-susceptible to recreational pressure. The Council’s Habitats Regulations Assessment (HRA) Report (2017) explains that –</p> <p><i>“... fenland sites are less likely to attract significant free-roaming visitor numbers than other types of habitat because the terrain is generally more difficult and less safe for visitors to negotiate... Cothill Fen comprises terrain that on the whole is of an inaccessible nature away from designated paths. A site visit indicated that at Parsonage Moor the habitat is extremely wet off-path, whilst footpaths through other parts of the SAC are lined by dense growth of reedbeds. The SAC is part designated for its ‘alder woodland on floodplains’ and theoretically in places visitors and dogs could stray from the designated paths into this habitat... However, access overall is limited by a minimal number of off-road parking spaces... Where footpaths exist at Parsonage Moor and Lashford Lane, off-path access is restricted in places by fencing, whilst Parsonage Moor has signs and gates/stiles restricting access for dog walkers. Parsonage Moor also lacks a circular walk, with only a small section of board walk over marshy ground which again limits the number of people likely to enter the Fen. Part of the SAC is a National Nature Reserve so access is managed. Natural England and the Oxford Conservation Volunteers undertake footpath management/improvement</i></p>		

specifically to ensure that people are discouraged from travelling ‘off-track’... Recreational pressure is not recognised as a threat to the site under its Site Improvement Plan. Nonetheless, BBOWT have identified that dog walking, dogs off leads, dog fouling and scaring of livestock do contribute to management difficulties on nature reserves including those at Cothill Fen.”

There is also the need to consider the possibility of a hydrological ‘impact pathway’, recognising that the site drains to Sandford Brook; however, the southern edge of Wootton is preferable to the northern and western edges of Wootton, in this respect. Furthermore, there is the need to consider the possibility of ‘in-combination effects’ recognising that growth at other locations, under Option 3, will also potentially result in some increase in recreational pressure on the site. However, it is not clear that there are notable concerns, recognising the HRA findings (including findings of HRA at the Preferred Options stage, at which time the proposal was to deliver 600 homes at North East of Marcham).

In **conclusion**, Option 3 potentially gives rise to concern, given proximity of the South of Wootton site to Cothill Fen SAC, and it is appropriate to ‘flag’ uncertain negative effects. There is also an argument to suggest that Option 1 is preferable to Option 2, including on the basis that reduced traffic on the A34 would lead to reduced air pollution impacting Oxford Meadows SAC (the other European Designated site with notable potential to be impacted by LPP2); however, any differential effects would be negligible, given the numbers involved.

Sustainability Objective: Heritage

	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank		2	3
Significant effects?	No		
Discussion	<p>Several of the sites in question (i.e. those that are a variable across the alternatives) are sensitive in heritage terms to some extent. Specifically –</p> <ul style="list-style-type: none"> • Cumnor – the South of Cumnor site partially abuts Cumnor Conservation Area, and two footpaths cross the site. The Conservation Area Character Appraisal identifies a number of important views across the potential site. The presence of Tree Preservation Orders (TPOs) potentially serves to indicate historic field boundaries / a historic field pattern. • North of East Hanney –abuts the East Hanney Conservation Area; however, there are no listed buildings associated with this part of the conservation area, and there is some existing screening; furthermore, there are limited views into the conservation area that would be impacted by the development, with views into the conservation area from the A338 being somewhat distant (at least 200m) and partially screened. • South East Marcham falls within an archaeological notification area - Prehistoric/Roman field system and Bronze Age arrowhead • North of Steventon – in proximity to the Steventon Conservation Area, however, intervening buildings and vegetation, and no listed buildings in proximity. <p>In conclusion, Option 1 is preferable. Option 3 performs poorly, recognising that the South of Cumnor site is constrained; however, it is not clear that allocation of this site would lead to significant negative effects. There will be good potential for mitigation through layout, design and landscaping measures, and the integrity of the conservation area will likely remain intact.</p>		

Sustainability Objective: <u>Landscape</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank		2	3
Significant effects?	No		
Discussion	<p>All of the sites in question (i.e. those that are a variable across the alternatives) are sensitive in landscape terms to some extent. Taking each site in turn –</p> <ul style="list-style-type: none"> • South of Cumnor – is located within the Green Belt; however, comprises small enclosed agricultural fields with mature hedgerows that offer good screening from both the immediate and wider landscape. The Landscape Capacity Study concludes ‘medium’ capacity. • North East of East Hanney – has high landscape capacity. • North of East Hanney - is generally well contained from the wider landscape and development within the site would fit in with the existing settlement pattern. Any development within the site would need to respect the setting of the adjacent Conservation Area, mitigate any views from the north with additional planting. The Landscape Capacity Study concludes ‘medium/high’ capacity. • South of Wootton - is the least constrained site at Wootton. The site is generally well contained by hedgerows and trees with few available open views. The rights of way at the eastern and southern site boundaries have limited intervisibility with the site, however there are partial views into the site through gaps in the boundary vegetation, from the bridleway to the north. Views into the site from surrounding properties vary with boundary treatment. The Landscape Capacity Study concludes ‘high’ capacity. • South East of Marcham - has a strong relationship to the new development to the south of Marcham and some relationship to the existing village to the north of the site. Development of the site would be consistent with the existing settlement pattern of Marcham, assuming some landscaping. The site is low lying and bound by hedgerows and trees, which contain views from the wider landscape. There are no footpaths in close proximity to the site and no public rights of way with views of the site. The hedgerow at the northern site boundary screens views from the A415 Marcham Road, however pedestrians and cyclists using the adjacent pavement have partial views into the site and open views at the two field gates. The Landscape Capacity Study concludes ‘medium/high’ capacity. • North of Steventon – the site is bounded by existing development to the east and new development to the south. The northern part is more sensitive and exposed to views from the north. A line of mature trees lining the access road to the west of the site provide good screening of views from the west. The Landscape Capacity Study concludes ‘medium/high’ capacity. <p>In conclusion, lower growth is preferable; however, it is recognised that some of the sites that ‘come in’ under the higher growth options are relatively unconstrained. Significant negative effects are not predicted, recognising that the proposal is not to allocate any site with ‘low’ capacity under any option, and recognising that there is little reason to suggest any potential for in-combination effects.</p>		

Sustainability Objective: <u>Pollution</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank		2	2
Significant effects?	Uncertain		
Discussion	<p>Air quality is a primary concern, particularly given the designated Air Quality Management Areas (AQMAs) in the centres of Abingdon-on-Thames, Botley and Marcham. South East of Marcham (Options 2 and 3) is adjacent to the AQMA (albeit the predominant direction of travel may be east, away from the AQMA), and hence any new junction could be within the AQMA, potentially leading to stationary traffic and hence increased pollution. Allocations at East Hanney (Options 2 and 3) will also lead to some traffic through the Marcham AQMA.</p> <p>The additional (Green Belt) sites that ‘come in’ under Option 3 are not particularly problematic, from an air quality perspective; however, higher growth will nonetheless inevitably lead to some increased movements through the AQMAs, for example, North of Abingdon-on-Thames could potentially have excellent access to the A34, along which is the Botley AQMA.</p> <p>In conclusion, Option 1 is preferable, and it is appropriate to ‘flag’ uncertain negative effects for all options, given the Marcham AQMA issue. Even under Option 1, growth at Kingston Bagpuize will result in increased traffic through the Marcham AQMA.</p>		

Sustainability Objective: <u>Climate change mitigation</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank	=	=	=
Significant effects?	No		
Discussion	<p>There is a need to minimise per capita CO₂ emissions from transport, and the built environment. In respect of the former, there is little to add to the discussion presented above, under ‘Services and facilities’ and ‘Movement’. In respect of the latter, a key consideration is the need to support larger developments – in excess of 500 homes – where there will be the economies of scale that enable delivery of decentralised heat and/or power infrastructure.</p> <p>All of the sites in question (i.e. those that are a variable across the alternatives) are smaller sites, and hence there will be little or no potential to deliver low carbon infrastructure.</p> <p>In conclusion, it is not possible to differentiate the alternatives. Significant effects are not predicted, recognising that climate change is a global issue (and hence local actions can have only limited effect).</p>		

Sustainability Objective: <u>Climate change adaptation</u>			
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Rank		2	2
Significant effects?	No	Uncertain	
Discussion	<p>The key issue here is flood risk, given limited potential to differentiate between sites – and therefore the alternatives - in respect of other climate change adaptation issues (e.g. increased temperatures and drought).</p> <p>None of the sites in question (i.e. those that are a variable across the alternatives) are constrained by fluvial flood risk. The majority of sites are associated with a degree of surface water flood risk, although the risk is relatively minor in all instances (recognising good potential for avoidance and mitigation).</p> <p>Capacity at Wastewater Treatment Works (WwTWs) is another consideration. The recently prepared Water Cycle Study (WCS) concludes –</p> <p><i>“Four WwTWs (Didcot, Kingston Bagpuize, Oxford and Wantage) do not currently have sufficient flow capacity and/or have insufficient treatment processes to accept all future development proposed within the plan period. Therefore solutions are required in order to accommodate the growth to ensure that the increased wastewater flow discharged does not impact on the current quality of the receiving watercourses, their associated ecological sites and also to ensure that the watercourses can still meet with legislative requirements.</i></p> <p><i>The WCS has concluded that feasible solutions are possible to ensure legislative objectives are met. However, this WCS recommends that the Vale of White Horse District Council, the Environment Agency, and Thames Water Utilities Limited continue to work together to determine the nature of upgrades which will need to be implemented in order to conclude the timing and quantity of development that can be accommodated across the District in the early phases of the Local Plan delivery period.”</i></p> <p>On this basis, it is important to highlight that wastewater from allocations at East Hanney (Options 2 and 3) will drain to Wantage WwTW.</p> <p>Under Option 3, two of the additional (Green Belt) sites would drain to Abingdon-on-Thames WwTW, whilst the other would drain to Appleton. Both are shown by the WCS to have relatively good capacity (Abingdon-on-Thames is described as having ‘flow capacity available, whilst Appleton has ‘limited flow capacity’).</p> <p>On balance, Option 1 is preferable on the basis that there would be less pressure on Wantage WwTW. At this stage, recognising that detailed work is still to be completed regarding the extent of upgrades required, and phasing of development, it is appropriate ‘flag’ uncertain negative significant effects for Options 2 and 3. It is noted that Option 1 would involve allocation of North West of Grove, which would drain to Abingdon-on-Thames WwTW; however, this site would not deliver until late in the plan period (at the earliest).</p>		

Summary findings and conclusions

Objective	Categorisation and rank		
	Option 1 Larger sites	Option 2 Three additional smaller sites	Option 3 Six additional smaller sites (inc. Green Belt)
Homes	3	2	★1
Services and facilities	★1	★1	2
Movement	=	=	=
Health	=	=	=
Inequality and exclusion	=	=	=
Economy	2	2	★1
Natural environment	★1	★1	2
Heritage	★1	2	3
Landscape	★1	2	3
Pollution	★1	2	2
Climate change mitigation	=	=	=
Climate change adaptation	★1	2	2

Conclusions

The appraisal shows Option 1 to perform best in terms of the greatest number of objectives, primarily because it would involve concentrating growth at a small number of sites that are relatively unconstrained in terms of environmental issues/objectives. However, Option 1 performs notably least well in terms of ‘Housing’ objectives, as there would be an over-reliance on large sites.

Option 2 outperforms Option 3 in respect of several environmental objectives, largely on the basis that one of the sites included in Option 3 (North of Steventon) is significantly constrained by a lack of capacity at the village primary school, another (South of Cumnor) is seemingly somewhat constrained in landscape/heritage terms (given contribution of the site to the setting of the Cumnor Conservation Area) and another (South of Wootton) is somewhat constrained in biodiversity terms (given proximity to Cothill Fen SAC). However, Option 3 is judged to outperform Option 2 in respect of ‘Economy’ objectives, recognising that two of the three additional smaller sites that would ‘come in’ (South of Cumnor and North of Steventon) are well located to either Oxford or Science Vale.