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# **Sustainability Appraisal of the Hertsmere Local Plan: Issues and Options**

## **Sustainability Appraisal Report**

Prepared by LUC  
February 2018

**Project Title:** Sustainability Appraisal of the Hertsmere Local Plan

**Client:** Hertsmere Borough Council

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# 1 Introduction

- 1.1 This Sustainability Appraisal Report has been prepared by LUC on behalf of Hertsmere Borough Council as part of the integrated Sustainability Appraisal (SA) and Strategic Environmental Assessment (SEA) of the Hertsmere Local Plan.
- 1.2 This report relates to the Issues and Options version of the Local Plan (September 2017) and it should be read in conjunction with that document.

## Context for the Hertsmere Local Plan

- 1.3 Hertsmere is located in southern Hertfordshire on the outer fringes of London and borders the London Boroughs of Barnet, Harrow and Enfield as well as Welwyn Hatfield, Three Rivers, Watford and St Albans Councils. The population of the Borough is primarily concentrated within the four main settlements of Borehamwood, Bushey, Potters Bar and Radlett, in addition to a number of smaller settlements including Aldenham, Elstree, Letchmore Heath, South Mimms, Ridge and Shenley. The Borough has good road and rail links with mainline stations at Elstree and Borehamwood, Potters Bar and Radlett (with Bushey just outside the Borough), as well the M25 running through the Borough with two junctions (23 and 24), the M1, A1(M) and A41.
- 1.4 Nearly 80% of the 100km<sup>2</sup> (38.6 sq. miles) of the Borough comprises land in the Metropolitan Green Belt. Minor amendments to the Green Belt boundary were made in 2016, following the adoption of the Site Allocations and Development Management Policies Plan, resulting in the former Shenley Hospital site (developed for housing in the 1990s) being taken out of the Green Belt as well as an area of safeguarded land for employment (approximately 17 hectares) at Rowley Lane, Borehamwood, along with a number of smaller boundary alterations. The majority of the Borough is located within the Watling Chase Community Forest and despite its proximity to London; there is a predominantly rural character to much of the Borough. There are a number of 'Gateway Sites' to the Watling Chase Community Forest which provide car free points of entry to the Forest's network of paths and routes, some of which are experiencing significant development and traffic pressure.
- 1.5 Hertsmere has a population of just over 100,000, with a high employment rate and a large proportion of small businesses. The area remains a major hub for UK and international film and TV production in the form of Elstree Studios and BBC Elstree, both located in Borehamwood. A number of nationally significant research institutions are also based in the Borough including the National Institute for Biological Standards and Control (NIBSC), Bio Products Laboratory and Cancer Research UK/University College London.

## The Local Plan

- 1.6 Hertsmere Borough Council is currently preparing a new Local Plan to guide development in the Borough over the next 15 years. Once adopted, the new Local Plan will replace the Hertsmere Local Plan (2012-2027) which consists of the Core Strategy (adopted January 2013), the Elstree Way Corridor Area Action Plan (adopted July 2015), the Site Allocations and Development Management Policies Plan (adopted November 2016) and the Policies Map (published November 2016).
- 1.7 The Core Strategy sets out the Council's vision for the Borough to 2027, providing the foundation for decisions on planning applications and development proposals affecting the area. The adopted Core Strategy seeks to strike a balance between the Borough's housing and economic development needs, social welfare and protection of the environment. The Site Allocations and

Development Management Policies Plan sets out detailed proposals and policies by which the Council sees the aims and objectives of the Core Strategy being best achieved.

- 1.8 The new Local Plan will set out the vision and objectives for the future of Hertsmere up to 2034, and will reconsider housing and employment needs. It will allocate sites for housing, employment and other forms of development and will set out development management policies for the Borough up to 2034.
- 1.9 Having completed a joint Strategic Housing Market Assessment (SHMA) and Economic Study, a Stage 1 Green Belt Assessment and a Gypsy and Traveller Accommodation Needs Study, various other evidence documents are being prepared to support the Local Plan, including a Strategic Flood Risk Assessment, a Stage 2 Green Belt Assessment, an Indoor Sports and Outdoor Playing Field Strategy, a joint Water Cycle Study, a Housing and Employment Land Availability Assessment and a joint Town Centres and Shopping Study. There are also a number of supporting studies jointly commissioned with neighbouring or other authorities including a Green Arc Strategic Green Infrastructure Plan, a Hertfordshire Green Infrastructure Study, a Retail Study and a Hertfordshire Infrastructure and Investment Strategy. A significant amount of the technical work previously commissioned or currently being prepared is being undertaken jointly with neighbouring authorities in South West Hertfordshire, who form part of a common Housing Market Area and Functional Economic Market Area.
- 1.10 The Council intends to consult on four stages of the Local Plan as follows:
  - Issues and Options (which this report relates to).
  - Preferred Options.
  - Consultation Draft.
  - Proposed Submission Local Plan, also known as Publication or Regulation 19 stage.

## Sustainability Appraisal and Strategic Environmental Assessment

- 1.11 Sustainability Appraisal is a statutory requirement of the Planning and Compulsory Purchase Act 2004. It is designed to ensure that the plan preparation process maximises the contribution that a plan makes to sustainable development and minimises any potential adverse impacts. The SA process involves appraising the likely social, environmental and economic effects of the policies and proposals within a plan from the outset of its development.
- 1.12 Strategic Environmental Assessment (SEA) is also a statutory assessment process, required under the SEA Directive<sup>1</sup>, transposed in the UK by the SEA Regulations (Statutory Instrument 2004, No 1633). The SEA Regulations require the formal assessment of plans and programmes which are likely to have significant effects on the environment and which set the framework for future consent of projects requiring Environmental Impact Assessment (EIA)<sup>2</sup>. The purpose of SEA, as defined in Article 1 of the SEA Directive is '*to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans....with a view to promoting sustainable development*'.<sup>3</sup>
- 1.13 SEA and SA are separate processes but have similar aims and objectives. Simply put, SEA focuses on the likely environmental effects of a plan whilst SA includes a wider range of considerations, extending to social and economic impacts. National Planning Practice Guidance<sup>3</sup> shows how it is possible to satisfy both requirements by undertaking a joint SA/SEA process, and to present an SA report that incorporates the requirements of the SEA Regulations. The SA/SEA of the Hertsmere Local Plan is being undertaken using this integrated approach and throughout this report the abbreviation 'SA' should therefore be taken to refer to 'SA incorporating the requirements of SEA'.

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<sup>1</sup> SEA Directive 2001/42/EC

<sup>2</sup> Under EU Directives 85/337/EEC and 97/11/EC concerning EIA.

<sup>3</sup> <http://planningguidance.planningportal.gov.uk/>



## Habitats Regulations Assessment

- 1.14 Under Article 6 (3) and (4) of the Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive) land-use plans, including Development Plan Documents, are also subject to Habitats Regulations Assessment (HRA). The purpose of HRA is to assess the impacts of a land-use plan against the conservation objectives of a European site and to ascertain whether it would adversely affect the integrity of that site.
- 1.15 The HRA for the Hertsmere Local Plan will be undertaken by LUC on behalf of the Council. An HRA Scoping Report has been prepared, and screening for likely significant effects of the Local Plan will be undertaken at the next stage of the plan preparation once preferred options have been identified. While the HRA will be reported on separately to the SA, the findings will be taken into account in the SA where relevant (for example to inform judgements about the likely effects of the Local Plan on biodiversity).

## Structure of this Report

- 1.16 This report is the SA report for the Hertsmere Local Plan: Issues and Options (September 2017). **Table 1.1** below signposts how the requirements of the SEA Regulations have been met within this report.

**Table 1.1: Requirements of the SEA Regulations and where these have been addressed in this SA Report**

SEA Regulation Requirements	Where covered in this SA report
Preparation of an environmental report in which the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives taking into account the objectives and geographical scope of the plan or programme, are identified, described and evaluated. The information to be given is (Art. 5 and Annex I):	
a) An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes	<b>Chapter 3 and Appendix 2</b>
b) The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme	<b>Chapter 3 and Appendix 3</b>
c) The environmental characteristics of areas likely to be significantly affected	<b>Chapter 3 and Appendix 3</b>
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.	<b>Chapter 3 and Appendix 3</b>
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	<b>Chapter 3 and Appendix 2</b>
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)	<b>Chapters 4, 5 and 6</b>

SEA Regulation Requirements	Where covered in this SA report
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;	<b>Chapters 4, 5 and 6</b>
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;	<b>Chapter 2</b> provides information about how the assessment was undertaken and difficulties encountered. <b>Chapters 4, 5 and 6</b> provide information about the Council's reasons for identifying the options that are set out in the Issues and Options document. Information about the reasons for selecting or rejecting site options will be included in the next iteration of the SA report once preferred options have been identified.
i) a description of measures envisaged concerning monitoring in accordance with Art. 10;	To be addressed once preferred options have been identified.
j) a non-technical summary of the information provided under the above headings	A separate non-technical summary document will be prepared to accompany the SA report for the Proposed Submission Local Plan.
The report shall include the information that may reasonably be required taking into account current knowledge and methods of assessment, the contents and level of detail in the plan or programme, its stage in the decision-making process and the extent to which certain matters are more appropriately assessed at different levels in that process to avoid duplication of the assessment (Art. 5.2)	Addressed throughout this SA report.
<p><b>Consultation:</b></p> <ul style="list-style-type: none"> <li>authorities with environmental responsibility, when deciding on the scope and level of detail of the information which must be included in the environmental report (Art. 5.4)</li> </ul>	Consultation on the SA Scoping Report was undertaken between September and October 2017. Comments received and how these have been addressed are recorded in <b>Appendix 1</b> of this document.
<ul style="list-style-type: none"> <li>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)</li> </ul>	Consultation is being undertaken in relation to the Hertsmere Local Plan and will continue to be for all future stages of the plan. The current consultation document is accompanied by this SA report.
<ul style="list-style-type: none"> <li>other EU Member States, where the implementation of the plan or programme is likely to have significant effects on the environment of that country (Art. 7).</li> </ul>	N/A

SEA Regulation Requirements	Where covered in this SA report
<b>Taking the environmental report and the results of the consultations into account in decision-making (Art. 8)</b>	
<p><b>Provision of information on the decision:</b> When the plan or programme is adopted, the public and any countries consulted under Art.7 must be informed and the following made available to those so informed:</p> <ul style="list-style-type: none"> <li>• the plan or programme as adopted</li> <li>• a statement summarising how environmental considerations have been integrated into the plan or programme and how the environmental report of Article 5, the opinions expressed pursuant to Article 6 and the results of consultations entered into pursuant to Art. 7 have been taken into account in accordance with Art. 8, and the reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives dealt with; and</li> <li>• the measures decided concerning monitoring (Art. 9)</li> </ul>	To be addressed after the Local Plan is adopted.
<p><b>Monitoring</b> of the significant environmental effects of the plan's or programme's implementation (Art. 10)</p>	To be addressed after the Local Plan is adopted.
<p><b>Quality assurance:</b> environmental reports should be of a sufficient standard to meet the requirements of the SEA Directive (Art. 12).</p>	This report has been produced in line with current guidance and good practice for SEA/SA and this table demonstrates where the requirements of the SEA Directive have been met.

1.17 This section has introduced the SA process for the Hertsmere Local Plan. The remainder of the report is structured into the following sections:

- **Chapter 2: Methodology** describes the approach that is being taken to the SA of the Local Plan.
- **Chapter 3: Sustainability Context for Development in Hertsmere** describes the relationship between the Hertsmere Local Plan and other relevant plans, policies and programmes; summarises the social, economic and environmental characteristics of the district and identifies the key sustainability issues.
- **Chapter 4: Sustainability Appraisal Findings for Issues and Options Part 1** summarises the SA findings for the proposed vision and objectives included in Part 1 of the Local Plan Issues and Options document.
- **Chapter 5: Sustainability Appraisal findings for Issues and Options Part 2** summarises the SA findings for options to address the planning issues identified in Part 2 of the Local Plan Issues and Options document.
- **Chapter 6: Sustainability Appraisal findings for Issues and Options Part 3** summarises the SA findings for reasonable alternative approaches for the spatial distribution of development (potential development options) presented in Part 3 of the Local Plan Issues and Options document.
- **Chapter 7: Conclusions** summarises the key findings from the SA of the Issues and Options version of the Local Plan and describes the next steps to be undertaken.

1.18 The main body of the report is supported by a number of appendices as follows:

- **Appendix 1** presents the **consultation responses** that were received in relation to the SA Scoping Report and explains how each one has been addressed.
- **Appendix 2** presents the **review of relevant plans, policies and programmes**, including updates in response to comments on the SA Scoping Report.
- **Appendix 3** presents the **updated baseline information**, taking into account comments on the SA Scoping Report.

- **Appendix 4** presents the **assumptions** that were applied during the appraisal of the site options.
- **Appendix 5** presents the detailed SA matrices for the approaches presented in **Part 2** of the Issues and Options document and their reasonable alternatives.
- **Appendix 6** presents the detailed SA matrices for the **potential development approaches** that are being considered for the Local Plan, presented in **Part 3** of the Issues and Options document.

## 2 Methodology

- 2.1 In addition to complying with legal requirements, the approach being taken to the SA of the Hertsmere Local Plan is based on current best practice and the guidance on SA/SEA set out in the National Planning Practice Guidance, which involves carrying out SA as an integral part of the plan-making process. **Table 2.1** below sets out the main stages of the plan-making process and shows how these correspond to the SA process.

**Table 2.1: Corresponding stages in plan making and SA**

<b>Local Plan Step 1: Evidence Gathering and Engagement</b>
SA stages and tasks
<b>Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope</b>
1: Identifying other relevant policies, plans and programmes, and sustainability objectives
2: Collecting baseline information
3: Identifying sustainability issues and problems
4: Developing the SA framework
5: Consulting on the scope of the SA
<b>Local Plan Step 2: Production</b>
SA stages and tasks
<b>Stage B: Developing and refining options and assessing effects</b>
1: Testing the Local Plan objectives against the SA framework
2: Developing the Local Plan options
3: Evaluating the effects of the Local Plan
4: Considering ways of mitigating adverse effects and maximising beneficial effects
5: Proposing measures to monitor the significant effects of implementing the Local Plan
<b>Stage C: Preparing the Sustainability Appraisal Report</b>
1: Preparing the SA Report
<b>Stage D: Seek representations on the Local Plan and the Sustainability Appraisal Report</b>
1: Public participation on Local Plan and the SA Report
2(i): Appraising significant changes
<b>Local Plan Step 3: Examination</b>
SA stages and tasks
2(ii): Appraising significant changes resulting from representations
<b>Local Plan Step 4 &amp; 5: Adoption and Monitoring</b>
SA stages and tasks
3: Making decisions and providing information
<b>Stage E: Monitoring the significant effects of implementing the Local Plan</b>
1: Finalising aims and methods for monitoring
2: Responding to adverse effects

- 2.2 The sections below describe the approach that has been taken to the SA of the Hertsmere Local Plan to date and provide information on the subsequent stages of the process.

### Stage A: Scoping

- 2.3 The SA process began with the production of a Scoping Report for the Hertsmere Local Plan, which was prepared by LUC on behalf of Hertsmere Borough Council in September 2017.
- 2.4 The Scoping stage of the SA involves understanding the social, economic and environmental baseline for the Plan area as well as the sustainability policy context and key sustainability issues. The Scoping Report presented the outputs of the following tasks:

- Policies, plans and programmes of relevance to the Local Plan were identified and the relationships between them were considered, enabling any potential synergies to be exploited and any potential inconsistencies and incompatibilities to be identified and addressed (see **Appendix 2**).
  - Baseline information was collected on environmental, social and economic issues in Hertsmere Borough Council. This baseline information provides the basis for predicting and monitoring the likely effects of options for policies and site allocations and helps to identify alternative ways of dealing with any adverse effects identified (see **Appendix 3**).
  - Key sustainability issues for Hertsmere were identified and their likely evolution without the implementation of the Local Plan was considered (see **Table 3.1**).
  - A Sustainability Appraisal framework was presented, setting out the SA objectives against which options and subsequently policies would be appraised. The SA framework provides a way in which the sustainability impacts of implementing a plan can be described, analysed and compared. It comprises a series of sustainability objectives and associated sub-questions that can be used to 'interrogate' options and policies drafted during the plan-making process. These SA objectives define the long-term aspirations of the district with regard to social, economic and environmental considerations. During the SA, the performances of the plan options (and later, policies) are assessed against these SA objectives and sub-questions (see **Table 2.2**).
- 2.5 Public and stakeholder participation is an important part of the SA and wider plan-making processes. It helps to ensure that the SA report is robust and has due regard for all appropriate information that will support the plan in making a contribution to sustainable development. The SA Scoping Report for the Local Plan was published for consultation between September and October 2017 with the three statutory consultees (Natural England, the Environment Agency and Historic England) and a number of other stakeholders identified by the Council.
- 2.6 **Appendix 1** lists the comments that were received during the consultation on the SA Scoping Report and describes how each one has been addressed during the preparation of this SA Report. In light of the comments received, a number of amendments were made to the review of plans, policies and programmes, the baseline information and the key sustainability issues. The updated versions of these are presented in this document. These parts of the Scoping Report will continue to be updated as necessary at each stage of the SA process to ensure that they remain up to date and reflect the current situation in Hertsmere Borough. The comments received also prompted a small number of minor changes to the SA framework. These are demonstrated in **Table 2.2** with deletions from the version presented in the SA Scoping Report shown in ~~strikethrough~~ text and any additions shown as underlined text.
- 2.7 The review of plans, policies and programmes and the baseline information are summarised in **Chapter 3**. The full, updated review of plans, policies and programmes and the baseline information is included in the SA Scoping Report (September 2017) and in **Appendix 2** and **Appendix 3**. These will continue to be updated to account for any new information in future iterations of the SA.
- 2.8 **Table 2.2** overleaf presents the updated SA framework for the Hertsmere Local Plan, which includes 15 SA objectives. The table also shows the appraisal questions and which SEA topics are relevant to each SA objective.

**Table 2.2: SA framework for the Hertsmere Local Plan<sup>4</sup>**

SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
<b>SA Objective 1</b>	<p><b><u>Education</u></b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability</p>	<p>Provide new and improved education facilities, which will support raising attainment and the development of skills, leading to a work ready population of school and college leavers?</p> <p>Promote the development of education services that retain young people through further and higher education in order to develop and diversify the skills needed to make Hertsmere prosper?</p> <p>Create new opportunities to improve educational attainment, qualification levels and participation in education and training through access to existing or the provision of new educational infrastructure?</p>	Population
<b>SA Objective 2</b>	<p><b><u>Services</u></b></p> <p>To ensure ready access to essential services and facilities<sup>5</sup> for all residents</p>	<p>Provide new and enhance existing leisure facilities, where thresholds/standards require these?</p> <p>Create opportunities to lead healthier lifestyles, including development that enhances existing and /or makes provision for and maintenance towards open spaces, sports and recreational facilities e.g. publicly available pitches, allotments, swimming pools, courts, etc.?</p> <p>Provide new or enhanced local services to support new and growing communities?</p> <p>Provide for the specific needs of disabled and older people?</p>	Population, Human Health

<sup>4</sup> Wording that has been deleted following consultation on the SA Scoping Report is shown in ~~strikethrough~~ text, whereas any additional wording is shown as underlined text.

<sup>5</sup> Essential services and facilities relevant to this objective include those discussed in the appraisal questions, as well as education and health facilities, which are assessed via SA objective 1 and SA objective 5. This objective relates to overall accessibility to a range of services and facilities, whilst SA Objectives 1 and 5 relate to health and education specifically, and will primarily be assessed through consideration of proximity and provision of facilities.

SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
<b>SA Objective 3</b>	<p><b><u>Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs</p>	<p>Create developments that make significant contributions to local housing needs?</p> <p>Provide a mix of housing suitable for a range of ages and household types?</p> <p>Provide genuinely affordable housing?</p>	Population, Material Assets, Human Health
<b>SA Objective 4</b>	<p><b><u>Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces</p>	<p>Create well-designed developments with a sufficient critical mass or density to support local services and public transport provision?</p> <p>Reduce levels of crime, anti-social behaviour and the fear of crime through high quality design and intervention, i.e. street layout, public space provision, passive surveillance, lighting etc.?</p> <p>Make provision for religious places of worship in Shenley and Borehamwood?</p>	Population, Human Health
<b>SA Objective 5</b>	<p><b><u>Health</u></b></p> <p>To improve population's health and reduce inequalities</p>	<p>Provide, steward and maintain green infrastructure assets and networks (including green open space and river/canal corridors), ensuring that these are linked into new and existing developments, to improve the connectivity of green space and green networks?</p> <p>Create opportunities to lead healthier lifestyles, including development that enhances existing and /or makes provision for and maintenance towards open spaces, sports and recreational facilities e.g. publicly available pitches, allotments, swimming pools, courts, etc.?</p> <p>Provide new or enhanced local health services to support new and growing communities?</p>	Population, Human Health



SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
<b>SA Objective 6</b>	<p><b><u>Soil and Minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources</p>	<p>Avoid development of high quality agricultural land? Ensure the re-use and redevelopment of brownfield sites?</p> <p>Result in efficient use of recycled/secondary materials?</p> <p>Protect mineral resources and infrastructure?</p> <p>Ensure development avoids sterilisation of local mineral reserves?</p>	Soil

SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
<p><b>SA Objective 7</b></p>	<p><b><u>Historic Environment Heritage</u></b></p> <p>To protect <del>and</del> <u>or</u> enhance historic buildings, heritage assets and archaeological sites<sup>6</sup> <u>and their settings</u></p>	<p><del>Avoid adverse effects on</del> <u>Conserve and enhance</u> listed buildings (including locally listed buildings), conservation areas, scheduled ancient monuments, registered parks and gardens, and registered battlefields and their settings?</p> <p><u>Seek to manage impacts on currently unknown historic and heritage assets, particularly in areas with archaeological potential?</u></p> <p>Provide appropriately scaled, designed and landscaped developments that relate well to and enhance the historic character of the Borough and contribute positively to its distinctive sense of place?</p> <p>Promote the enhancement of the Borough’s archaeological resource and other aspects of <del>heritage</del> <u>the historic environment</u>, such as parks and open spaces, and areas with a particular historical or cultural association?</p> <p><u>Protect archaeological and other vulnerable assets (particularly organic remains) from changes in hydrological conditions and soil chemistry?</u></p> <p>Promote access to, as well as enjoyment and understanding of, the local historic environment <u>(including architectural, archaeological and artistic heritage)?</u></p> <p><u>Ensure climate change mitigation and energy efficiency measures can be sensitively incorporated into the historic environment?</u></p> <p>Improve participation in cultural activities?</p> <p>Help foster heritage-led regeneration?</p> <p>Improve existing and provide new leisure, recreational, or cultural activities related to the historic environment?</p>	<p>Cultural Heritage, including architectural and archaeological heritage</p>

<sup>6</sup> This includes both designated and non-designated assets. Archaeological sites include sites with archaeological potential, in particular known Archaeological Sites as sent to LUC by the Council. Originally sourced from Historic England.

SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
<b>SA Objective 8</b>	<p><b><u>Landscape</u></b></p> <p>To maintain and enhance the quality of countryside and landscape</p>	<p><del>Consider</del><u>Retain or enhance</u> the existing character, form and pattern of the Borough's landscapes, buildings and settlements?</p> <p>Protect and enhance the local distinctiveness and contribution to a sense of place?</p>	Landscape
<b>SA Objective 9</b>	<p><b><u>Greenhouse Gas Emissions</u></b></p> <p>To reduce greenhouse gas emissions, including a reduced dependence on the private car</p>	<p>Ensure a complementary mix of land uses within compact communities that minimises the length of journeys to services and facilities and employment opportunities, increases the proportion of journeys made on foot or by cycle, and are of a sufficient density to support and enhance local services and public transport provision?</p> <p>Situate development in locations well served by public transport, cycle paths and walking routes?</p> <p>Provide new and improved sustainable transport networks, including cycle and walking routes, to encourage active travel and improve connectivity to local service centres, transport hubs, employment areas and open/green spaces?</p> <p>Improve strategic public transport infrastructure?</p> <p><u>Minimise greenhouse gas emissions from industrial and commercial activities?</u></p>	Air, Climatic Factors, Human Health
<b>SA Objective 10</b>	<p><b><u>Biodiversity and Geodiversity</u></b></p> <p>To protect and enhance biodiversity and geodiversity</p>	<p>Protect and where possible enhance <u>internationally (including European sites)</u>, nationally designated biodiversity sites and species?</p> <p>Avoid net loss, damage to, or fragmentation of locally designated and non-designated wildlife sites, habitats and species and encourage net gain in biodiversity?</p> <p>Enhance and increase the extent of habitats for protected species and priority species identified in the Hertfordshire BAP or the</p>	Biodiversity, Fauna, Flora

SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
		<p>England Biodiversity Strategy 2020?</p> <p>Increase opportunities for people to come into contact with resilient wildlife places while encouraging respect for and raising awareness of the sensitivity of these sites?</p> <p>Integrate biodiverse habitats into new developments, as well as contribute to improvements in ecological connectivity and ecological resilience in rural and urban areas?</p> <p>Maintain and enhance ecological networks in the Borough?</p> <p>Protect sites valued for their geological characteristics?</p> <p><b>NB</b> Climate change is likely to impact upon habitats and thereby biodiversity. Plan policies that achieve the goals listed above should all help to enhance the ability of wildlife to adapt to a changing climate.</p>	
<b>SA Objective 11</b>	<p><b><u>Water Quality and Quantity</u></b></p> <p>To improve water quality and manage water resources sustainably</p>	<p>Ensure that development does not lead to the deterioration of groundwater, surface water or river water quality?</p> <p>Locate development where adequate foul drainage, sewage treatment facilities, <u>adequate potable water supply</u> and surface water drainage can be made available?</p> <p>Incorporate SuDS (including their long-term maintenance) into development, so as to reduce the rate of run-off and the risk of surface water flooding and combined sewer overflow?</p> <p>Increase water efficiency, particularly in new developments?</p>	Water, Biodiversity, Fauna, Flora
<b>SA Objective 12</b>	<p><b><u>Flooding</u></b></p> <p>To minimise the risk of flooding taking account of climate change</p>	<p>Avoid development in locations at risk from flooding or which could increase the risk of flooding elsewhere, taking into account the impacts of climate change?</p> <p>Create development that incorporates SuDS (including their long-term maintenance) to reduce the rate of run-off and reduce the risk of surface water flooding and combined sewer overflows?</p>	Water, Climatic Factors, Human Health

SA Objective Reference	SA Objective	Appraisal questions: Will the Plan ...?	Relationship with the SEA Topics
<b>SA Objective 13</b>	<p><b><u>Air Quality</u></b></p> <p>To improve local air quality</p>	<p><u>Minimise the number of vehicles travelling to, from and through the Borough's AQMAs?</u></p> <p>Situate development in locations well served by public transport, cycle paths and walking routes in order to reduce emissions?</p> <p>Situate developments within walking distance to essential services and facilities?</p> <p>Make provision for new and improved sustainable transport networks, including cycling and walking routes?</p> <p><u>Minimise emissions of air pollutants from industrial activities?</u></p>	Air, Human Health
<b>SA Objective 14</b>	<p><b><u>Energy Efficiency</u></b></p> <p>To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy</p>	<p>Create strategic-scale developments that make significant and lasting contributions to the UK's national carbon target of reducing emissions by at least 80% from 1990 levels by 2050?</p> <p>Create connected energy networks that provide local low carbon and renewable electricity and heat?</p>	Climatic Factors
<b>SA Objective 15</b>	<p><b><u>Economy</u></b></p> <p>Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres</p>	<p>Improve access to jobs for local people from all sectors of the community that will reduce inequality between standards of living?</p> <p>Enhance the vitality and vibrancy of town centres?</p> <p>Provide high quality employment sites and associated infrastructure suitable for the likely continuation in a shift from manufacturing to higher skill, service industries?</p>	Population, Material Assets



- 2.9 The SA framework is designed to strike a balance between providing sufficient detail to identify key effects, whilst keeping analysis at a strategic level. Many of the objectives are cross-cutting, as they relate to a number of SEA topics. In order to avoid repetition and to ensure assessments are effective and useful in decision-making, each SA objective is considered individually. For example, SA Objective 3 relates to provision of suitable homes, including affordable housing. Provision of housing is not a sustainability issue in its own right, but is important in ensuring people have a suitable place to live, which in turn benefits the health and wellbeing of residents and their economic productivity, among other social and economic benefits. As such, these factors are not repeated in the assessment of other SA objectives.

## SA Stage B: Developing and Refining Options and Assessing Effects

- 2.10 Developing options for a plan is an iterative process, usually involving a number of consultations with public and stakeholders. Consultation responses and the SA can help to identify where there may be other 'reasonable alternatives' to the options being considered for a plan.
- 2.11 Regulation 12 (2) of the SEA Regulations requires that:  
*"The (environmental or SA) report must identify, describe and evaluate the likely significant effects on the environment of—*  
*(a) implementing the plan or programme; and*  
*(b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme."*
- 2.12 Any alternatives considered for the plan need to be 'reasonable'. This implies that alternatives that are not reasonable do not need to be subject to appraisal. Examples of unreasonable alternatives could include policy options that do not meet the objectives of the plan or national policy (e.g. the National Planning Policy Framework) or site options that are unavailable or undeliverable.
- 2.13 The SA findings are not the only factors taken into account when determining a preferred option to take forward in a plan. Indeed, there will often be an equal number of positive or negative effects identified for each option, such that it is not possible to 'rank' them based on sustainability performance in order to select a preferred option. Factors such as public opinion, deliverability and conformity with national policy will also be taken into account by plan-makers when selecting preferred options for their plan.
- 2.14 This section provides an overview of how the appraisal of options has been undertaken and how this will feed into the development of the Hertsmere Local Plan.

### Identification and appraisal of options

- 2.15 The Council's starting point for identifying Issues and Options in the Borough was the objectively assessed need for new homes and jobs, as identified in the joint South West Herts SHMA and Economy Study (both 2016). The current local plan identifies land for around 45% of the housing needed in the Borough by 2027 (as identified through new joint evidence studies with neighbouring councils), because of its focus on protecting the Green Belt and a lower level of objectively assessed housing need, which derived in part from the former Regional Spatial Strategy for the area. As a result, the consideration of issues and options has stemmed from addressing this shortfall of housing and employment sites and identifying the best and most sustainable approaches to delivering the additional number of homes and jobs needed in Hertsmere.
- 2.16 The Council sent a 'Planning for Growth' newsletter to all homes in the Borough at the end of 2016. This letter asked residents for their views on how best to plan for new homes, jobs and infrastructure. This was followed up by presentations to groups of local people, the business community and developers, and a survey of questions about the number of new homes, jobs and local services that should be provided. Responses to these engagement opportunities have fed into identifying the issues and options presented in the Issues and Options report (September 2017).

## SA Stage C: Preparing the SA Report

- 2.17 This SA Report describes the process that has been undertaken to date in carrying out the SA of Hertsmere Local Plan. It sets out the findings of the appraisal of options, highlighting any likely significant effects (both positive and negative, and taking into account the likely secondary, cumulative, synergistic, short, medium and long-term and permanent and temporary effects).

## SA Stage D: Consultation on Local Plan and this SA Report

- 2.18 Hertsmere Borough Council is inviting comments on the Local Plan: Issues and Options and this SA Report. Alongside a series of public consultation events, the Issues and Options document was available for consultation on the Council's website from September to November 2017, as part of the ongoing Regulation 18 consultation programme. This SA report will be available for consultation from February 2018.
- 2.19 **Appendix 1** presents the consultation comments that were received in relation to the SA Scoping Report and explains how they have been addressed. Information about the consultation responses received in relation to this SA report and how they have been addressed will be provided in the next iteration of the SA report to be prepared.

## SA Stage E: Monitoring Implementation of the Local Plan

- 2.20 The Issues and Options document identifies some of the key issues that will be considered in preparing the Local Plan and presents a limited range of options for achieving this, most notably with regards to the spatial distribution of development. As policies and allocations have not been drawn up at this stage, the effects of the plan cannot be assessed. Recommendations for monitoring the implementation of the Local Plan will be included in future iterations of the SA, once policies and site allocations have been identified and selected.

## Appraisal Methodology

- 2.21 The options set out in the Issues and Options document (September 2017) have been appraised against the SA objectives in the SA framework (see **Table 2.2** earlier in this section), with scores being attributed to each option to indicate its likely sustainability effects on each objective as follows:

**Figure 2.1 Key to symbols and colour coding used in the SA of Hertsmere's Local Plan**

++	The option is likely to have a <b>significant positive</b> effect on the SA objective(s).
++/-	The option is likely to have a mixture of <b>significant positive</b> and <b>minor negative</b> effects on the SA objective(s).
+	The option is likely to have a <b>minor positive</b> effect on the SA objective(s).
0	The option is likely to have a <b>negligible</b> or no effect on the SA objective(s).
-	The option is likely to have a <b>minor negative</b> effect on the SA objective(s).
--/+	The option is likely to have a mixture of <b>significant negative</b> and <b>minor positive</b> effects on the SA objective(s).
--	The option is likely to have a <b>significant negative</b> effect on the SA objective(s).
?	It is <b>uncertain</b> what effect the option will have on the SA objective(s).



+/- or +/-

The option is likely to have an equal mixture of **both minor or both significant positive and negative** effects on the SA objective(s).

- 2.22 Where a potential positive or negative effect is uncertain, a question mark was added to the relevant score (e.g. +? or -?) and the score is colour coded as per the potential positive, negligible or negative score (e.g. green, yellow, orange, etc.).
- 2.23 The plan may affect certain objectives to different degrees, i.e. the magnitude of effects will differ. As the purpose of SA is to identify likely significant effects, the scores (as shown in **Figure 2.1**) only indicate whether an effect is positive or negative (and/or uncertain) and whether it is minor or significant. Differences in the magnitude of similar effects were discussed in the assessment text, where relevant.
- 2.24 The assessment of each element of the Issues and Options document has been carried out in isolation, i.e. without reference to the potential effects of other aspects of the Issues and Options document. This allows identification of effects arising from each part of the Issues and Options document individually, which is important as these are subject to change. When preferred options are known, a cumulative assessment of the plan as a whole will also be undertaken.
- 2.25 The likely effects of options need to be determined and their significance assessed, which inevitably requires a series of judgments to be made. This appraisal has attempted to differentiate between the most significant effects and other more minor effects through the use of the symbols shown above. The dividing line in making a decision about the significance of an effect is often quite small. Where either (++) or (--) has been used to distinguish significant effects from more minor effects (+ or -) this is because the effect of an option on the SA objective in question is considered to be of such magnitude that it will have a noticeable and measurable effect taking into account other factors that may influence the achievement of that objective. However, scores are relative to the scale of proposals under consideration.
- 2.26 SA inevitably relies on an element of subjective judgement. However, in order to ensure consistency in the appraisal of the site options, a detailed set of assumptions was developed and applied. These assumptions are presented in **Appendix 4** and were applied mainly through the use of Geographical Information Systems (GIS) data.

## Difficulties Encountered and Limitations

- 2.27 It is a requirement of the SEA Regulations that consideration is given to any data limitations or other difficulties that are encountered during the SA process. The high-level nature of the spatial distribution options meant that at times it was difficult to assess in detail the likely effects of the options on each SA objective. Once the preferred approach has been identified and draft policies have been worked up and site allocations identified, it should be possible to draw more certain conclusions about their likely effects.
- 2.28 There was a need to ensure that a large number of site options could be appraised consistently. This was achieved by the use of assumptions relating to each SA objective, as described above.
- 2.29 There could be undiscovered archaeological features at any location within the Borough. For the purposes of this SA, we have focused on assessing the likely effects of development on known archaeological sites, but further archaeological work may be necessary prior to any development in order to avoid loss of archaeological resources.
- 2.30 In preparing this SA it has not been possible to access information regarding contaminated land in the Borough. However, it has been assumed that any contamination present can and will be remediated to safe levels prior to development of any site. If this is not possible, it has been assumed that the Council would not consider such sites to be reasonable options for development.
- 2.31 The assumptions presented in **Appendix 4** include a range of distance thresholds. These are based on the suggested acceptable walking distances presented in Guidelines for Providing for Journeys on Foot (The Institution of Highways and Transportation, 2000). It cannot be known which route people will take and this is likely to vary depending on the starting point of each

individual's journey. Therefore, for consistency, these thresholds will use straight line measurements from the boundary of a site.

# 3 Sustainability Context for Development in Hertsmere

## Review of Plans, Policies and Programmes

- 3.1 The Hertsmere Local Plan is not prepared in isolation, being greatly influenced by other plans, policies and programmes and by broader sustainability objectives. It needs to be consistent with international and national guidance and strategic planning policies and should contribute to the goals of a wide range of other programmes and strategies, such as those relating to social policy, culture and the historic environment. It must also conform to environmental protection legislation and the sustainability objectives established at an international, national and regional level.
- 3.2 During the Scoping stage of the SA, a review was undertaken of the other plans, policies and programmes that are relevant to the Local Plan, as described in **Chapter 2**. The key findings are summarised below and the full review can be found in the September 2017 SA Scoping Report.
- 3.3 Annex 1 of the SEA Directive requires:
- (a) *“an outline of the...relationship with other relevant plans or programmes”*; and
  - (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”*
- 3.4 It is necessary to identify the relationships between the Hertsmere Local Plan and the relevant plans, policies and programmes so that any potential links can be built upon and any inconsistencies and constraints addressed.

### *Key international plans, policies and programmes*

- 3.5 At the international level, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment (the 'SEA Directive') and Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the 'Habitats Directive') are particularly significant as they require Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) to be undertaken in relation to the emerging Local Plan. These processes should be undertaken iteratively and integrated into the production of the plan in order to ensure that any potential negative environmental effects (including on European-level nature conservation designations) are identified and can be mitigated.
- 3.6 There are a wide range of other EU Directives relating to issues such as water quality, waste and air quality, most of which have been transposed into UK law through national-level policy.

### *Key national plans, policies and programmes*

- 3.7 The most significant development in terms of the policy context for the Hertsmere Local Plan has been the publication of the National Planning Policy Framework (NPPF), which first replaced the suite of Planning Policy Statements (PPSs) and Planning Policy Guidance (PPGs) in 2012. The purpose of the NPPF was to streamline national planning policy, having initially reduced over a thousand pages of policy down to around 50 pages; subsequent National Planning Practice Guidance (PPG) has expanded significantly on how national policy requirements are to be applied locally. The Local Plan must be consistent with the requirements of the NPPF, although a revised NPPF is expected to be issued in 2018. The NPPF sets out information about the purposes of local plan-making, stating that:

*“Local Plans must be prepared with the objective of contributing to the achievement of sustainable development. To this end, they should be consistent with the principles and policies set out in this Framework, including the presumption in favour of sustainable development.”*

- 3.8 The NPPF also requires Local Plans to be 'aspirational but realistic'. This means that opportunities for appropriate development should be identified in order to achieve net gains in terms of sustainable social, environmental and economic development; however significant adverse impacts in any of those areas should not be allowed to occur.
- 3.9 The NPPF requires local planning authorities to set out the strategic priorities for the area in the Local Plan. This should include strategic policies to deliver:
- the homes and jobs needed in the area;
  - the provision of retail, leisure and other commercial development;
  - the provision of infrastructure for transport, telecommunications, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat);
  - the provision of health, security, community and cultural infrastructure and other local facilities; and
  - climate change mitigation and adaptation, conservation and enhancement of the natural and historic environment, including landscape.
- 3.10 In addition, Local Plans should:
- plan positively for the development and infrastructure required in the area to meet the objectives, principles and policies of the NPPF;
  - be drawn up over an appropriate time scale, preferably a 15-year time horizon, take account of longer term requirements, and be kept up to date;
  - be based on co-operation with neighbouring authorities, public, voluntary and private sector organisations;
  - indicate broad locations for strategic development on a key diagram and land-use designations on a proposals map;
  - allocate sites to promote development and flexible use of land, bringing forward new land where necessary, and provide detail on form, scale, access and quantum of development where appropriate;
  - identify areas where it may be necessary to limit freedom to change the uses of buildings, and support such restrictions with a clear explanation;
  - identify land where development would be inappropriate, for instance because of its environmental or historic significance; and
  - contain a clear strategy for enhancing the natural, built and historic environment, and supporting Nature Improvement Areas where they have been identified.

### *Neighbouring Local Plans*

- 3.11 Throughout the preparation of the Local Plan and the SA process, consideration will be given to the local plans being prepared by the authorities around Hertsmere. The development proposed in those authorities could give rise to in-combination effects with the effects of the Hertsmere Local Plan, and the effects of the various plans may travel across local authority boundaries. There are seven authorities that border Hertsmere: the London Boroughs of Barnet, Harrow and Enfield as well as Welwyn Hatfield, Three Rivers, Watford and St Albans Councils. In addition, Hertfordshire County Council has responsibility for waste and minerals planning in the area.

## Baseline Information

- 3.12 Baseline information provides the context for assessing the sustainability of proposals in the Hertsmere Local Plan and it provides the basis for identifying trends, predicting the likely effects of the plan and monitoring its outcomes. The requirements for baseline data vary widely, but it must be relevant to environmental, social and economic issues, be sensitive to change and should ideally relate to records which are sufficient to identify trends.

- 3.13 Schedule 2 of the SEA Regulations requires data to be gathered on biodiversity, population, human health, flora, fauna, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors. As an integrated SA and SEA is being carried out, baseline information relating to other sustainability topics has also been included; for example information about housing, education, transport, energy, waste and economic growth. This information can be found in the September 2017 Scoping Report.

## Key Sustainability Issues

- 3.14 A set of key sustainability issues for Hertsmere was identified during the Scoping stage of the SA and was presented in the Scoping Report.
- 3.15 Identification of the key sustainability issues and consideration of how these issues might develop over time if the Local Plan is not prepared, help meet the requirements of Annex 1 of the SEA Directive to provide information on:
- “the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan; and any existing environmental problems which are relevant to the plan.”*
- 3.16 In recognition of the SEA Regulation requirement (Schedule 2) that the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme must be described in the Environmental Report, **Table 3.1** overleaf describes the likely evolution of each key sustainability issue if the Local Plan were not to be adopted. Note that this has been amended slightly since it was originally presented in the SA Scoping Report in response to consultation comments received on the SA Scoping Report.
- 3.17 The information in **Table 3.1** shows that, in general, the current trends in relation to the various social, economic and environmental issues affecting Hertsmere would be more likely to continue without the implementation of the Local Plan. In addition, it is possible that future policy changes and updates to housing need calculations could mean that the housing provision in the current local plan no longer reflects local housing needs ~~is no longer appropriate~~. This could result in development outside of the current Local Plan and/or a lack of suitable and sustainable development. In most cases, the emerging Local Plan offers opportunities to directly and strongly affect existing trends in a positive way, through an up-to-date plan that reflects the requirements of the NPPF.



**Table 3.1: Key sustainability issues for hertsmere and likely evolution without the Local Plan<sup>7</sup>**

Key sustainability issues	Likely evolution without implementation of the Local Plan
<p><b>Housing Provision (Supply)</b> – There is a need to ensure sufficient land is available to meet future housing requirements within Hertsmere.</p>	<p>Policy CS1 of the Core Strategy states that the Council will make provision for at least 3,990 additional dwellings within the Borough between 2012 and 2027, a development rate of a minimum of 266 dwellings per year. The Site Allocations and Development Management Policies Plan (SADMPP) (2016) demonstrates a supply of 4,177 dwellings between 2012 and 2027, averaging 278.5 dwellings per year and allocates specific sites for development through Policy SADM1.</p> <p>The recently published SHMA<sup>8</sup> found that Hertsmere requires 599 dwellings per year.</p> <p>Without the emerging Local Plan, there would be a shortfall in housing and an increased risk of speculative and piecemeal windfall developments, including permitted development conversion schemes, with insufficient supporting infrastructure.</p>
<p><b>Housing Provision (Affordable Housing)</b> – There is a need for affordable housing across Hertsmere due to the fact that average earnings are below the county average yet house prices are above regional and national averages.</p>	<p>Policy CS4 of the Core Strategy states that developments of 5 self-contained, residential units or more (gross), or residential sites of more than 0.2 hectares, should make provision for 35-40% Affordable Housing dependent upon post codes area.</p> <p>The recently published SHMA<sup>9</sup> found Hertsmere requires 434 affordable dwellings per year, equating to 72% of the required total number of dwellings required per year.</p> <p>Without the emerging Local Plan, there would be a shortfall in affordable housing with many of the windfall developments coming forward, including permitted development conversion schemes, failing to deliver on-site affordable homes.</p>
<p><b>Housing Provision (Mix)</b> – There is the need for a mix of housing types including</p>	<p>Policy CS7 of the Core Strategy states that housing developments in excess of 10 units (gross) are required to contain some variation within their</p>

<sup>7</sup> Wording that has been deleted following consultation on the SA Scoping Report is shown in ~~strikethrough~~ text, whereas any additional wording is shown as underlined text.

<sup>8</sup> South West Hertfordshire Strategic Housing Market Assessment (January 2016)

<sup>9</sup> South West Hertfordshire Strategic Housing Market Assessment (January 2016)

Key sustainability issues	Likely evolution without implementation of the Local Plan
<p>one to three bedroom houses.</p>	<p>housing mix, with sites over 25 units or 1 hectare reflecting identified variations within the Borough’s housing need, and that on large sites allocated in the Site Allocations DPD and large windfall sites, the need for a proportion of sheltered or extra care housing is considered as part of the overall housing mix.</p> <p>The Elstree Way Corridor Area Action Plan (EWCAAP) (2015) Policy EWC3 requires a mix of homes to be provided in the AAP area. Housing developments of over 25 units must contain variation in type and size, including a proportion of three bed units.</p> <p>The recently published SHMA<sup>10</sup> found there is a high overall requirement for three bedroom homes and one to three bedroom affordable homes. It also found there is a residential care housing need of 669 units from 2013-2026.</p> <p>Without the emerging Local Plan, it is uncertain whether the required housing mix would be delivered during the plan period of the current Local Plan (until 2027), as needs are likely to have changed since that plan was prepared. Following this, without a planned local approach to development, the required housing mix may not be delivered.</p>
<p><b>Service Accessibility</b> – Promote vibrant inclusive communities with good accessibility to services, education and employment.</p>	<p>Policy CS18 of the Core Strategy states that the Council will require new development to contribute to the Community Strategy aim of achieving fair access to key community facilities, and where necessary provide key community facilities.</p> <p>Policy CS19 of the Core Strategy states that proposals for the provision or dual use of key community facilities will be supported, and that the loss of facilities will not be permitted.</p> <p>Policy SADM32 supports provision and enhancement of community facilities and identifies specific proposals for provision of community facilities. Policy SADM33 also supports provision and enhancement of facilities in which faith communities can meet and worship. Policy SADM42 supports specific proposals to improve facilities, functions and environment of town centres.</p>

<sup>10</sup> South West Hertfordshire Strategic Housing Market Assessment (January 2016)



Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>Policy SADM45 aims to protect class A1 shops in local and neighbourhood centres, neighbourhood parades and for individual shops. Policies SADM46, SADM47 and SADM48 give further details on appropriate development in such areas.</p> <p>The EWCAAP Policy EWC4 promotes retention and enhancement of community facilities and provision of new facilities where a need has been identified.</p> <p>The recently published SHMA<sup>11</sup> found that Hertsmere requires 599 dwellings per year, the residents of which will require additional accessible services.</p> <p>Without the emerging Local Plan, it is uncertain whether services would be retained and provided during the plan period of current Local Plan (until 2027), as needs are likely to have changed since that plan was prepared. In addition, it is recognised that a timelag between the development of new homes and the provision of additional infrastructure may occur in some locations. Following this, without a planned local approach to development, the required accessible services may not be delivered.</p>
<p><b>Health</b> – There is a need to reduce health inequalities within Hertsmere.</p>	<p>Policy SP1 of the Core Strategy states that all development should ensure healthy living environments for residents and users of development. Policy CS19 also states that healthcare facilities should be retained.</p> <p>SADMPP Policy SADM20 works to maintain health and amenity by ensuring development of sensitive uses in proximity to AQMAs are only permitted where it will not result in an undue impact on health. In addition, this policy states that new residential development should not be exposed to existing significant sources of noise pollution and light installations should not harm the amenity of residents. Policy SADM30 is also expected to contribute to retaining residential amenity.</p> <p>Life expectancy in Hertsmere is 9.7 years lower for men and 5.5 years lower for women in the most deprived areas of Hertsmere than in the least</p>

<sup>11</sup> South West Hertfordshire Strategic Housing Market Assessment (January 2016)

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>deprived areas. Additionally, the rates of smoking, excess winter deaths and deaths and injuries on roads are above the England average. Local priorities include reducing obesity, increasing physical activity, reducing smoking, and helping the growing older population maintain their health<sup>12</sup>.</p> <p>Without the emerging Local Plan, these issues are likely to continue, although the SADMPP is expected to safeguard residential amenity throughout the current Local Plan period (until 2027).</p>
<p><b>Biodiversity</b> – Although there are no EU level designations in Hertsmere, a number of habitats have been identified as internationally important under the EU Habitats Directive.</p>	<p>Policy CS12 of the Core Strategy states that developments should conserve and enhance the natural environment of the Borough, including biodiversity, habitats, protected trees, landscape character, and sites of ecological and geological value. It also requires developments to identify opportunities for habitat creation and enhancement.</p> <p>Policy SADM10 of the SADMPP requires developers to avoid significant harm to sites of importance for biodiversity and geodiversity in the first instance or implement mitigation or compensatory measures where this is not possible and the benefits of development clearly outweigh any harm. SADMPP Policy SADM12 requires healthy, high quality trees and hedgerows to be retained. SADM 13 and SADM16 may also retain the quality of watercourses, by requiring development to have regard to its impact on these. SADM28 requires the Watling Chase Community Forest Plan and supplementary planning guidance to be material considerations for the determination of planning applications in the Forest area.</p> <p>A number of habitats have been identified as internationally important under the EU Habitats Directive. These include characteristic oak-hornbeam woodlands, the natural stand type found within Hertsmere<sup>13</sup>. Additionally, Redwell Wood SSSI is located in Hertsmere and over 40% of this site is in an unfavourable - recovering condition<sup>14</sup>.</p>

<sup>12</sup> Public Health England: Hertsmere District Health Profile 2017

<sup>13</sup> Hertsmere Borough Council: Biodiversity, Trees and Landscape SPD (2010)

<sup>14</sup> Natural England: Redwell Wood SSSI - SSSI Condition Summary

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>Without the emerging Local Plan, habitats are likely to be protected during the plan period of the current Local Plan (until 2027). Following this, without a planned local approach to development, habitat and biodiversity may be at risk from poorly planned development and their conditions could degrade.</p>
<p><b><u>Historic environment</u></b> – Hertsmere has a large number of listed buildings, designated conservation areas, four Registered Parks and Gardens and four Scheduled Monuments.</p>	<p>Policy CS14 of the Core Strategy states that development proposals must conserve or enhance the historic environment of the Borough. Additionally, it states that developments should be sensitively designed to a high quality and not cause harm to identified, protected sites, buildings or locations of heritage or archaeological value including Conservation Areas, Listed Buildings, Historic Parks and Gardens, Scheduled Ancient Monuments or their setting, and identified and as yet unidentified Archaeological Remains.</p> <p>SADMPP Policy SADM29 states that the Council will not permit development proposals that fail to protect or enhance the setting, significance, character and appearance of a heritage asset, including nationally and locally listed buildings and historic parks and gardens. It states that historic features, open spaces and views should be retained within Conservation Areas. It also states that developers will be required to undertake an archaeological field assessment prior to the Council granting planning permission. Development on or affecting the setting of the site of the Battle of Barnet (1471) is not permitted.</p> <p>Hertsmere contains numerous <u>heritage historic</u> features which could be adversely affected by poorly planned development.</p> <p>Without the emerging Local Plan, <u>heritage features the historic environment and their setting are</u> likely to be protected during the plan period of the current Local Plan (until 2027). Following this, without a planned local approach to development, heritage assets and their settings may be at risk from poorly planned development. <u>In addition, transport issues are likely to continue and transport-related emissions are likely to increase in the absence of the plan. This could affect the historic environment as traffic may detract from the settings of historic and heritage assets and increases in pollution may damage the fabric of historic features. Changes in noise</u></p>

Key sustainability issues	Likely evolution without implementation of the Local Plan
<p><b>Transport</b> – Issues associated with road links being better than access to public transport is reflected in high levels of car ownership and traffic congestion. However, traffic congestion will continue without intervention. Additionally, there is a severe deficit in rail services both for passengers and freight.</p>	<p><u>and light pollution, landscape and townscape and climate change are also likely to affect the historic environment.</u></p> <p>Policy CS24 of the Core Strategy requires new development to comply with the Hertfordshire Local Transport Plan, provide a Travel plan, and contribute to the provision or funding of new infrastructure or improved public transport services and non-motorised routes.</p> <p>Policy CS25 of the Core Strategy make requirements for the quantity of off-street parking for all modes of transport to be provided at new developments.</p> <p>Policy CS26 of the Core Strategy states that the Council will support a wide range of measures to provide safer and more reliable alternatives to the car, including improved public transport facilities and routes, and the enhancement, additional and safeguarding of non-motorised links.</p> <p>SADMPP Policy SADM38 aims to direct new development to the appropriate category of road in the road hierarchy, which may contribute to reducing congestion. Policy SADM39 directs major trip generating development to town centres and Transport Development Areas, where access to sustainable transport is likely to be better.</p> <p>Policy EWC1 of the EWCAAP requires development proposals to provide access across the Elstree Way Corridor by sustainable modes of transport. EWC5 supports promotion of safer and more attractive routes for pedestrians, cyclists and public transport users.</p> <p>CO<sub>2</sub> emissions per capita for transportation alone in Hertsmere (3.6 tCO<sub>2</sub> per person in 2015) is significantly higher than the average for Hertfordshire (2.3 tCO<sub>2</sub> per person in 2015) and England (1.9 tCO<sub>2</sub> per person in 2015). Moreover, transport emissions in Hertsmere have been increasing from 2012-2015<sup>15</sup>. Additionally Hertsmere contains 8 AQMAs.</p>

<sup>15</sup> CECC (2015): UK local authority and regional carbon dioxide emissions national statistics: 2005-2015

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>Without the emerging Local Plan, transport issues are likely to continue, notably following the plan period of the current Local Plan (until 2027), and transport related emissions likely to continue to rise.</p>
<p><b>Climate Change Adaptation and Mitigation</b> - There is the need to address issues related to climate change and low carbon development and to reduce pollution and emissions including those from transport methods.</p>	<p>Policy CS17 of the Core Strategy states that residential development must achieve minimum levels of the Code for Sustainable Homes and Part L of the Buildings Regulations. It also requires all new non-domestic development to achieve, as a minimum, CO<sub>2</sub> emissions reductions in-line with the Building Regulations Part L. Additionally, it requires large scale developments to incorporate on-site renewable energy generation.</p> <p>Policy CS16 of the Core Strategy states developments should not create an unacceptable level of risk to the wider environment. This also requires developments to incorporate sustainability principles, minimise their impact on the environment and ensure prudent use of natural resources. This includes minimising pollution, using locally sourced materials where possible in line with the requirements of BREEAM on sustainable design, as well as achieving reduced levels of energy consumption and the use of energy from renewable resources.</p> <p>SADMPP Policies SADM13 and SADM15 are likely to contribute to climate change <del>adaptation and mitigation</del> by minimising future increases in flood risk. Policies SADM34, SADM35, SADM36 and SADM37 may also contribute to climate change <u>adaptation and</u> mitigation as these promote retention, enhancement and creation of green space.</p> <p>Although decreasing, the CO<sub>2</sub> emissions per capita in Hertsmere (7.1 tCO<sub>2</sub> per person in 2015) is higher than the average for Hertfordshire (5.5 tCO<sub>2</sub> per person in 2015) and England (5.6 tCO<sub>2</sub> per person in 2015)<sup>16</sup>. Additionally, Hertsmere contains 8 AQMAs.</p> <p>Without the emerging Local Plan, the NPPF and Buildings Regulations will enforce energy efficiency and carbon reduction requirements on developments. Also, the environmental requirements of the current Local</p>

<sup>16</sup> CECC (2015): UK local authority and regional carbon dioxide emissions national statistics: 2005-2015

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>Plan will remain in force over its plan period (until 2027). Without a planned approach to development through the emerging Local Plan however, there is less opportunity to adopt a co-ordinated, spatial approach that would help to manage health and environmental risks and require higher efficiency and environmental standards. Therefore, issues regarding greenhouse gas emissions and the effects of climate change may continue.</p>
<p><b>Resource Efficiency</b> - There is a need to reduce energy demand, improve energy efficiency and the use of low carbon and renewable resources.</p>	<p>Policy CS17 of the Core Strategy states that residential development must achieve minimum levels of the Code for Sustainable Homes (although the Code was withdrawn in 2014) and Part L of the Buildings Regulations. It also requires all new non-domestic development to achieve as a minimum CO<sub>2</sub> emissions reductions in-line with the Building Regulations Part L. Additionally, it requires large scale developments to incorporate on-site renewable energy generation.</p> <p>Policy CS16 of the Core Strategy states developments should not create an unacceptable level of risk to the wider environment. This also requires developments to incorporate sustainability principles, minimise their impact on the environment and ensure prudent use of natural resources. This includes minimising pollution, using locally sourced materials where possible in line with the requirements of BREEAM on sustainable design, as well as achieving reduced levels of energy consumption and the use of energy from renewable resources.</p> <p>SADMPP Policy SADM17 requires wastewater efficiency measures to be incorporated into the development. This policy also requires non-residential development to enable achievement of the BREEAM 'Excellent' standard or the best practice level of the Association for Environment Conscious Building Water Standards or equivalent.</p> <p>Although decreasing, the CO<sub>2</sub> emissions per capita in Hertsmere (7.1 tCO<sub>2</sub></p>

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>per person in 2015) is higher than the average for Hertfordshire (5.5 tCO<sub>2</sub> per person in 2015) and England (5.6 tCO<sub>2</sub> per person in 2015)<sup>17</sup>. Additionally Hertsmere contains 8 AQMAs.</p> <p>Without the emerging Local Plan, the NPPF and Buildings Regulations will enforce energy efficiency and carbon reduction requirements on developments. Also, the environmental requirements of the current Local Plan will remain in force over its plan period (until 2027). Without a planned approach to development through the emerging Local Plan however, there is less opportunity to adopt a co-ordinated, spatial approach that would help to manage health and environmental risks and require higher efficiency and environmental standards. Therefore, issues regarding resource efficiency may continue.</p>
<p><b>Water Supply</b> – Affinity Water who provide the mains water supply in Hertsmere do not have sufficient water to meet their customers’ future needs for water.</p>	<p>Policy CS16 of the Core Strategy states developments should not create an unacceptable level of risk to the wider environment. This also requires developments to incorporate sustainability principles, minimise their impact on the environment and ensure prudent use of natural resources. This includes improving water efficiency through measures such as water saving devices in line with the Code for Sustainable Homes and BREEAM as a minimum requirement and incorporating the use of Sustainable Urban Drainage Systems.</p> <p>SADMPP Policy SADM13 supports effective use of the water supply and does not permit development that may affect the water table.</p> <p>Affinity Water provides the mains water supply in Hertsmere Borough. However, their Water Resources Management Plan found that their Central and Southeast regions do not have sufficient water for the whole of the 25-year planning period to meet their customers’ need for water<sup>18</sup>.</p> <p>Without the emerging Local Plan, water efficiency measures will be implemented over the plan period of the current Local Plan (until 2027). Following this, without a Local Plan there may be water supply shortages</p>

<sup>17</sup> CECC (2015): UK local authority and regional carbon dioxide emissions national statistics: 2005-2015

<sup>18</sup> Final Water Resources Management Plan, 20915-2020 (2014) <https://stakeholder.affinitywater.co.uk/docs/FINAL-WRMP-Jun-2014.pdf>

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>due to inappropriate development. <u>The absence of a Local Plan after 2027 will reduce the ability of Affinity Water to plan for necessary strategic infrastructure and increases in water demand, due to a lack of information and certainty regarding the locations and quantities of planned future development.</u></p>
<p><b>Open Space</b> – There is a shortage of open space across the whole of Hertsmere, particularly the availability of play facilities.</p>	<p>Policy CS15 of the Core Strategy states the council will safeguard, enhance and facilitate access to parks and open spaces, as well as to rural visitor attractions and the wider local countryside.</p> <p>SADMPP Policy SADM34 encourages development to improve the quality, quantity and/or accessibility of open space, sports and leisure facilities and to not exacerbate existing deficits of open space and leisure facilities. Policies SADM35 and SADM36 require developments to retain Local Green Space and Minor Amenity Land in most circumstances. Policy SADM37 requires larger developments to provide new open space on site.</p> <p>Hertsmere has a diverse distribution of different types of open space. However, compared to the proposed standards there are a number of deficiencies within Hertsmere<sup>19</sup>.</p> <p>Without the emerging Local Plan, open spaces are likely to be protected and enhanced during the plan period of the current Local Plan (until 2027). Following this, without a planned local approach to development, open spaces may be at risk from poorly planned and located development, with potential pressure to build on some existing open spaces. Moreover, due to the increased housing requirements, demand for open space by residents will likely increase and may result in open space deficiencies.</p>
<p><b>Air quality</b> – Hertsmere Council has measured concentrations of NO<sub>2</sub> above the annual mean objective within and outside of existing AQMAs.</p>	<p>Policy CS16 of the Core Strategy states developments should not create an unacceptable level of risk to the wider environment. This also requires developments to incorporate sustainability principles, minimise their impact on the environment and ensure prudent use of natural resources. This</p>

<sup>19</sup> Hertsmere Borough Council: Open Space Study (2011)



Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>includes minimising air pollution.</p> <p>Policy SADM20 of the SADMPP does not permit development that would significantly exacerbate poor air quality in AQMAs and requires that sensitive development located in or adjacent to AQMAs will not result in an undue impact on health.</p> <p>Hertsmere contains eight AQMAs designated due to nitrogen dioxide pollutants. Four of these were designated in 2003, two in 2005<sup>20</sup>, and two in 2016<sup>21</sup>.</p> <p>Whilst the SADMPP is expected to ensure that poor air quality is not exacerbated in the Borough, air quality may deteriorate after the current Local Plan period (until 2027). Without the Local Plan, and its planned approach to development, air pollution issues may continue. The new Local Plan could act to improve air quality, rather than just ensuring it does not deteriorate further.</p>
<p><b>Flooding</b> – Surface water flooding is highlighted as a major cause of frequent flooding in Hertsmere and often occurs in combination with groundwater flooding. Drainage infrastructure flooding has also been recorded in all urban areas across the Borough.</p>	<p>Surface water flooding is highlighted as a major cause of frequent flooding in the Borough and often occurs in combination with groundwater flooding<sup>22</sup>.</p> <p>Waste water has a detrimental impact on water quality, with over 2,000 residential properties and six large sewage treatment works discharging treated water into local rivers in the catchment. In addition, challenges caused when intermittent sewage is discharged (under license) during storm events, can also impact on groundwater<sup>23</sup>.</p> <p>Policy CS16 of the Core Strategy states developments should not create an unacceptable level of risk to the wider environment. This also requires developments to incorporate sustainability principles, minimise their impact</p>

<sup>20</sup> Defra: Air Quality Areas - Hertsmere Borough Council

<sup>21</sup> Air Quality Consultants (2017) 2016 Air Quality Annual Status Report (ASR): Hertsmere Borough Council

<sup>22</sup> Strategic Flood Risk Assessment: Volume I (2008) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB02a-SFRA-Final-Report-and-Appendix-E.PDF>

<sup>23</sup> Catchment Data Explorer: Colne Operational Catchment (2017) <http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3096/Summary>

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>on the environment and ensure prudent use of natural resources. This includes incorporating the use of Sustainable Urban Drainage Systems and avoiding development in floodplains.</p> <p>SADMPP Policy SADM13 directs development towards Flood Zone 1. This policy does not permit new development in Flood Zone 3b and will only support redevelopment in this zone if for a compatible use. Policy SADM14 requires development to be located within areas of lower flood risk. It also requires that development does not increase risk of flooding elsewhere and requires development at risk of flooding to be flood resilient, resistant and safe. In addition, Policy SADM15 promotes use of SuDS for flood attenuation and reduction in flood risk.</p> <p>Without the Local Plan, the Core Strategy may successfully limit the impacts of flooding over its plan period. Following this, without a planned approach to development via the local plan, issues regarding flooding may continue due to inappropriate development.</p> <p>Pollution reduction measures will be implemented over the plan period of the current Local Plan (until 2027). However, without a planned approach to development via the emerging Local Plan, particularly following the plan period of the Core Strategy, there may be continued and increasing issues with regard to water pollution due to inappropriate development.</p>
<p><b>Deprivation</b> – Hertsmere’s average deprivation rank is below the county average, with one Lower Super Output Area (LSOA) falling in the top 10% most deprived nationally.</p>	<p>There are no policies directly regarding deprivation in the current Local Plan (until 2027).</p> <p>Life expectancy in Hertsmere is 9.7 years lower for men and 5.5 years lower for women in the most deprived areas of Hertsmere than in the least deprived areas. Additionally, 13.1% of children are in low income families<sup>24</sup>. One LSOA within Hertfordshire falls within the top 10% most deprived LSOAs nationally<sup>25</sup>.</p>

<sup>24</sup> Public Health England: Hertsmere District Health Profile 2017

<sup>25</sup> DCLG: English indices of deprivation 2015

Key sustainability issues	Likely evolution without implementation of the Local Plan
	<p>Without the emerging Local Plan, these issues are likely to continue. It is recognised that the Local Plan is only part of the solution to tackling deprivation and that there are a range of factors that may need to be addressed outside the scope of the Local Plan.</p>
<p><b>Soil and minerals</b> – Development on previously developed land should continue to be prioritised to decrease pressure on Hertsmere’s best and most versatile agricultural land. Sand and gravel reserves in the Borough will need to be safeguarded from development.</p>	<p>Policy CS16 of the Core Strategy states developments should not create an unacceptable level of risk to the wider environment. This also requires developments to incorporate sustainability principles, minimise their impact on the environment and ensure prudent use of natural resources. This includes minimising soil pollution and remediating land affected by instability and contamination.</p> <p>Policy CS12 of the Core Strategy states proposals will only be permitted where there is no likelihood of the land being sterilised for future agriculture or mineral extraction.</p> <p>SADMPP Policy SADM18 states that development within the Mineral Consultation Area will not be permitted to sterilise or prevent the future extraction of the mineral resource.</p> <p>The Borough contains areas of high quality agricultural land as well as important reserves of sand and gravel, which have been identified by Hertfordshire County Council as ‘preferred areas’ for future mineral extraction in its Minerals Local Plan<sup>26</sup>.</p> <p>Without the emerging Local Plan, agricultural land and sand and gravel reserves will be protected over the plan period of the current Local Plan (until 2027). Following this, without a planned approach to development via the local plan, high quality agricultural land and mineral reserves may be at risk from inappropriate development.</p>

<sup>26</sup> Hertsmere Local Plan: Core Strategy (2013)

## 4 Sustainability Appraisal Findings for Issues and Options Part 1

- 4.1 Part 1 of the Issues and Options document sets out the proposed vision and priorities for the new local plan. The sustainability implications of these have been assessed below and are summarised in **Table 4.1**. No reasonable alternatives to these have been identified.
- 4.2 The Vision and Priorities are somewhat abstract, reflecting aspirations that the Local Plan will aim to achieve through the policies and site allocations in the plan. As such, we have taken the following approach to assessing them. Where The Vision or a Priority directly addresses one of the SA Objectives, we have assumed a significant effect. Where The Vision or a Priority addresses part of an SA Objective, or addresses it indirectly, we have assumed a minor effect. For those SA Objectives where The Vision or a priority does not mention the topic either directly or indirectly, we have assumed effects will be negligible.

### The Vision

- 4.3 The Vision states that schools will be needed to support growth. A significant positive effect is therefore given for SA Objective 1: Education.
- 4.4 With regard to SA Objective 2, The Vision states that the Council would like homes to be built with good facilities in easy-to-reach places. It also states that schools, doctors' surgeries, clinics, community facilities and green spaces for leisure and recreation will be required. A significant positive effect is therefore likely for SA Objective 2: Services.
- 4.5 The Vision states that the Council may need to accommodate around 6,000 homes to meet the needs of local people and communities. It also states that the Council want a choice of homes which meet the needs of everyone in the community, including homes which people can afford to rent, buy, or build themselves through the government's new self-build initiative. A significant positive effect is therefore likely for SA Objective 3: Housing Provision.
- 4.6 According to The Vision, community facilities will support the growth of Hertsmere. However, reference is not made to crime. A minor positive effect is therefore likely for SA Objective 4: Community Cohesion.
- 4.7 With regard to SA Objective 5: Health, The Vision states that doctors' surgeries, clinics and leisure centres will support Hertsmere's growth. Additionally, The Vision states that the Council will make it easier for people to get out into the countryside, which will help improve people's health. The Vision also seeks to promote active transport modes through the improvement of pedestrian and bike routes. A significant positive effect is therefore likely for SA Objective 5: Health.
- 4.8 The Vision states that homes may be built on brownfield sites or within the Green Belt. This has resulted in a mixed minor positive and negative effect for SA Objective 6: Soil and minerals.
- 4.9 With regard to SA Objectives 7 and 8, The Vision states that the Council will continue to protect the area's countryside and historic buildings and places. A significant positive effect is likely for both these objectives. However, effects depend on the detailed location and design of development, which will be assessed separately in future iterations of the SA, once these details are available.
- 4.10 With regard to SA Objective 9, The Vision seeks to encourage active modes of transport by building homes in easy-to-reach places, therefore increasing possibilities of walking to and from services, facilities and public transport links, and by improving pedestrian and cycle routes. This will help reduce dependence on the private car, as well as greenhouse gas emissions. The Vision also states that the Council wants to see more renewable energy being developed in the Borough,

including biomass, solar and wind power. A significant positive effect is likely for SA Objective 9: Greenhouse Gas Emissions.

- 4.11 With regard to SA Objective 10, although reference is made to protecting the countryside and designing houses in a way that minimises their impact on the environment, The Vision does not specifically refer to designated wildlife sites or other biodiversity features. As such, a minor positive effect is expected with regards to SA Objective 10: Biodiversity and Geodiversity.
- 4.12 The Vision does not directly address water quality and quantity, therefore a negligible effect is likely for SA Objective 11: Water Quality and Quantity.
- 4.13 According to The Vision, houses are to be constructed and designed in a way that reduces their impact on the environment and climate. More specifically, the location of housing and the risk of flooding will be considered. However, The Vision does not specifically state that development will not be located in Flood Zone 3. A minor positive effect is therefore likely for SA Objective 12: Flooding.
- 4.14 The Vision does not directly address energy efficiency, therefore a negligible effect is likely for SA Objective 14: Energy Efficiency.
- 4.15 The Vision seeks to encourage more sustainable transport modes by building homes in easy-to-reach places and making improvements to public transport, pedestrian and cycle routes. This will have a positive effect on air quality, by reducing dependence on the private car. However, The Vision states that the Council may need to accommodate around 6,000 homes, which will increase the amount of cars on the road. A mixed minor positive and negative effect is therefore likely for SA Objective 13: Air Quality.
- 4.16 With regard to SA Objective 15: Economy, The Vision states that Hertsmere will build on its strong economy and attract more enterprises and businesses. It estimates that 9,000 additional jobs are required over the next 15 years. In order to achieve this, the Council will earmark accessible sites for new industrial and commercial development, which will attract more businesses to the Borough and create new employment opportunities for local people. Therefore, a significant positive effect is likely for SA Objective 15: Economy.

## Priorities

### Priority 1: Housing need

- 4.17 Priority 1 states that the Local Plan will respond to local housing need through 'Ensuring all new homes are built in places where there are or will be roads, schools, cycle routes, shops, and other services and facilities nearby'. It is noted that 'nearby' is not quantified by Priority 1, however this assessment assumes 'nearby' means 'easily accessible to residents of the development without sole reliance on use of the private car'.
- 4.18 Priority 1 states that new homes will be built in places where there are or will be schools nearby. A minor positive effect is therefore likely for SA Objective 1: Education.
- 4.19 Priority 1 states that new homes will be built in places where there are or will be services nearby, including shops and other services and facilities. A minor positive effect is therefore likely for SA Objective 2: Services.
- 4.20 With regards to SA Objective 3, Priority 1 plans to increase housing supply, including a range of dwelling sizes and affordable homes. It also states that suitable homes will be provided for everyone in the community, including the growing elderly population. A significant positive effect is therefore likely for SA Objective 3: Housing Provision.
- 4.21 Priority 1 does not address crime. The design and location of the additional housing provided for by Priority 1 may indirectly influence crime within the Borough, for example, via the design of street layout and provision of open space. A negligible effect is therefore likely for SA Objective 4: Community Cohesion.
- 4.22 With regards to SA Objective 5, Priority 1 states that homes are to be built in places near services and facilities, including cycle routes. Such services may include health services, which would be accessible to residents of new development. This may also include leisure facilities and providing

access to cycle routes may encourage new residents to lead more active lifestyles. Therefore, a minor positive effect is given for SA Objective 5: Health.

- 4.23 Priority 1 states that the supply of new homes will be increased. Due to the constrained nature of the Borough, this supply will likely be built on brownfield and greenfield land, within the settings of sensitive historic and heritage assets and in proximity to sensitive and designated biodiversity sites and other biodiversity features. These new homes may also be placed in locations where new development could impact the character of the surrounding landscape and settlements. Mixed minor positive and negative effects are therefore likely for SA Objective 6: Soil and Minerals, and minor negative effects are likely for SA Objective 7: Historic Environment, SA Objective 8: Landscape and SA Objective 10: Biodiversity and Geodiversity. However, the negative effects for SA objectives 7, 8 and 10 are uncertain as these depend on the exact location, design of development and mitigation measures introduced.
- 4.24 With regards to SA Objective 9, Priority 1 states new homes will be built in places where there are or will be services and facilities nearby, including cycle routes. This may help reduce dependence on the private car, as well as greenhouse gas emissions. However, Priority 1 also states that the supply of new homes will be increased. The construction of these new homes, including construction traffic and energy requirements during construction, as well as the energy requirements of the residents of these homes, are likely to increase greenhouse gas emissions within the Borough. The residents of new housing are also likely to own cars and therefore increase the number of car journeys in the Borough. Therefore, mixed minor positive and negative effects are likely for SA Objective 9: Greenhouse Gas Emissions.
- 4.25 With regards to SA Objective 11 and 12, Priority 1 does not make reference to water quality and quantity or flooding. Priority 1 states that the supply of new homes will be increased and this will therefore increase pressures on water supply and the sewerage network capacity. Additionally, due to the constrained nature of the Borough, new homes may be located on greenfield sites, thereby increasing the impermeable land coverage and contributing to flooding, and possibly located within the small number of areas within the Borough susceptible to flooding. A minor negative effect is therefore likely for SA Objective 11: Water quality and Quantity and SA Objective 12: Flooding. However, these effects are uncertain as these depend on the location and quantity of additional housing.
- 4.26 Priority 1 states that new homes will be built in places where there are or will be cycle routes and services and facilities nearby. This will likely have a positive effect on air quality by reducing dependence on the private car. However, Priority 1 states that the supply of new homes within the Borough will be increased and it does not make reference to public transport. Therefore, it will likely increase the amount of cars on the road. A mixed positive and negative effect is therefore likely for SA Objective 13: Air Quality.
- 4.27 With regard to SA Objective 14, Priority 1 makes no reference to increasing energy efficiency and increasing renewable energy use. Therefore, a negligible effect is likely for SA Objective 14: Energy Efficiency.
- 4.28 Priority 1 states that new homes will be provided in places where services and facilities will be nearby, which may include some employment opportunities, although these are likely to be limited. Therefore, the residents of these new homes will provide an increased workforce, attracting business to the Borough, and the facilities and services will offer employment opportunities. Furthermore, the construction of the new homes will provide short term employment opportunities. A minor positive effect is therefore likely for SA Objective 15: Economy.

### **Priority 2: Economic growth**

- 4.29 Priority 2 does not address education, therefore a negligible effect is likely for SA Objective 1: Education.
- 4.30 With regard to SA Objective 2, Priority 2 does not address service provision. Priority 2 states that new business and employment development will be supported, and therefore will support a larger workforce. However, this is unlikely to place additional pressures on services and facilities as workers are likely to make use of the services and facilities near their homes, rather than their workplaces. A negligible effect is therefore likely for SA Objective 2: Services.

- 4.31 Priority 2 does not address housing, therefore a negligible effects is given for SA Objective 3: Housing Provision.
- 4.32 With regard to SA Objective 4, Priority 2 does not address crime. The design and location of the additional business and employment development supported by Priority 2 will influence crime within the Borough, for example, via the design and layout. A negligible effect is therefore likely for SA Objective 4: Community Cohesion.
- 4.33 Priority 2 does not address health, therefore a negligible effects is given for SA Objective 5: Health.
- 4.34 Priority 2 states that new sites for employment will be identified and new business and employment development supported. Due to the constrained nature of the Borough, this employment development will likely be built on brownfield and greenfield land, within the settings of sensitive historic and heritage assets and in proximity to sensitive and designated biodiversity sites and other biodiversity features. This development may also be placed in locations where new development could impact the character of the surrounding landscape and settlements. Mixed minor positive and negative effects are therefore likely for SA Objective 6: Soil and Minerals, and minor negative effects are likely for SA Objective 7: Historic Environment, SA Objective 8: Landscape and SA Objective 10: Biodiversity and Geodiversity. However, the negative effects for SA Objectives 7, 8 and 10 are uncertain as these depend on the exact location and design of development.
- 4.35 With regards to Objective 9, Priority 2 states employment sites will be identified and new business and employment development will be supported. The construction of employment sites, including associated construction traffic and energy requirements during construction, as well as commuter transport and the energy requirements of the resultant employment operations, will increase greenhouse gas emissions within the Borough. However, additional employment development could improve accessibility to employment opportunities, and therefore decrease private car usage by workers commuting to work. Mixed minor positive and negative effects are therefore likely for SA Objective 9: Greenhouse Gas Emissions.
- 4.36 With regards to SA Objective 11 and 12, Priority 2 does not make reference to water quality and quantity or flooding. Priority 2 states that new sites for employment will be identified and new business and employment development supported. This will therefore increase pressures on water supply and the sewage network capacity. Additionally, due to the constrained nature of the Borough, new development may be located on greenfield sites, thereby increasing the impermeable land coverage and contributing to flooding, and possibly located within the small number of areas within the Borough susceptible to flooding. A minor negative effect is therefore likely for SA Objective 11: Water Quality and Quantity and SA Objective 12: Flooding. However, these effects are uncertain as these depend on the location and quantity of additional employment development.
- 4.37 Priority 2 states that new sites for employment will be identified and new business and employment development supported. This new employment development will support a larger workforce and could subsequently increase the number of private commuter cars on the road. However, additional business development could improve accessibility to employment opportunities, and therefore decrease private car usage by workers commuting to work. Mixed minor positive and negative effects are therefore likely for SA Objective 13: Air Quality.
- 4.38 With regard to SA Objective 14, Priority 2 makes no reference to increasing energy efficiency and increasing renewable energy use. Therefore, a negligible effect is likely for SA Objective 14: Energy Efficiency.
- 4.39 Priority 2 states that new sites for employment will be identified and new business and employment development supported. This includes support of start-ups, growth of existing business, support of the rural economy and growth of shopping centres. This will create a range of economic and employment opportunities for local people and enhance the vitality and vibrancy of town centres. A significant positive effect is therefore likely for SA Objective 15: Economy.

### **Priority 3: Connecting people**

- 4.40 Priority 3 states that new schools will be planned for and existing schools improved. A significant positive effect is therefore likely for SA Objective 1: Education.



- 4.41 With regard to SA Objective 2, Priority 3 states that community facilities, which meet the changing needs of the Borough's diverse community, will be provided. Therefore, a significant positive effect is likely for SA Objective 2: Services.
- 4.42 Priority 3 does not address housing, therefore a negligible effect is expected with regards to SA Objective 3: Housing Provision.
- 4.43 Priority 3 states that community facilities, which meet the changing needs of the Borough's diverse community, will be provided. These facilities may result in greater community cohesion, which may result in a reduction of crime. However, the design of new development, for example the design of street layout and provision of open space is also a key determinant of crime, but cannot be known at this stage. Therefore, a minor positive effect with uncertainty is likely for SA Objective 4: Community Cohesion.
- 4.44 With regard to SA Objective 5, Priority 3 states that new health facilities will be provided and existing health facilities improved. Additionally, Priority 3 states that better transport and pedestrian routes will be planned for, which may encourage people to travel by more active modes of transport. A significant positive effect is therefore likely for SA Objective 5: Health.
- 4.45 Priority 3 states that community facilities, schools and health facilities will be provided within the Borough. Due to the constrained nature of the Borough, these facilities may be built on brownfield and greenfield land, within the settings of sensitive historic and heritage assets and in proximity to sensitive and designated biodiversity sites and other biodiversity features. These facilities may also be placed in locations where new development could impact the character of the surrounding landscape and settlements. Mixed minor positive and negative effects are therefore likely for SA Objective 6: Soil and Minerals, and minor negative effects are likely for SA Objective 7: Historic Environment, SA Objective 8: Landscape and SA Objective 10: Biodiversity and Geodiversity. However, the negative effects for SA Objectives 7, 8 and 10 are uncertain as these depend on the exact location and design of development, particularly as such development is expected to be relatively small scale.
- 4.46 With regard to SA Objective 9, Priority 3 states that the Council will plan for better public transport, cycle and pedestrian routes and other sustainable transport initiatives. This is expected to encourage people to travel by more sustainable modes of transport and therefore reduce the use of the private car. Therefore, a significant positive effect is likely for SA Objective 9: Greenhouse Gas Emissions.
- 4.47 With regards to SA Objective 11 and 12, Priority 3 does not make reference to water quality and quantity or flooding. Priority 3 states that community facilities will be provided within the Borough. Facility operations will somewhat increase pressures on water supply and the sewage network capacity. Additionally, due to the constrained nature of the Borough, new facilities may be located on greenfield sites, thereby increasing the impermeable land coverage and contributing to flooding, and possibly located within the small number of areas within the Borough susceptible to flooding. However, due to the small scale of development that would result from the provision of additional community facilities, a negligible effect is likely for SA Objective 11: Water Quality and Quantity and SA Objective 12: Flooding. However, these effects are uncertain as these depend on the location, scale and quantity of additional community facilities.
- 4.48 With regard to SA Objective 9, Priority 3 states that the Council will plan for better public transport, cycle and pedestrian routes and other sustainable transport initiatives. This will have a positive effect on air quality by reducing dependence on private car usage. A significant positive effect is therefore identified for SA Objective 13: Air Quality.
- 4.49 With regard to SA Objective 14, Priority 3 makes no reference to increasing energy efficiency and increasing renewable energy use. Therefore a negligible effect is given for SA Objective 14: Energy Efficiency.
- 4.50 Priority 3 states that community facilities, schools and health facilities will be provided within the Borough. These facilities could provide employment opportunities within the Borough, although these are likely to be limited. In addition, improvements to electronic infrastructure, such as high speed broadband, may attract new businesses to the Borough. A minor positive effect is therefore likely for SA 15: Economy.



#### Priority 4: Environment

- 4.51 Priority 4 does not address education, services or housing; therefore negligible effects are likely for SA Objective 1: Education, SA Objective 2: Services and SA Objective 3: Housing Provision.
- 4.52 Priority 4 encourages well designed public spaces, which enhance the local area and build a safe, strong and cohesive community. Therefore, a significant positive effect is therefore likely for SA Objective 4: Community Cohesion.
- 4.53 With regard to SA Objective 5, Priority 4 states that the Council will encourage the provision of an expanded green infrastructure (GI) network. This may include the creation of additional publically accessible green spaces and open space, therefore encouraging residents to engage in outdoor recreation. In addition, GI can contribute to creating an attractive public realm, which can contribute positively to mental wellbeing. A minor positive effect is therefore likely for SA Objective 4: Health.
- 4.54 Priority 4 states that the Green Belt should be protected against inappropriate or unplanned development. As one of the NPPF purposes of the Green Belt is to encourage the recycling of derelict and other urban land<sup>27</sup>, this may encourage the re-use of brownfield sites and minimise the development of high quality agricultural land, as well as protecting mineral resources. A minor positive effect is therefore likely with regard to SA Objective 6: Soil and Minerals.
- 4.55 With regard to SA Objective 7, Priority 4 states that the Council will ensure that the Borough's historic, culturally important buildings and places are conserved and enhanced. Additionally, Priority 4 states that the Council will ensure the Borough's towns and villages retain their own distinct and separate identities. Therefore, a significant positive effect is identified for SA Objective 7: Historic Environment.
- 4.56 With regard to SA Objective 8, Priority 4 states that the Council will ensure the Borough's towns and villages retain their own distinct and separate identities. Additionally, Priority 4 states that the Green Belt will be protected against inappropriate or unplanned development, which may contribute to retaining attractive areas of countryside and minimising risk of coalescence between settlements. In relation to Priority 4, creation of a better environment, a minor positive effect is therefore given for SA Objective 8: Landscape, although this is uncertain as effects depend on the location and design of development.
- 4.57 Priority 4 states that the building of greener, more energy efficient homes, offices and commercial buildings will be supported. This will reduce greenhouse gas emissions associated with these buildings due to decreased energy demand. Additionally, Priority 4 states that a wider green infrastructure network will be provided and enhanced. Green infrastructure may incorporate sustainable transport infrastructure, such as walking and cycling routes, and therefore could reduce greenhouse gas emissions by reducing dependence on private cars. Therefore, a minor positive effect is likely for SA Objective 9: Greenhouse Gas Emissions. There is some uncertainty associated with this effect as it is not known whether green infrastructure will include walking and cycling routes.
- 4.58 With regard to SA Objective 10, Priority 4 states that biodiversity will be protected and enhanced, and that that a wider green infrastructure network will be provided and enhanced. A significant positive effect is therefore likely for SA Objective 10: Biodiversity and Geodiversity.
- 4.59 Priority 4 does not address water quality and quantity, therefore a negligible effect is likely for SA Objective 11: Water Quality and Quantity.
- 4.60 Priority 4 states that the building of greener homes, offices and commercial buildings to help minimise flood risk will be supported. A significant positive effect is therefore likely for SA Objective 12: Flooding.
- 4.61 With regard to SA Objective 13, Priority 4 states that a wider green infrastructure network will be provided and enhanced. This green infrastructure could incorporate sustainable transport links, such as walking and cycling routes thereby reducing emissions from private car use. In addition, green infrastructure could contribute to air quality improvements as many plants, particularly trees, can help filter pollutants from the air. A minor positive effect is therefore likely with regard

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<sup>27</sup> DCLG (2012) National Planning Policy Framework (NPPF) Paragraph 80

to SA Objective 13: Air Quality. This effect is uncertain as it is not known whether green infrastructure will include walking and cycling routes.

- 4.62 Priority 4 states that the building of greener and more energy efficient homes, offices and commercial buildings will be supported. Therefore, a significant positive effect is likely for SA Objective 14: Energy Efficiency.
- 4.63 Priority 4 does not address the economy directly; however greener and more attractive places may attract more business<sup>28</sup> to the area. Therefore, as Priority 4 encourages the provision of an expanded green infrastructure network, a minor positive effect is likely for SA Objective 15: Employment.

**Table 4.1: Summary of SA scores for The Vision and priorities of the Local Plan**

	SA1: Education	SA2: Services	SA3: Housing Provision	SA4: Community Cohesion	SA5: Health	SA6: Soil and Minerals	SA7: Historic Environment	SA8: Landscape	SA9: Greenhouse Gas Emissions	SA10: Biodiversity and Geodiversity	SA11: Water Quality and Quantity	SA12: Flooding	SA13: Air Quality	SA14: Energy Efficiency	SA15: Economy
<b>The Vision</b>	++	++	++	+	++	+/-	++?	++?	++	+	0	+	+/-	0	++
<b>Priority 1</b> Housing need	+	+	++	0	+	+/-	-?	-?	+/-	-?	-?	-?	+/-	0	+
<b>Priority 2</b> Economic growth	0	0	0	0	0	+/-	-?	-?	+/-	-?	-?	-?	+/-	0	++
<b>Priority 3</b> Connecting people	++	++	0	+	++	+/-	-?	-?	++	-?	0	0	++	0	+
<b>Priority 4</b> Environment	0	0	0	++	+	+	++	+	+	++	0	++	+	++	+

<sup>28</sup> Forest Research (2010) Benefits of Green Infrastructure

## 5 Sustainability Appraisal Findings for Issues and Options Part 2

- 5.1 Part 2 of the Issues and Options document discusses a range of planning issues in the Borough and proposes a way forward for some of these. The following issues are discussed in Part 2:
- **Local housing need.**
  - **Additional housing requirements.**
  - **Jobs and prosperity.**
  - Community facilities.
  - Movement/Transport.
- 5.2 For those issues in **bold** in the list above, the Issues and Options document proposes a way forward, and the sustainability implications of these have been discussed below. For those issues not in bold, the Issues and Options document asks an open-ended question, without suggesting an approach to the issue, therefore it is not possible to comment on the sustainability implications of an approach to these at this stage. Once further details are available, the SA will assess any policies and options coming forward regarding these.

### Local Housing Need

- 5.3 The Issues and Options document makes provision for 600 homes per annum over the plan period for the next 15 years, a total of 9,000 homes. This is the objectively assessed housing need<sup>29</sup> as set out in the South West Hertfordshire Strategic Housing Market Assessment (SHMA)<sup>30</sup>. This was the 'demographic-based scenario', which is adjusted for affordability. Two reasonable alternative options were identified in relation to the housing provision figures for Hertsmere:
- The economic-led growth scenario: Makes provision for the highest housing growth scenario from the SHMA, the economic-led growth scenario, based on the economy study scenario, which provides 670 homes per annum over the plan period for the next 15 years, a total of 10,050 homes.
  - The 10-year migration trend scenario: Makes provision for the lowest housing growth scenario from the SHMA, the 10-year migration trend scenario, which provides 468 homes per annum over the plan period for the next 15 years, a total of 7,020 homes.
- 5.4 A summary of assessment results is given below and a summary of the SA scores for housing provision options are presented in **Table 5.1**. Full SA appraisal matrices can be found in **Appendix 5**.

### Summary of results

- 5.5 Mixed effects were identified with regards to SA objectives 1 (education), 2 (access to services), and 5 (health) as additional housing may put existing services and facilities under additional pressure, although this may also provide additional funding for new and improved facilities. Such effects are expected to be significant with regards to demographic and employment-led scenarios,

<sup>29</sup> The Objectively Assessed Housing Need is 599 homes per annum. This has been rounded to 600 by Hertsmere Borough Council.

<sup>30</sup> GL Hearn Limited (2016) South West Hertfordshire Strategic Housing Market Assessment for Dacorum Borough Council, Hertsmere Borough Council, Three Rivers District Council, and Watford Borough Council: <https://www.hertsmere.gov.uk/Planning--Building-Control/Planning-Policy/Local-Plan/Supporting-Studies.aspx>

due to the larger amount of housing that would be provided through these. Similarly, mixed effects were recorded with regards to SA objective 9 (greenhouse gas emissions) and 13 (air quality), as although additional housing will lead to increased energy demand and an increased number of cars on the road, housing development may provide funding for public transport improvements.

- 5.6 The selected option would provide the required housing provision in the Borough, based on demographic projections and adjusted for affordability. This was deemed the most suitable approach through the SHMA work. As such, this approach would provide a suitable number of homes, including affordable homes, resulting in significant positive effects with regards to SA objective 3 (housing).
- 5.7 The alternative economic-led growth scenario would also provide the required housing provision within the Borough, and would therefore be likely to result in a significant positive effect with regard to SA objective 3. Whilst the SHMA identifies a greater housing need for Hertsmere under the employment-led scenario, the overall housing need across the HMA is lower than the demographic-led projections. The SHMA states that there are '*strong labour market inter-relationships between the local authorities within the HMA*' and that '*it would be artificial to seek to balance growth in employment and labour supply within the confines of somewhat arbitrary boundaries of individual administrative authorities*', therefore there is no need to adjust housing need to support this level of economic growth.
- 5.8 The SHMA considers that the alternative 10-year migration trend scenario is deemed to be less robust as it does not account for the changing age structure of the population and the effect this might have on migration, or the inter-relationship with how London's population is expected to change. In addition, it is thought that migration figures may have historically been underestimated, therefore projections based on more recent data are likely to be more reliable. As such, this scenario is likely to provide less housing than is required within the Borough and would likely cause a housing supply shortfall. Therefore, it would likely have a minor negative effect with regard to SA Objective 3.
- 5.9 Mixed effects were identified with regards to SA objective 6 (soil), as all scenarios are likely to require development on both greenfield and brownfield land.
- 5.10 Negative effects were identified in relation to most other environmental objectives, including SA objectives 7 (historic environment), 8 (landscape), 10 (biodiversity and geodiversity) and 12 (flood risk). Due to the constrained nature of the Borough and the scale of development required, development is likely to be in proximity to receptors that will be affected by this. Larger housing requirements are more likely to lead to significant negative effects on these objectives, due to the greater land-take required.
- 5.11 The scale of housing provision for all of the options will require high levels of energy use during construction and operation. The greater the number of homes to be delivered, the higher the overall increase in energy consumption. As such, the demographic-based and economic-led scenarios are assessed as having significant negative effects on this objective. As the 10-year migration trend scenario will provide the lowest number of homes, minor negative effects have been recorded. However, these effects are uncertain as energy efficiency will depend on the layout and design of development.
- 5.12 All scenarios are expected to have positive effects on the economy, as they will bring additional workforce to the area, which may in turn attract more businesses. Short-term jobs will also be created through construction of new developments.

#### **Reasons for selecting the Issues and Options document housing provision figure**

- 5.13 The Council has taken forward the recommended objectively assessed housing need figure based on work it has undertaken to identify a number of scenarios based on demographic information and employment-led scenarios. The demographic scenario is based on the SHMA, which used the approach set out in the PPG. This took the latest population and household projections as a starting point, then considered adjusting this to take account of market signals, evidence of affordable housing need or to support expected growth in the economy. The SHMA concluded that the demographic based scenario would significantly boost housing delivery and should

improve affordability. Therefore, the demographic-based scenario was selected as the Issues and Options document housing provision figure.

- 5.14 The economic-led scenario is based on various employment rates and scenarios utilising the econometric forecasts from Cambridge Econometrics and forecasts from Oxford Economics East of England Forecast Model. This scenario might lead to higher net migration, leading to a slightly higher need of 670 homes per year. The Council considers this scenario to be unrealistic given the interrelationship between the Boroughs within the HMA, in that many people travel to work across local authority boundaries. Over the HMA as a whole the employment-led scenario produced a lower number than the demographic projection, and it was agreed across all of the commissioning authorities that there was no robust evidence for seeking to adjust assessed housing need for individual authorities within the HMA to take account of economic factors. Therefore, the economic-led scenario was not taken forward.
- 5.15 With regard to the 10-year migration trend scenario, the SHMA concluded that the migration based projections were not as technically robust as the Sub-National Population Projections used for the demographic scenario. Therefore, the 10-year migration trend scenario was not taken forward.

**Table 5.1: Summary of SA scores for the housing provision options**

	SA1: Education	SA2: Services	SA3: Housing Provision	SA4: Community Cohesion	SA5: Health	SA6: Soil and Minerals	SA7: Historic Environment	SA8: Landscape	SA9: Greenhouse Gas Emissions	SA10: Biodiversity and Geodiversity	SA11: Water Quality and Quantity	SA12: Flooding	SA13: Air Quality	SA14: Energy Efficiency	SA15: Economy
<b>Selected option: Demographic-based scenario</b>	++ ?/-- ?	++ ?/-- ?	++	0	++ ?/-- ?	+/-	--?	-?	++ ?/--	--?	-?	-?	++ ?/--	--?	+
<b>Alternative option: Economic-led scenario</b>	++ ?/-- ?	++ ?/-- ?	++	0	++ ?/-- ?	+/-	--	--?	++ ?/--	--	--?	--?	++ ?/--	--?	++ ?
<b>Alternative option: 10-year migration trend scenario</b>	+?/ -?	+?/ -?	-	0	+?/ -?	+/-	-?	-?	+?/ -	-?	-?	-?	+?/ -	-?	+?

## Additional Housing Requirements

- 5.16 The Issues and Options document discusses a range of additional housing requirements, including affordable housing, pitches for Gypsies, Travellers and Travelling Showpeople, self-build plots and adaptable housing for the elderly population. Of these, the Issues and Options document gives proposed approaches to affordable housing and self-build housing only, therefore it was only possible to assess these through the SA process at this stage. Other aspects of additional housing requirements will be assessed if and when these are available. Full SA appraisal matrices can be found in **Appendix 5**. A summary of assessment results is given below and a summary of the SA scores for additional housing requirements are presented in **Table 5.2**.

## Affordable housing

- 5.17 The Issues and Options document proposes that 35-40% of new homes should be provided as affordable housing within larger developments. This is in line with the current local plan, particularly Core Strategy policy CS4. Whilst the definition of 'larger developments' is not given in the Issues and Options document, the Core Strategy policy CS4 states that all housing developments of 5 or more homes, or over 0.2 hectares should provide affordable housing. If this threshold is to be carried forward to the new local plan, it is expected that this will provide sufficient affordable housing for all households currently on the Borough's housing register (more than 850). This has resulted in uncertain significant positive effects with regards to SA Objective 3 (housing). This proposed approach is not relevant to any of the other SA objectives.

## Self-build housing

- 5.18 The Issues and Options document proposes that, within larger developments, land should be available for up to 10% new housing to be self-build homes. Whilst the document states that the Council already has a register of people wanting to buy a self-build plot, it is not known how many are on the register or whether or not this requirement will meet those needs. It is also not known what would be considered a 'larger development'. Nevertheless, this proposed approach is expected to have minor positive effects with regards to SA objective 3 (housing), as it will contribute to ensuring a mix of housing and may help those who wish to build housing to meet their own specialist needs. This proposed approach is not relevant to any of the other SA objectives.

**Table 5.2: Summary of SA scores for the additional housing requirements options**

	SA1: Education	SA2: Services	SA3: Housing Provision	SA4: Community Cohesion	SA5: Health	SA6: Soil and Minerals	SA7: Historic Environment	SA8: Landscape	SA9: Greenhouse Gas Emissions	SA10: Biodiversity and Geodiversity	SA11: Water Quality and Quantity	SA12: Flooding	SA13: Air Quality	SA14: Energy Efficiency	SA15: Economy
<b>Affordable Housing</b>	0	0	++	0	0	0	0	0	0	0	0	0	0	0	0
<b>Self-build housing</b>	0	0	+	0	0	0	0	0	0	0	0	0	0	0	0

## Jobs and Prosperity

- 5.19 The Issues and Options document makes provision for 9,000 jobs over the plan period for the next 15 years. This is the employment-led scenario<sup>31</sup>, which is the preferred scenario from the South West Hertfordshire Economic Study<sup>32</sup>. Two reasonable alternative options were identified in relation to the housing provision figures for Hertsmere:

- The labour supply scenario: Makes provision for approximately 7,300<sup>33</sup> total jobs growth over the plan period.

<sup>31</sup> The employment-led scenario makes provision for 13,800 total jobs growth over 23 years from 2013-2026. This equates to 600 jobs per year and therefore equates to 9,000 jobs over the 15 year plan period.

<sup>32</sup> Regeneris Consulting and GL Hearn (2016) for Dacorum, Hertsmere, Three Rivers and Watford Councils. [https://www.watford.gov.uk/downloads/file/760/south\\_west\\_herts\\_economy\\_study\\_final\\_report\\_-\\_february\\_2016](https://www.watford.gov.uk/downloads/file/760/south_west_herts_economy_study_final_report_-_february_2016)

<sup>33</sup> The labour supply scenario makes provision for 11,200 total jobs growth over 23 years from 2013-2026. This equates to 487 jobs per year and therefore equates to 7,304 jobs over the 15 year plan period.

- The higher growth scenario: Makes provision for approximately 9,100<sup>34</sup> total jobs growth over the plan period.
- 5.20 The Economy Study also sets out a lower 'Past Completions' scenario. However, this has not been assessed as it was considered to give an unrealistic view of future demand (i.e. it is not a reasonable alternative), due to the slow employment growth over the past few years and limited amount of B class new build development.
- 5.21 The full assessment matrices for the employment provision quantum and the two reasonable alternative options are shown in **Appendix 5**. A summary of assessment results is given below and a summary of the SA scores for employment provision options are presented in **Table 5.3**.

### Summary of results

- 5.22 Mixed effects were also identified with regards to SA objective 6 (soil), as all scenarios are likely to require development on both greenfield and brownfield land. Similarly, mixed effects were recorded with regards to SA objective 9 (greenhouse gas emissions) and 13 (air quality), as although additional job growth will lead to increased energy demand and an increased number of cars on the road, employment development may provide funding for public transport improvements and may increase the accessibility of employment sites, thereby decreasing car use. Generally, effects are more likely to be significant with regards to the employment-led and higher growth scenarios, as they would provide for more jobs, therefore they are likely to require greater land take and result in more vehicle movements, through people driving to work or the coming and going of deliveries or industrial traffic. However, greater employment growth may also increase accessibility of employment, meaning that the population do not have to travel so far to work and development may also provide more funding opportunities for sustainable transport.
- 5.23 Negative effects were identified in relation to most other environmental objectives, including SA objectives 7 (historic environment), 8 (landscape), 10 (biodiversity and geodiversity), and 12 (flood risk). Due to the constrained nature of the Borough and the scale of development required, development is likely to be in proximity to receptors that will be affected by this. Larger amounts of employment development are more likely to lead to significant negative effects on these objectives, due to the greater land-take required. Similarly, negative effects were identified in relation to SA objective 11 (water) as employment development could place increased pressure on sewage infrastructure and potable water supply, with larger amounts of employment development being more likely to lead to significant negative effects due to this increased pressure.
- 5.24 Construction of employment sites will require high levels of energy use, and businesses are likely to use substantial amounts of energy in their normal operations. The employment-led and higher growth scenarios are likely to lead to higher energy consumption, therefore they are assessed as having significant negative effects on this objective. As the labour supply scenario will provide the lowest number of jobs, minor negative effects have been recorded. However, these effects are uncertain as energy efficiency will depend on the layout and design of development.
- 5.25 The selected option would provide the required job growth provision in the Borough, based on employment forecasts. This was deemed the most suitable approach through the Economic Study work. As such, this approach would provide a suitable number of jobs resulting in significant positive effects with regards to SA objective 15 (economy). Similarly, the alternative higher growth scenario would also provide the required job growth provision within the Borough, as determined by the Economic Study, and therefore likely to result in a significant positive effect with regard to SA objective 15. On the other hand, the labour supply scenario provides for less than the required need and therefore was identified to likely have a minor negative effect with regard to SA objective 15.

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<sup>34</sup> The higher growth scenario makes provision for 14,000 total jobs growth over 23 years from 2013-2026. This equates to 609 jobs per year and therefore equates to 9,130 jobs over the 15 year plan period.



### Reasons for selecting the Issues and Options document employment provision figure

- 5.26 The Council has taken forward the preferred employment-led scenario based on work it has undertaken to identify a number of scenarios based on demographic information and employment forecasts. The preferred scenario plans for 9,000 total jobs growth over the plan period and is based on employment forecasts. This scenario sees South West Hertfordshire create just over 60,000 new jobs by 2036, representing an annual growth rate of 0.8% p.a. (compared to a national average of 0.5% p.a.). The Economic Study concludes that the employment-led scenario is the preferred scenario as the growth rate of 0.8% p.a. represents an aspirational and strong growth rate, which meets the requirements of NPPF to adopt a positive approach to plan making.
- 5.27 The labour supply scenario, which plans for approximately 7,300 total jobs growth over the plan period, is based on ONS's 2012 sub-national population projections as a starting point. This scenario estimates the number of new jobs that would need to be created to support South West Hertsmeres's growing population. This would result in the creation of 62,000 new jobs in South West Hertfordshire by 2036. The close alignment between the employment led and labour supply scenario indicates that the demand for, and supply of, labour are expected to be broadly balanced over the plan period. This offers further weight to the plausibility of the employment led scenario as it implied that employers would be able to access the skills they need to grow without significant changes to existing commuting or migration patterns.
- 5.28 The higher growth scenario, which plans for approximately 9,100 total jobs growth over the plan period, is based on the prediction that the growth potential of the economy is enhanced still further as a result of the major transport investment planned. This will increase the appeal of South West Hertfordshire as an investment location and improve the viability of new development. This higher growth scenario estimates that the growth rate could increase to 0.9% p.a., equating to 66,000 additional jobs in South West Hertfordshire by 2036. The growth rate of 0.9% p.a. in the higher growth rate scenario would not be inconsistent with the analysis undertaken for the Economic Study but would be at the upper end of growth rates that have been achieved in the past, therefore was considered to not be justified due to the high rates of employment and out-commuting within Hertsmeres.
- 5.29 Therefore, the employment-led scenario was selected as the Issues and Options document jobs growth figure.
- 5.30

**Table 5.3: Summary of SA scores for the employment provision options**

	SA1: Education	SA2: Services	SA3: Housing Provision	SA4: Community Cohesion	SA5: Health	SA6: Soil and Minerals	SA7: Historic Environment	SA8: Landscape	SA9: Greenhouse Gas Emissions	SA10: Biodiversity and Geodiversity	SA11: Water Quality and Quantity	SA12: Flooding	SA13: Air Quality	SA14: Energy Efficiency	SA15: Economy
<b>Selected option: Employment-led scenario</b>	0	0	0	0	0	+/-	--?	--?	++ ?/-- ?	--?	--?	--?	++ ?/-- ?	--?	++
<b>Alternative option: Labour supply scenario</b>	0	0	0	0	0	+/-	-?	-?	+?/ -?	-?	-?	-?	+?/ -?	-?	-
<b>Alternative option: Higher growth scenario</b>	0	0	0	0	0	+/-	--?	--?	++ ?/--	--?	--?	--?	++ ?/--	--?	++





## 6 Sustainability Appraisal Findings for Issues and Options Part 3

- 6.1 This chapter presents the SA findings for the potential development approaches, as presented in Part 3 of the Issues and Options document. Five potential development approaches have been appraised:
- Option 1: Redevelopment of urban brownfield sites.
  - Option 2: Growth through new garden suburbs.
  - Option 3: Supporting larger rural communities and growth of key villages.
  - Option 4: Meeting the needs of other villages.
  - Option 5: New garden village.
- 6.2 The SA findings for these options are summarised below. The detailed SA matrices for the site options can be found in **Appendix 6**. The sites were appraised in line with the detailed assumptions set out in **Appendix 4**. Each option only provides for a limited number of homes and therefore the Council has confirmed that multiple options will need to be taken forward in order to meet the full objectively assessed housing need.
- 6.3 All options list required infrastructure. For Options 2 and 5, this includes provision of new services, such as new school and healthcare provision. For Options 3 and 4, this may include provision of new services and facilities for larger developments, but could include contributions to existing services and facilities for smaller developments. Developments under Option 1 would not be required to provide new services and facilities but would be required to contribute to additional services and facilities. As all options are expected to provide sufficient infrastructure to meet the additional needs they generate, all options are considered to have significant positive effects with regards to SA Objectives 1 (education), 2 (services) and 5 (health).

### **SA Objective 1: To improve access to education, training, opportunities for lifelong learning and employability**

- 6.4 Each of the five options presented in the Issues and Options version of the Local Plan received a significant positive effect for this objective. This was due to the fact that each option seeks to provide additional primary and/or secondary school places, and in some cases at least one new primary or secondary school.

### **SA Objective 2: To ensure ready access to essential services and facilities for all residents**

- 6.5 Each of the five options presented in the Issues and Options document was given a significant positive effect for this objective. This is partly due to the fact that each option makes provision for a range of services including education, healthcare, open space, leisure, recreation and community facilities. Proposed improvements to pedestrian/cycle connectivity, bus services and local and wider strategic highway networks under each of these options, also contribute towards the significant positive effect for this objective.

### **SA Objective 3: To ensure the provision of housing including affordable housing and a mix that meets local needs**

- 6.6 All of the options are expected to have a significant positive effect on this objective, due to the nature of the proposed development which would help provide new homes to meet the identified need in the District. It is assumed that new housing developments will include an appropriate proportion of affordable housing and a mix that meets local needs. Sites that would provide 11 homes or more in urban areas and those which would provide 6 homes or more in rural areas are

expected to provide affordable housing in line with national affordable housing thresholds<sup>35</sup> and therefore are likely to have a significant positive effect.

- 6.7 Option 5 received an uncertain significant positive effect because it proposes the development of a new garden village, which is likely to have a longer lead-in time. As such, housing might not be able to be provided through this option until later in the plan period or beyond.

**SA Objective 4: To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces**

- 6.8 Options 3, 4 and 5 received a significant positive effect for this objective, due to each of them being located within one of the 20% most deprived areas in terms of barriers to housing and services<sup>36</sup>. With regard to crime prevention, the effect of development will not be influenced by the location of the site allocated through the Local Plan but by the detailed proposals for each. Option 5 proposes the development of a new garden village, which creates greater opportunities to design out crime. Options 1 and 2 received a minor positive effect as, along with the other options, they would provide for new community facilities.

**SA Objective 5: To improve population's health and reduce inequalities**

- 6.9 Each of the five options was given a significant positive effect for this objective. This is because each option states that provision will be made for additional healthcare as well as leisure and recreation facilities.
- 6.10 Improvements to pedestrian and cycle connectivity could encourage active travel, therefore increasing physical activity of residents. In addition, improved public transport services, may reduce inequalities by enhancing accessibility and reducing reliance on the private car.

**SA Objective 6: To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources**

- 6.11 No significant effects were identified in relation to this objective. All but one of the options (Option 1) received a minor negative effect due to the fact that development within these sites would most likely result in a loss of greenfield land. Additionally, a very large proportion of the Borough is located within a Minerals Safeguarding Area, therefore all options may sterilise mineral resources. Option 4 received an uncertain minor negative effect because its actual effect will depend on the exact location of development, as some areas of search are outside of the Minerals Safeguarding Area. Option 1 received a minor positive effect because it seeks to maximise redevelopment of brownfield land.

**SA Objective 7: To protect or enhance historic buildings, heritage assets and archaeological sites**

- 6.12 All options include areas of search that are located within close proximity to Listed Buildings, archaeological sites and in some cases Conservation Areas. Development is generally expected to have a negative effect on these features as it may harm the features themselves or their settings. The effect is uncertain because the actual effect will depend on the location, scale, design and layout of the new development. This negative effect is considered minor for all options, except Option 5, as, due to the scale of development, it is considered that significant negative effects, such as development on, or within the setting of, an archaeological site is likely to be unavoidable.
- 6.13 Option 1 has been identified as having mixed positive and negative uncertain effects, as it may lead to regeneration of degraded land, which could improve the settings of historic and heritage assets.

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<sup>35</sup> DCLG (2016), Planning Practice Guidance, Reference ID: 23b-001-20161116

<sup>36</sup> According to the 'Overall – Barriers to housing and services' domain of English Indices of Deprivation (<https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>)

### **SA Objective 8: To maintain and enhance the quality of countryside and landscape**

- 6.14 Option 5 received a significant negative but uncertain effect for this objective. This is because Option 5 proposes the development of a new garden village, which will have a significant effect on the landscape due to its scale and location in a rural area. Although development of a garden village will result in a loss of Green Belt land, its design and the enhancement of green infrastructure could help to avoid coalescence with surrounding settlements and ensure an attractive settlement in-keeping with the character of nearby settlements.
- 6.15 Option 1 received a mixed minor positive and negative effect. This is because the redevelopment of brownfield sites will involve a significant increase in densities in central locations, which could have an adverse effect on the quality of the townscape. Alternatively, redevelopment of brownfield land could enhance townscape by regenerating urban areas. In addition, the development of brownfield sites helps safeguard the countryside and landscape by reducing the extent to which greenfield and Green Belt land needs to be built on.
- 6.16 All other options are assessed as having minor positive effects on this SA objective.

### **SA Objective 9: Greenhouse Gas Emissions**

- 6.17 Option 1 received a mixed significant positive and negative effect. This is due to the fact it makes provision for pedestrian/cycle connectivity, bus services and electric charging points, but the development of up to 3,000 homes is expected to increase the amount of cars on the road overall. Option 5 on the other hand received a mixed minor positive and significant negative but uncertain effect. The reason it did not receive a significant positive effect is that unlike Option 1, it does not make provision for electrical charging points and is not located on brownfield land within close proximity to a range of services. Option 5 proposes the development of a new garden village, giving it an uncertain effect as details of public transport links are not known at this stage.
- 6.18 All other options are assessed as having a mixed minor positive and negative effect on this SA objective.

### **SA Objective 10: To protect and enhance biodiversity and geodiversity**

- 6.19 Option 5 received a mixed minor positive and significant negative but uncertain effect. This is due to the area of search being located within close proximity to a number of designated nature conservation sites, which may be lost, damaged or degraded as a result of development. Yet this option states that enhancements will be made to green infrastructure, which may enhance areas of habitat. The effect is uncertain as it depends on the exact location and detailed design proposals of development. The remaining options (with the exception of Option 1) received a mixed minor positive and negative but uncertain effect. Option 1 received a minor positive effect as development on brownfield land is less likely to be within or near to a sensitive biodiversity site.
- 6.20 All other options are assessed as having a mixed minor positive and negative, but uncertain, effect on this SA objective.

### **SA Objective 11: To improve water quality and manage water resources sustainably**

- 6.21 No significant effects were identified in relation to this objective. For all options, it is uncertain how sufficient wastewater infrastructure will be provided and how sufficient water will be provided, given the limited water supply in the Borough. Options 1, 2, 3 and 4 received a minor negative but uncertain effect, as these options also include areas of search within or near to Source Protection Zones.
- 6.22 Option 5 received a mixed (minor positive and minor negative) effect. This is because, although all issues relating to Options 1, 2, 3 and 4 above apply, the scale and nature of a new garden village is likely to provide funding for new infrastructure and will allow the whole development to be planned in a comprehensive manner, taking into account the challenges of water supply and treatment.

### **SA Objective 12: To minimise the risk of flooding taking account of climate change**

- 6.23 Option 5 received a minor negative effect because the development of a new garden village is expected to significantly increase the amount of impermeable surfaces, reducing the drainage ability of the ground. Option 1, on the other hand received a negligible uncertain effect because the redevelopment of brownfield sites is not likely to result in an increase in surface water flooding, although this depends on the existing permeability and location of brownfield land. The remaining options received a minor negative uncertain effect, as there is potential for small areas of development to be located in Flood Zones 2 or 3.

### **SA Objective 13: To improve local air quality**

- 6.24 Option 1 received a mixed significant positive and minor negative but uncertain effect. This is because Option 1 makes provision for more sustainable transport modes and focuses on redevelopment of urban brownfield sites, which are more likely to be located near existing services and facilities, therefore reducing the need to travel by car. It also provides for electric vehicle charging points, which may encourage the use of electric vehicles. However, the development of up to 3,000 homes is expected to increase the number of cars on the road. Furthermore, the industrial development proposed by this option may also have an adverse effect on local air quality. The uncertainty is due to the fact it is unknown whether these brownfield sites will be located in Air Quality Management Areas (AQMAs) and what the industrial uses will be. Options 3 and 5 received a mixed minor positive and negative effect, while the Options 2 and 4 received a mixed minor positive and negative but uncertain effect, as they propose improvements to the wider strategic highway network.

### **SA Objective 14: To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy**

- 6.25 Energy use will largely be influenced by design, layout and construction methods, therefore the influence of the location/distribution of development on this SA Objective is considered to be negligible.

### **SA Objective 15: Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres**

- 6.26 All but one of the options (Option 2) received a significant positive effect for this objective. This is due to each option proposing the development of a neighbourhood/village centre or in some cases, commercial and industrial development. Additionally, Option 5 proposes the development of a new office / high tech business park while Option 3 states that the extension of either village could incorporate additional local employment opportunities. Each option would include high speed broadband network improvements. Effects of Options 3 and 4 are uncertain as these options may only provide employment via new services and facilities (rather than larger business/employment sites)<sup>37</sup>. Option 3 includes 'potential' expansion of local business parks and Option 4 includes 'potential' business growth around South Mimms Services, therefore it is not guaranteed that such business growth would be delivered. Option 2 received a minor positive effect as new employment opportunities are expected to be limited in number.

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<sup>37</sup> As this requirement is not included for 'Any development with up to 100 new homes' it is assumed that the requirements listed in 'Any development with up to 250 new homes' will only apply to developments of over 100 homes.

**Table 6.1: Summary of SA scores for potential development approaches**

	SA1: Education	SA2: Services	SA3: Housing provision	SA4: Community cohesion	SA5: Health	SA6: Soil and minerals	SA7: Historic Environment	SA8: Landscape	SA9: Greenhouse Gas Emissions	SA10: Biodiversity and geodiversity	SA11: Water quality and quantity	SA12: Flooding	SA13: Air Quality	SA14: Energy Efficiency	SA15: Economy
<b>Option 1:</b> Redevelopment of brownfield sites	++	++	++	+	++	+	+/-/?	+/-	++/--	+	-?	0?	++/-/?	0	++
<b>Option 2:</b> Growth through new garden suburbs	++	++	++	+	++	-	-?	-?	+/-/?	+/-/?	-/?	-?	+/-/?	0	+
<b>Option 3:</b> Supporting larger rural communities – growth of key villages	++	++	++	++	++	-	-?	-?	+/-	+/-/?	-/?	-?	+/-	0	+++?
<b>Option 4:</b> Meeting the needs of other villages	++	++	++	++	++	-?	-?	-?	+/-/?	+/-/?	-/?	-?	+/-/?	0	+++?
<b>Option 5:</b> New garden village	++	++	+++?	++	++	-	--?	--?	+/-/?	+/-/?	+/-	-	+/-	0	++

## 7 Conclusions

- 7.1 The Issues and Options document, and in particular the reasonable alternatives considered during its preparation, have been subject to an appraisal against the SA objectives, which were developed at the scoping stage of the SA process. Three types of options have been assessed. Vision and priorities, as presented in Part 1 of the Issues and Options document; policy approach options, as presented in Part 2 of the Issues and Options document; and potential development approaches, as presented in Part 3 of the Issues and Options document.
- 7.2 The Vision and priorities (in Part 1) were assessed as having generally positive effects against a range of SA objectives, as these are positive, aspirational statements to guide the plan in creating an even better Hertsmere over the plan period.
- 7.3 With regards to housing and employment provision options (in Part 2), effects are likely to be mixed against many SA objectives, with larger options having potential for more significant negative effects, particularly in terms of environmental harm, but also having greater potential to mitigate such effects and deliver new and improved infrastructure. Negative effects are expected with regards to a range of environmental objectives, namely SA objectives 7, 8, 10, 11 and 12, as the land take required for all options is likely to mean that development will be in close proximity to sensitive features and, due to the constrained nature of the Borough, will require development of greenfield land. Again, options for greater quanta are more likely to have significant effects, as they will require greater land take.
- 7.4 The potential development approaches (in Part 3) are generally expected to have positive impacts on the social SA objectives, as all will provide housing, as well as a range of services and facilities, including community facilities. Again, they may have negative effects against the environmental objectives, due to the land take required to deliver development. Significant negative effects were only identified in relation to Option 5 (New garden village) against SA objectives 7 and 8 as the large scale development of greenfield land required by this option reduces the chances of mitigating effects on the historic environment and landscape.
- 7.5 The Borough has limited opportunities for brownfield development, meaning that some development will be required on greenfield land. Almost all greenfield land in the Borough is also within the Green Belt, therefore development may lead to loss of open countryside and increase potential for settlement coalescence. In addition, much of the Borough lies within a minerals safeguarding area, which means that most development is likely to, to some extent, sterilise these mineral resources. This could be avoided where minerals can be worked prior to development of the site. All future development will need to address water supply, given the limited water resources available for the Borough, and should ensure that sufficient wastewater treatment capacity is available.
- 7.6 For all options, effects depend on the detailed developmental design and location, and the development management policies that are brought forward through the plan. Once preferred options are identified and further details of site allocations and policy approaches are known, more detailed assessment work can be undertaken.

### Next Steps

- 7.7 This SA Report will be available for consultation from February 2018.
- 7.8 Following this consultation, the responses will be reviewed and addressed. The findings of the SA and the outcomes of the consultation will be taken into account by the Council as it prepares the next iteration of the Local Plan. The SA will then be updated to reflect that version of the Local

Plan and further consideration will be given to potential mitigation measures as well as the approach to monitoring the likely significant effects of the plan.

LUC  
February 2018



## **Appendix 1**

### Consultation Responses Received in Relation to the SA Scoping Report (September-October 2017)

**Table A1.1: Consultation comments received in relation to the September 2017 SA Scoping Report for the Local Plan and how they have been addressed in this SA report**

Consultee	Consultation comment	Action/response
<b>Historic England</b>		
	Historic England has published guidance on Sustainability Appraisals, which contains details on baseline information, sustainability issues and objectives, indicators and monitoring. This document can be found here: <i>Historic England Advice Note 8: Sustainability Appraisal and Strategic Environmental Assessment:</i> <a href="https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/">https://historicengland.org.uk/images-books/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/</a>	Noted.
	Suggested additions to Policy Context in Section 2 and Appendix 1: <ul style="list-style-type: none"> <li>• UNESCO World Heritage Convention</li> <li>• The European Convention on the Protection of Archaeological Heritage (Valetta Convention)</li> <li>• European Landscape Convention (Florence Convention)</li> <li>• Convention for the Protection of the Architectural Heritage of Europe (Granada Convention)</li> <li>• Planning (Listed Buildings &amp; Conservation Areas) Act 1990</li> <li>• Ancient Monuments &amp; Archaeological Areas Act 1979</li> </ul>	The UNESCO World Heritage Convention has not been included as the nearest World Heritage sites are over 18km away, in central London. The Valetta Convention, Florence Convention and Granada Convention were already referenced in the Plan, Policy and Programme review. The relevant Acts have now been included in <b>Appendix 2</b> .
	Suggested using local level documents, including Hertsmere's existing Conservation Area Appraisals. Local SPDs and SPGs such as the Borough's Planning and Design SPD and Streetscape Manual should also be used.	The Plan, Policy and Programme review focuses only on the national and international levels. Other relevant documents, such as those listed, will be referred to throughout the SA process as appropriate.
	Welcomed reference to GI and noted that heritage assets can form part of GI networks.	Noted.
	Suggested additions to baseline information and sources of information for the historic environment: <ul style="list-style-type: none"> <li>• Identify which Grade II buildings and buildings of local importance are 'at risk'.</li> <li>• Local Historic Environment Record</li> <li>• Building Futures online resource</li> <li>• Hertfordshire Archaeology and History Journal</li> <li>• Information and figures relating to visitor numbers and key historic attractions in the Borough.</li> </ul>	These suggestions have been taken into account in updating the baseline information as presented in <b>Appendix 3</b> , where we have been able to access this information.  The baseline information will be updated at each stage of the SA, as and when additional or updated information becomes available.
	Recommended that the term 'historic environment' is used throughout (rather than 'heritage').	The term 'historic environment' has been used throughout this report.
	Agreed that without a planned local approach to development, heritage assets and their settings would be at risk from poorly planned development.	Noted.
	Suggested the Scoping Report recognises adverse impacts that other aspects such as transport could have upon the historic environment.	This has been acknowledged in <b>Table 3.1</b> of this document.
	The objectives and questions in the SA framework are generally appropriate.	Noted.

Consultee	Consultation comment	Action/response
	<p>Requested the following amendments to SA Objective 7 of the SA Framework:</p> <ul style="list-style-type: none"> <li>• Refer to 'historic environment'</li> <li>• State "<i>to protect or enhance</i>" rather than "<i>protect and enhance</i>" in order to be consistent with the statutory obligations embodied in the Planning (Listed Buildings &amp; Conservation Areas) Act 1990.</li> <li>• Include reference to the settings of historic buildings, designated and non-designated heritage assets and archaeological sites. It would also be helpful to clarify what is meant by archaeological sites as it is not clear how they differ from designated sites in the form of scheduled monuments and non-designated heritage assets.</li> <li>• Another particularly useful objective would be to: "<i>improve access to the cultural heritage of the district (including architectural, archaeological and artistic heritage) for enjoyment and educational purposes.</i>"</li> <li>• With regards to the first question of SA Objective 7 we request that the wording is amended to read, "<i>Conserve or enhance listed buildings .... and their settings</i>" rather than, "<i>avoid adverse effects on ...</i>".</li> <li>• It would be helpful if a question was added which sought to explore the ability of the emerging Plan to deal with the effects of unknown heritage assets on the development proposals.</li> <li>• With regards to the question on archaeology, it would be helpful to expand the question to include consideration of the effects of alterations to hydrological conditions as this could impact upon water dependent heritage assets including organic remains.</li> <li>• It is also advised that a question which will address how climate change mitigation and energy efficiency measures are integrated into the historic environment sensitively particularly as there is a separate objective on energy efficiency.</li> <li>• We welcome questions which will explore the ability of any emerging Plan to improve participation in and access to the historic environment as well as fostering heritage-led regeneration.</li> </ul>	<p>Noted. <b>Table 2.2</b> and <b>Appendix 4</b> have been updated accordingly. Access to cultural heritage has been incorporated as one of the questions for SA Objective 7.</p>
	<p>The SA matrices and form of assessment are reasonable</p>	<p>Noted.</p>
	<p>We welcome the statement in paragraph 5.1 which outlines consultation with statutory consultees, we would request that 'Historic England' is used instead of 'English Heritage' as that is no longer the correct name for the organisation.</p>	<p>Noted. This document and future SA Reports will refer to Historic England.</p>
	<p>The emerging Local Plan offers the opportunity to review the historic environment elements of the existing adopted development plan, from the evidence base to specific policies and proposals.</p> <p>Historic England look forward to being involved in future Local Plan consultations. We have produced guidance relating to Local Plans which you may find helpful:  <i>Historic Environment Good Practice Advice in Planning 1: The Historic Environment in Local Plans: <a href="https://historicengland.org.uk/images-books/publications/gpa1-historic-environment-local-plans/">https://historicengland.org.uk/images-books/publications/gpa1-historic-environment-local-plans/</a></i></p>	<p>Noted.</p>
	<p>Paragraph 3.44 states that there are no heritage assets at risk within the Borough. We therefore question the site allocation assumptions regarding SA objective 7, which identifies allocation as having a significant positive effect in bringing heritage at risk back into use.</p>	<p>Noted. This has been removed as demonstrated in <b>Appendix 2</b>.</p>

Consultee	Consultation comment	Action/response
	<p>The acceptability of site allocation with regards to heritage assets appears to be based purely on distance. We advise that this is an inappropriate method for assessing the suitability of a site allocation on the significance of a designated heritage asset and its setting. The distances that have been applied however are relatively substantial.</p>	<p>Distance thresholds are intended as a starting point, rather than the sole determinant of assessment. The assumptions have been amended to reflect this in <b>Appendix 2</b>.</p> <p>LUC will continue to discuss with the Council the best approach to ensuring the effects of site allocations on the historic environment are appropriately assessed. Due to the high-level nature of spatial options considered at this stage (Issues and Options), any alterations to the proposed approach to the assessment of site allocations will not affect any of the assessments in this report.</p>
	<p>Refer to site allocation guidance: <a href="https://historicengland.org.uk/images-books/publications/historic-environment-and-site-allocations-in-local-plans/">https://historicengland.org.uk/images-books/publications/historic-environment-and-site-allocations-in-local-plans/</a></p>	<p>Noted.</p>
	<p>The SA Scoping Report contains no information on monitoring and indicators. It is considered that the report should cover these two topics to ensure that appropriate means of monitoring and assessment processes are used to inform the final Sustainability Appraisal.</p>	<p>Monitoring only needs to be carried out where likely significant effects have been identified. No assessment work was undertaken at the Scoping stage, therefore the likely effects of the plan are unknown, therefore monitoring needs are unknown. Indicators and monitoring will be addressed at a later stage of the SA process.</p>
<b>Environment Agency</b>		
	<p>No response has been received from the Environment Agency.</p>	<p>N/A.</p>
<b>Natural England</b>		
	<p>Natural England does not consider that this Local Plan Sustainability Appraisal Scoping Report poses any likely risk or opportunity in relation to our statutory purpose, and so does not wish to comment on this consultation.</p>	<p>Noted.</p>
<b>Aldenham Parish Council</b>		
	<p>Page 12, 3.22. What are the accessibility issues in Aldenham?</p>	<p>This is in relation to accessibility of open space. There are no parks and gardens in Aldenham and 1 in 3 people are not within the defined accessible catchment for an allotment. Accessibility deficiencies are detailed in Table 12.4 of the Hertsmere Open Space Study (2011), as referenced in the Scoping Report.</p>
	<p>Page 16, 3.50. Could you clarify the details of "Aldenham West is within the 20% most deprived wards in the country"? How is this defined?</p>	<p>As stated in the SA Scoping Report, these statistics are taken from the English Indices of Deprivation 2015.</p>
	<p>Page 18, 3.68. The Radlett Neighbourhood plan supports the assertion that there is "a high overall need for affordable housing with one to three bedrooms".</p>	<p>Noted.</p>
	<p>3.70. We agree that congestion is a major concern, particularly in the centre of Radlett at rush</p>	<p>Noted.</p>

Consultee	Consultation comment	Action/response
	hours and school bus collection times.	
	Page 20, Housing Provision Mix. We agree wholeheartedly that there is a need for a mix of housing types, including one to three bedroomed homes.	Noted.
	Page 21, Service Accessibility. We support this policy, as mentioned in the Neighbourhood Plan. SADM32 identifies specific proposals for provision of community facilities.	Noted. This table identified key sustainability issues and their likely evolution without the plan. It only discusses existing Local Plan policies, it does not present new policies.
	Page 23, Biodiversity. SADM12 requires healthy, high quality trees and hedgerows to be retained. The Neighbourhood Plan strongly supports this, and would encourage HBC to put greater penalties on developers who flout these rules, and insistence that trees and hedgerows knocked down should be replaced with mature specimens.	Noted.
	Page 36. Housing Provision. We support strongly the need to provide housing for a range of ages and household types. This is emphasised in our Neighbourhood Plan. We hope this will be taken into account when considering planning applications in Radlett for very large homes, where potentially smaller ones could be built.	Noted.
	Page 37, Community Cohesion. (reducing and preventing crime and the fear of crime). There is mention of street lighting. We would like to propose that, as the conversion to LED light sources in the street lighting progresses, that the timing criteria are changed to allow the lights to be on longer during the hours of darkness. This policy was a cost saving policy, and as LEDs save roughly 80% of energy consumption as opposed to standard lighting, a few extra hours of operation would still save money and give the residents a much greater sense of security.	Noted.
	The Parish Council also made a number of comments that do not relate to the SA Scoping Report. These included reference to specific developments. Some of these comments also related to other activities of the Council, such as funding for various services and facilities. Other such comments included a desire for developers' viability assessments to be more transparent and comments on particular aspects the Parish Council would like to be considered in relation to planning applications.	The role of the SA Scoping Report is to review plans, policies and programmes relevant to the Local Plan, summarise the existing baseline with regards to sustainability topics, identify key issues for the Borough and set out the SA Framework to use in future assessments. As such, these issues are not relevant to the SA Scoping Report.
<b>Affinity Water</b>		
	Page 28: Water Supply – Likely evolution without implementation of the Local Plan. Whilst we support this section, we would suggest adding an additional sentence highlighting that without the updated Local Plan, the ability for Affinity Water to plan for necessary strategic infrastructure and increases in water demand in the Hertsmere Borough beyond 2027 would	This section has been amended, see <b>Table 3.1</b> .

Consultee	Consultation comment	Action/response
	also be reduced, due to a lack of information and certainty regarding the locations and quantities of planned future development.	
	Page 40: SA Objective 11 – Water Quality and Quantity. We believe that paragraph 2 should be reworded to include adequate potable water supply.	An appraisal question regarding potable water supply has been added to <b>Table 2.2</b> .
	The 2014 Water Resources Management Plan (WRMP14) is cited as a reference within the report. We would just like to highlight that we are currently in the process of undertaking work on our next Water Resources Management Plan (WRMP19), which will assess our water supply and demand balance over the next 25 years, replacing our previous WRMP. The draft plan will be submitted to DEFRA in December and we are planning to undertake public consultation on the plan early next year, prior to submitting the final version later next year.	Noted.
<b>Watford Borough Council</b>		
	The section titled 'Economy and labour market' could reference the retail work being undertaken which has not specifically been reviewed in the Scoping Report aside from the number of jobs associated with the sector.	We assume this refers to the Joint Retail Study. Reference to this has been included in the updated Baseline section in <b>Appendix 3</b> .
	<p>With regards to <b>Table 4.2</b>:</p> <ul style="list-style-type: none"> <li>SA Objective 2 (Services): It could be useful to specify what services are considered to be 'essential' to provide more context for this objective.</li> </ul>	A footnote has been added to <b>Table 2.2</b> for clarity. As demonstrated in the assumptions presented in Appendix 2 of the SA Scoping Report, this will largely be measured in terms of proximity to town and local centres.
	<p>With regards to <b>Table 4.2</b>:</p> <ul style="list-style-type: none"> <li>SA Objectives 2 (Services) and 5 (Health): There is overlap between the questions posed in these two objectives. Without more distinction between them this could limit the value the assessment has overall. It could be useful to provide more clarity between the appraisal questions that contribute to each objective. For example, further clarity could be provided between which objective relates to facilities such as medical centres where there is direct health intervention available and indirect intervention such as access to recreational facilities that could improve health.</li> </ul>	There is a degree of overlap between these objectives, but this is not considered to limit the value of the assessment. As noted above, SA objective 2 will be largely measured in terms of proximity to town and local centres and is about accessibility of services and facilities in general, whilst SA objective 5 considers health in terms of accessibility to health facilities, as well as recreation facilities. Clarification has been added to the footnote to <b>Table 2.2</b> .
	<p>With regards to <b>Table 4.2</b>:</p> <ul style="list-style-type: none"> <li>SA Objective 8 (Landscape): The first question could be more definitive if instead of asking if the Plan will 'consider the existing...' the question was more targeted by asking</li> </ul>	The SA framework in <b>Table 2.2</b> has been updated accordingly.

Consultee	Consultation comment	Action/response
	if the Plan 'will retain or enhance the existing...'	
	<p>With regards to <b>Table 4.2:</b></p> <ul style="list-style-type: none"> <li>SA Objective 9 is called emissions, however, the focus of the appraisal questions is on promoting alternative forms of transport to the car sustainable transport modes. These questions overlap the same topic and are covered by Objective 13, which is related to air quality. The assumptions for Objective 13 set out in Appendix 2 do not reflect the appraisal questions set out in Table 4.2. A clearer distinction between the objectives and the respective appraisal questions in the two objectives could provide more value to the overall assessment.</li> </ul>	<p>SA objective 9 relates to greenhouse gas emissions. As a large proportion of greenhouse gas emissions in Hertsmere arise from transport, this has been used, in part, as a proxy for greenhouse gas emissions. SA objective 13 relates to air quality. Again, a large proportion of air pollutants in Hertsmere arise from transport, therefore this has been used as a proxy. Greenhouse gas emissions and air quality relate to different SEA topics, as outlined in the SEA Regulations, and therefore have been kept separate in this SA, despite the fact that transport is an important factor for both topics. Please note that there are additional factors that may influence both objectives. <b>Table 2.2</b> has been updated to add clarity.</p>
	<p>With regards to <b>Table 4.2:</b></p> <ul style="list-style-type: none"> <li>SA 10 (Biodiversity and Geodiversity): It could be useful to reference European protected sites as part of the appraisal questions as these sites are specifically referenced in national policy for the highest protection. This would help demonstrate such designations have been accounted for, whether they are in the Borough or outside of it.</li> </ul>	<p>The SA framework in <b>Table 2.2</b> has been updated accordingly.</p>
	<p>In Appendix 2, it could be useful to clarify if the distances (e.g. access to facilities) refer to a straight line distance or if this is a distance along public rights of way.</p>	<p>Clarification has been included in the 'Difficulties encountered and limitations' section in <b>Chapter 2</b>.</p>

# Appendix 2

## Review of Plans, Policies and Programmes



Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
<b>INTERNATIONAL</b>			
<b>EU Directives</b>			
<i>SEA Directive 2001</i> Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment	Provides for a high level of protection of the environment and contributes to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive at the national level.	Requirements of the SEA Directive must be met in Sustainability Appraisals.
<i>The Industrial Emissions Directive 2010</i> Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control)	Lays down rules on integrated prevention and control of pollution arising from industrial activities. It also lays down rules designed to prevent or, where that is not practicable, to reduce emissions into air, water and land and to prevent the generation of waste, in order to achieve a high level of protection of the environment taken as a whole.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal question for reducing pollution.
<i>Energy Performance of Buildings Directive 2010 on the energy performance of buildings 2010/31/EU</i>	The Directive aims to promote the energy performance of buildings and building units. It requests that member states adopt either national or regional methodology for calculating energy performance and minimum requirements for energy performance.	Policies and site allocations should take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include SA objective relating to the energy performance/efficiency of existing and proposed buildings.
<i>The Birds Directive 2009</i> Directive 2009/147/EC is a codified version of Directive 79/409/EEC as amended	Requires the preservation, maintenance, and re-establishment of biotopes and habitats to include the following measures: <ul style="list-style-type: none"> <li>• Creation of protected areas.</li> <li>• Upkeep and management in accordance with the ecological needs of habitats inside and outside the protected zones.</li> <li>• Re-establishment of destroyed biotopes.</li> </ul> Creation of biotopes.	Policies should make sure that the upkeep of recognised habitats is maintained and not damaged from development.  Should also avoid pollution or deterioration of habitats or any other disturbances affecting birds.	Include sustainability objective / appraisal questions for the protection of biodiversity.
<i>The Waste Framework Directive 2008</i>	Aims to prevent or reduce waste production and its harmfulness and to increase the recovery of waste by means of recycling, re-use or reclamation. Aims to achieve recovery or disposal of waste without endangering human health and without using processes that could harm the	Develop policies that take account of the Directive as well as more detailed policies	Include sustainability objective / appraisal questions that minimise

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
Directive 2008/98/EC on waste	environment.	derived from the Directive contained in the NPPF.	waste production as well as promote recycling.
<i>The Air Quality Directive 2008</i> Directive 2008/50/EC on ambient air quality and cleaner air for Europe	Avoid, prevent and reduce harmful effects of ambient noise pollution on human health and the environment.	Allocate sites and develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to maintain and enhance air quality.
<i>The Floods Directive 2007</i> Directive 2007/60/EC on the assessment and management of flood risks	Establishes a framework for the assessment and management of flood risks, aiming at the reduction of the adverse consequences for human health, the environment, cultural heritage and economic activity associated with floods.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions that relate to flood management and reduction of risk.
<i>The Water Framework Directive 2000</i> Directive 2000/60/EC establishing a framework for community action in the field of water policy	Protection of inland surface waters, transitional waters, coastal waters and groundwaters.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to protect and minimise the impact on water quality.
<i>The Landfill Directive 1999</i> Directive 99/31/EC on the landfill of waste	Prevent or reduce negative effects on the environment from the landfilling of waste by introducing stringent technical requirements for waste and landfills.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to increase recycling and reduce the amount of waste.
<i>The Drinking Water Directive 1998</i> Directive 98/83/EC on the quality of water intended for human consumption	Protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to protect and enhance water quality.
<i>The Packaging and Packaging Waste Directive 1994</i> Directive 94/62/EC on packaging and packaging	Harmonise the packaging waste system of Member States. Reduce the environmental impact of packaging waste.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to minimise the environmental impact of waste and promote

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
waste			recycling.
<i>The Habitats Directive 1992</i> Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	Promote the maintenance of biodiversity taking account of economic, social, cultural and regional requirements. Conservation of natural habitats and maintain landscape features of importance to wildlife and fauna.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to protect and maintain the natural environment and important landscape features.
<i>The Nitrates Directive 1991</i> Directive 91/676/EEC on nitrates from agricultural sources.	Reduce water pollution caused or induced by nitrates from agricultural sources and prevent further such pollution.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to reduce water pollution.
<i>The Urban Waste Water Directive 1991</i> Directive 91/271/EEC concerning urban waste water treatment	Protect the environment from the adverse effects of urban waste water collection, treatment and discharge, and discharge from certain industrial sectors.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to reduce water pollution.
<b>European plans, policies and programmes</b>			
EU Seventh Environmental Action Plan (2002-2012)	The EU's objectives in implementing the programme are: (a) to protect, conserve and enhance the Union's natural capital; (b) to turn the Union into a resource-efficient, green and competitive low-carbon economy; (c) to safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing; (d) to maximise the benefits of the Union's environment legislation; (e) to improve the evidence base for environment policy; (f) to secure investment for environment and climate policy and get the prices right; (g) to improve environmental integration and policy coherence; (h) to enhance the sustainability of the Union's cities; (i) to increase the Union's effectiveness in confronting regional and global environmental	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to protect and enhance the natural environment and promote energy efficiency.

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	challenges.		
European Spatial Development Perspective (1999)	Economic and social cohesion across the community. Conservation of natural resources and cultural heritage. Balanced competitiveness between different tiers of government.	Develop policies that take account of the Directive as well as more detailed policies derived from the Directive contained in the NPPF.	Include sustainability objective / appraisal questions to conserve natural resources and cultural heritage.
European Landscape Convention (Florence, 2002)	The convention promotes landscape protection, management and planning.	Develop policies that take account of the Convention.	Include sustainability objective / appraisal questions to protect the archaeological heritage.
European Convention on the Protection of the Archaeological Heritage (Valletta, 1992) <i>Revision of the 1985 Granada Convention</i>	Protection of the archaeological heritage, including any physical evidence of the human past that can be investigated archaeologically both on land and underwater. Creation of archaeological reserves and conservation of excavated sites.	Develop policies that take account of the Convention.	Include sustainability objective / appraisal questions to protect the archaeological heritage.
<b>Other international plans, policies and programmes</b>			
Johannesburg Declaration on Sustainable Development (2002)	Commitment to building a humane, equitable and caring global society aware of the need for human dignity for all. Renewable energy and energy efficiency. Accelerate shift towards sustainable consumption and production.	Develop policies that take account of the Declaration.	Include sustainability objective / appraisal questions to enhance the natural environment and promote renewable energy and energy efficiency.
Aarhus Convention (1998)	Established a number of rights of the public with regard to the environment. Local authorities should provide for:  The right of everyone to receive environmental information  The right to participate from an early stage in environmental decision making  The right to challenge in a court of law public decisions that have been made without respecting the two rights above or environmental law in general.	Develop policies that take account of the Convention.	Ensure that public are involved and consulted at all relevant stages of SA production.

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA Plan
<b>NATIONAL</b>			
<b>White Papers</b>			
Energy White Paper: Our Energy Future (2003)	<p>There are four key aims in this document:</p> <ul style="list-style-type: none"> <li>To put ourselves on a path to cut the United Kingdom carbon dioxide emissions- the main contributor to global warming- by some 60 % by about 2050, with real progress by 2020;</li> <li>To maintain the reliability of energy supplies;</li> <li>To promote competitive markets in the United Kingdom and beyond, helping to raise the rate of sustainable economic growth and to improve our productivity; and</li> </ul> <p>To make sure that every home is adequately and affordably heated.</p>	The Local Plan and its policies need to promote development that is energy efficient and increases the use and/ or availability of renewable energy	Include a sustainability objective relating to energy efficiency.
Heritage Protection for the 21 <sup>st</sup> Century: White Paper (2007)	<p>The proposals in this White Paper reflect the importance of the heritage protection system in preserving our heritage for people to enjoy now and in the future. They are based around three core principles:</p> <ul style="list-style-type: none"> <li>Developing a unified approach to the historic environment;</li> <li>Maximising opportunities for inclusion and involvement; and</li> <li>Supporting sustainable communities by putting the historic environment at the heart of an effective planning system</li> </ul>	The Local Plan policies will need to ensure that they protect the Borough's heritage assets.	Include a sustainability objective relating to cultural heritage.
Natural Environment White Paper, 2011 <i>The Natural Choice: securing the value of nature</i>	<p>Protecting and improving our natural environment;</p> <p>Growing a green economy; and</p> <p>Reconnecting people and nature.</p>	Protect the intrinsic value of nature and recognise the multiple benefits it could have for communities.	Include a sustainability objective / appraisal question relating to the enhancement of the natural environment.
Electricity Market Reform White Paper 2011, <i>Planning our Electric Future: A White Paper for Secure, Affordable and Low-Carbon Electricity</i>	This White Paper sets out the Government's commitment to transform the UK's electricity system to ensure that our future electricity supply is secure, low-carbon and affordable.	Develop policies that support renewable energy generation and encourage greater energy efficiency.	Include sustainability objective / appraisal questions to reduce carbon emissions and increase proportion of energy generated from renewable sources.
The Future of Transport White Paper 2004: A network for 2030	<p>Ensure we can benefit from mobility and access while minimising the impact on other people and the environment, now and in the future.</p> <p>Get the best out of our transport system without damaging our overall quality of life.</p> <p>Develop strategies that recognise that demand for travel will increase in the future.</p>	Develop policies that provide for an increase in demand for travel whilst minimizing impact on the environment. Policies also needed to promote public transport use	Include sustainability objective / appraisal questions to reduce the need to travel and improve choice and use of sustainable transport

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	Work towards a transport network that can meet the challenges of a growing economy and the increasing demand for travel but can also achieve the government's environmental objectives.	rather than increasing reliance on the car.	modes.
<p>Water White Paper, 2011 <i>Water for Life</i></p>	<p>Objectives of the White Paper are to:</p> <ul style="list-style-type: none"> <li>• Paint a clear vision of the future and create the conditions which enable the water sector and water users to prepare for it;</li> <li>• Deliver benefits across society through an ambitious agenda for improving water quality, working with local communities to make early improvements in the health of our rivers by reducing pollution and tackling unsustainable abstraction;</li> <li>• Keep short and longer term affordability for customers at the centre of decision making in the water sector;</li> <li>• Protect the interests of taxpayers in the policy decisions that we take;</li> <li>• Ensure a stable framework for the water sector which remains attractive to investors;</li> <li>• Stimulate cultural change in the water sector by removing barriers to competition, fostering innovation and efficiency, and encouraging new entrants to the market to help improve the range and quality of services offered to customers and cut business costs;</li> <li>• Work with water companies, regulators and other stakeholders to build understanding of the impact personal choices have on the water environment, water resources and costs; and</li> </ul> <p>Set out roles and responsibilities – including where Government will take a stronger role in strategic direction setting and assessing resilience to future challenges, as well as clear expectations on the regulators.</p>	Ensure that site allocations and policies will support the wise use of water, and improvement of water quality.	Include sustainability objective / appraisal questions that relate to water quality and quantity.
<p>Urban White Paper 2000, <i>Our Towns and Cities: The Future – delivering an urban renaissance</i></p>	New, sustainable homes that are attractive, safe and practical. Retaining people in urban areas and making them more desirable places to live. Improving quality of life, opportunity and economic success through tailored solutions in towns and cities.	Allocate sites that will effectively deliver better towns and cities taking into account the key aims of the White Paper.	Include sustainability objective / appraisal questions to prioritise new development on brownfield sites or conversion of existing buildings; and to improve the quality of life in urban areas.
<p>Rural White Paper 2000, <i>Our Countryside: The Future – a fair deal for rural England</i></p>	<p>Facilitate the development of dynamic, competitive and sustainable economies in the countryside.</p> <p>Maintain and stimulate communities and secure access to services for those who live and work in the countryside.</p>	Allocate sites that will increase employment and services in the rural parts of the Borough whilst conserving the landscape.	Include sustainability objective / appraisal questions that aim to improve the economies of rural areas with minimal

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	<p>Conserve and enhance rural landscapes.</p> <p>Increase opportunities for people to get enjoyment from the countryside.</p>		<p>impact to the environment.</p>
<p>Housing White Paper 2016, <i>Fixing our broken housing market</i></p>	<p>The White Paper sets out ways to address shortfall in affordable homes and boost housing supply. The White Paper focuses on the following:</p> <ul style="list-style-type: none"> <li>• Planning for the right homes in the right places – Higher densities in appropriate areas, protecting the Green Belt while making more land available for housing by maximising the contribution from brownfield and surplus public land, regenerating estates, releasing more small and medium-sized sites, allowing rural communities to grow and making it easier to build new settlements</li> <li>• Building homes faster – Improved speed of planning cases, ensuring infrastructure is provided and supporting developers to build out more quickly.</li> <li>• Diversifying the Market – Backing small and medium-sized house builders, custom-build, institutional investors, new contractors, housing associations.</li> <li>• Helping people now – supporting home ownership and providing affordable housing for all types of people, including the most vulnerable</li> </ul>	<p>Allocate sites that will fulfil the aims of the White Paper, including development on smaller/medium sized sites, brownfield land and sites capable of achieving higher densities.</p>	<p>Include sustainability objectives/appraisals that relate to providing the right mix of housing and recognise the sustainability advantages of development on brownfield land.</p>
<p><b>Policies and Strategies</b></p>			
<p>DCLG (2012) National Planning Policy Framework</p>	<p>Presumption in favour of sustainable development.</p> <p>Delivering sustainable development by:</p>	<p>Development plan has a statutory status as the starting point for decision making.</p>	<p>Sustainability appraisal should be an integral part of the plan preparation process, and should consider all the likely significant effects on the environment, economic and social factors.</p>
	<p>Building a strong, competitive economy.</p>	<p>Set out clear economic visions for that particular area.</p>	<p>Include a sustainability objective / appraisal question relating to strengthening the economy.</p>
	<p>Ensuring vitality of town centres.</p>	<p>Recognise town centres as the heart of their communities.</p>	<p>Include a sustainability objective / appraisal question relating to the vitality of town centres.</p>
	<p>Promoting sustainable transport</p>	<p>To implement sustainable transport modes depending on nature/location of the site, to reduce the need for major</p>	<p>Include a sustainability objective / appraisal question relating to sustainable transport.</p>

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
		transport infrastructure.	
	Supporting high quality communications infrastructure.	Enhance the provision of local community facilities and services by supporting the expansion of electronic communications networks.	Include a sustainability objective / appraisal question relating to improving communications infrastructure.
	Delivering a wide choice of high quality homes.	Identify size, type, tenure and range of housing that is required in particular locations.	Include a sustainability objective / appraisal question relating to housing availability and quality.
	Requiring good design.	Establish a strong sense of place to live, work and visit.	Include a sustainability objective / appraisal question relating to good design.
	Promoting healthy communities.	Promote safe and accessible environments with a high quality of life and community cohesion.	Include a sustainability objective / appraisal question relating to health and well-being.
	Protecting Green Belt Land.	To prevent the coalescence of neighbouring towns.	Include a sustainability objective relating to the coalescence of towns.
	Meeting the challenge of climate change, flooding, and coastal change.	Use opportunities offered by new development to reduce causes/impacts of flooding.	Include a sustainability objective / appraisal question relating to climate change mitigation and adaption.
	Conserving and enhancing the natural environment.	Recognise the wider benefits of biodiversity.	Include a sustainability objective / appraisal question relating to the conservation and enhancement of the natural environment.



Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	Conserving and enhancing the historic environment	Sustain and enhance heritage assets and put them to viable uses consistent with their conservation.  A local plan may be considered unsound if there has been no proper assessment of the significance of heritage assets in the area, and the plan does not contain a positive strategy for the conservation, enhancement and enjoyment of the historic environment.	Include a sustainability objective / appraisal question relating to the conservation of historic features.
	Facilitating the use of sustainable materials.	Encourage prior extraction of minerals where practicable and environmentally feasible.	Include a sustainability objective / appraisal question relating to avoiding sterilisation of identified, viable mineral reserves.
National Planning Practice Guidance, DCLG, 2014	Provides further guidance to be read alongside the NPPF on a range of topics that link to the promotion of sustainable development including: <ul style="list-style-type: none"> <li>• Air quality</li> <li>• Climate change</li> <li>• Conserving and enhancing the historic environment</li> <li>• Flood risk</li> <li>• Health and well being</li> <li>• Housing and economic development</li> <li>• Natural environment</li> <li>• Minerals</li> <li>• Rural housing</li> <li>• Open space</li> <li>• Transport</li> <li>• Waste</li> </ul> Water supply, wastewater and water quality	The NPPG sets out a range of social, economic and environmental considerations for the preparation of the Local Plan. It also includes information on preparation of local plans which can be taken into consideration.	The NPPG sets out a range of social, economic and environmental considerations for the preparation of the Local Plan. It also includes information on undertaking sustainability appraisals which can be taken into consideration.
<i>DfT (2013) Door to Door: A strategy for improving sustainable transport integration</i>	The strategy's vision is for an inclusive, integrated and innovative transport system that works for everyone, and where making door-to-door journeys by sustainable means is an attractive and convenient option. Four key areas to address are highlighted: <ul style="list-style-type: none"> <li>• improving availability of information;</li> <li>• simplifying ticketing;</li> </ul>	Enhance public transport provision and encourage active modes of travel such as walking and cycling.	Include a relevant sustainability objective / appraisal question relating to sustainable transport.

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA Plan
	<ul style="list-style-type: none"> <li>making connections between different steps in the journey, and different modes of transport, easier; and</li> <li>providing better interchange facilities.</li> </ul>		
<p>DEFRA (2011) <i>Biodiversity 2020: A strategy for England's wildlife and ecosystem services</i></p>	<p>The strategy aims to guide conservation efforts in England up to 2020, and move from a net biodiversity loss to gain. The strategy includes 22 priorities which include actions for the following sectors:</p> <ul style="list-style-type: none"> <li>Agriculture;</li> <li>Forestry;</li> <li>Planning and Development;</li> <li>Water Management;</li> <li>Marine Management;</li> <li>Fisheries;</li> <li>Air Pollution; and</li> </ul> <p>Invasive Non-Native Species.</p>	<p>Develop policies that promote conservation and enhancements of biodiversity.</p>	<p>Include sustainability objective / appraisal question that relates to biodiversity.</p>
<p>Lifetime Neighbourhoods (2011)</p>	<p>This document is a national strategy for housing in an ageing society. It seeks to support residents to develop lifetime neighbourhoods in terms of resident empowerment, access, services and amenities, built and natural environment, social networks/well-being and housing.</p>	<p>The policies and site allocations will need to reflect the requirements set out within the national strategy.</p>	<p>Include a sustainability objective relating to the creation of sustainable communities.</p>
<p>UK Bioenergy Strategy (2012)</p>	<p>The UK Government has a responsibility to ensure that its policies only support bioenergy use in the right circumstances. This strategy is based on four principles which will act as a framework for future government policy on bioenergy.</p> <p>In summary the four principles state that:</p> <ul style="list-style-type: none"> <li>Policies that support bioenergy should deliver genuine carbon reductions that help meet UK carbon emissions objectives to 2050 and beyond.</li> <li>Support for bioenergy should make a cost effective contribution to UK carbon emission objectives in the context of the overall energy goals.</li> <li>Support for bioenergy should aim to maximise the overall benefits and minimise costs (quantifiable and non-quantifiable) across the economy.</li> </ul> <p>At regular time intervals and when policies promote significant additional demand for bioenergy in the UK, beyond that envisaged by current use, policy makers should assess and respond to the impacts of this increased deployment on other areas, such as food security and biodiversity.</p>	<p>The principles of the Bioenergy Strategy 2012 will need to be reflected within the Local Plan policies.</p>	<p>Include a sustainability objective relating to energy efficiency and climate change.</p>
<p>National Planning Policy for Waste (2014)</p>	<p>Key planning objectives are identified within National Planning Policy for Waste, requiring planning authorities to:</p> <ul style="list-style-type: none"> <li>help deliver sustainable development through driving waste management up the waste hierarchy</li> </ul>	<p>Develop policies that promote sustainable waste management and use of the waste hierarchy.</p>	<p>Include sustainability objective / appraisal question that relates to waste reduction.</p>

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	<ul style="list-style-type: none"> <li>• Ensure waste management is considered alongside other spatial planning concerns</li> <li>• provide a framework in which communities take more responsibility for their own waste</li> <li>• help secure the recovery or disposal of waste without endangering human health and without harming the environment,</li> </ul> <p>ensure the design and layout of new development supports sustainable waste management</p>		
DCLG (2011) <i>Laying the Foundations: A Housing Strategy for England</i>	Aims to provide support to deliver new homes and improve social mobility.	Develop policies that encourage development of residential properties.	Include sustainability objective / appraisal question that assesses whether housing need is being met.
UK Government Sustainable Development Strategy: Securing the Future (2005)	<p>The Strategy sets out 5 principles for sustainable development:</p> <ul style="list-style-type: none"> <li>• Living within environmental limits;</li> <li>• Ensuring a strong, healthy and just society;</li> <li>• Achieving a sustainable economy;</li> <li>• Promoting good governance ; and</li> <li>• Using sound science responsibly.</li> </ul> <p>The strategy sets four priorities for action:</p> <ul style="list-style-type: none"> <li>• Sustainable consumption and production;</li> <li>• Climate change and energy;</li> <li>• Natural resource protection and environmental enhancement;</li> <li>• Sustainable communities</li> </ul> <p>The strategy commits to:</p> <ul style="list-style-type: none"> <li>• A programme of community engagement;</li> <li>• Forums to help people live sustainable lifestyles;</li> <li>• Open and innovative ways for stakeholders to influence decision; educating and training</li> </ul>	<p>The Local Plan should seek to deliver sustainable communities. These are places which:</p> <ul style="list-style-type: none"> <li>• Meet the diverse needs of existing and future residents</li> <li>• People want to live and work in</li> <li>• Are sensitive to their environment</li> <li>• Contribute to a high quality of life</li> <li>• Are safe and inclusive</li> <li>• Are well planned, built and run; and</li> <li>• Offer equality of opportunity and good services for all</li> </ul>	To ensure that the requirements of the Strategy are embedded within the SA framework.
National Policy Statement EN1: Overarching Energy Policy Statement (2011)	This policy document sets out government policy for the delivery of major planning applications for energy development. These will be dealt with by the Planning Inspectorate, rather than local authorities in which the development occurs. The document also specifies the criteria for waste management, traffic and transport , water quality and quantity, noise and vibration, open spaces and green infrastructure, the landscape , visual impact , dust flood risk, historic environment, odour, light, smoke/steam, insects, coastal change, aviation, biodiversity and geodiversity.	The Local Plan will need to be consistent with the National Policy Statement.	Include a sustainability objective relating to energy efficiency.
The Carbon Plan: Delivering our Local Carbon Future	The Carbon Plan sets out the government's plans for achieving the emissions reductions it committed to in the first four carbon budgets.	The Local Plan will need to include policies that reflect the targets within the Carbon	Include a sustainability objective relating to greenhouse gas emissions.

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
(2011)	Emissions in the UK must, by law, be cut by at least 80% of 1990 by 2050. The UK was first to set its ambition in law and the Plan sets out progress to date.	Plan.	
DEFRA (2011) Securing the Future: Delivering UK Sustainable Development Strategy	Enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life for future generations. There are 4 shared priorities: <ul style="list-style-type: none"> <li>sustainable consumption and production;</li> <li>climate change and energy;</li> <li>natural resource protection and environmental enhancement; and sustainable communities.</li> </ul>	Develop policies that meet the aims of the Sustainable Development Strategy.	Include sustainability objective / appraisal questions to cover the shared priorities.
Department of Health (2010) <i>Healthy Lives, Healthy People: our Strategy for public health in England</i>	Protect the population from serious health threats; helping people live longer, healthier and more fulfilling lives; and improving the health of the poorest, fastest. Prioritise public health funding from within the overall NHS budget.	Policies within the Local Plan should reflect the objectives of the strategy where relevant.	Include a sustainability objective / appraisal question relating to health and well-being.
Building a Greener Future: Policy Statement (DCLG, 2007)	This Statement confirms the government's intention to achieve 25% more energy efficient homes by 2010, 44% more efficient homes by 2013 and zero carbon (net carbon emissions should be zero per annum) homes by 2016.	Policies should seek to promote zero carbon residential development.	Include sustainability objectives / appraisal questions relating to renewable energy generation and energy efficiency.
DECC (2011) UK Renewable Energy Roadmap  (updates setting out progress and changes to the strategy dated 2013 and 2013)	Make the UK more energy secure Help protect consumers from fossil fuel price fluctuations. Help drive investment in new jobs and businesses in the renewable energy sector. Keep the UK on track to meet carbon reduction objectives	Encourage developments that would support renewable energy provision including electricity, heat and transport.	Include sustainability objectives / appraisal questions relating to renewable energy generation and energy efficiency.
Community Energy Strategy (DECC, 2014)	Sets out plans to promote and facilitate the planning and development of decentralised community energy initiatives in four main types of energy activity: <ul style="list-style-type: none"> <li>Generating energy (electricity or heat)</li> <li>Reducing energy use (saving energy through energy efficiency and behaviour change)</li> <li>Managing energy (balancing supply and demand)</li> </ul> Purchasing energy (collective purchasing or switching to save money on energy)	Ensure that site allocations and policies will support community low carbon and renewable energy provision including electricity, heat and transport.	Include sustainability objectives / appraisal questions relating to renewable energy generation and energy efficiency.
The National Adaptation	The report sets out visions for the following sectors:	Policies should take account	Include sustainability

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
<p>Programme – Making the Country Resilient to a Changing Climate (Defra, 2013)</p>	<ul style="list-style-type: none"> <li>• Built Environment – <i>“buildings and places and the people who live and work in them are resilient to a changing climate and extreme weather and organisations in the built environment sector have an increased capacity to address the risks and take the opportunities from climate change”.</i></li> <li>• Infrastructure – <i>“an infrastructure network that is resilient to today’s natural hazards and prepared for the future changing climate”.</i></li> <li>• Healthy and resilient communities – <i>“a health service, a public health and social care system which are resilient and adapted to a changing climate. Communities and individuals, including the most vulnerable, are better prepared to cope with severe weather events and other impacts of climate change. Emergency services and local resilience capability take account of and are resilient to, a changing climate”.</i></li> <li>• Agriculture and Forestry – <i>“profitable and productive agriculture and forestry sectors that take the opportunities from climate change are resilient to its threats and contribute to the resilience of the natural environment by helping maintain ecosystem services and protect and enhance biodiversity”.</i></li> <li>• Natural Environment – <i>“the natural environment, with diverse and healthy ecosystems, is resilient to climate change, able to accommodate change and valued for the adaptation services it provides”.</i></li> <li>• Business – <i>“UK businesses are resilient to extreme weather and prepared for future risks and opportunities from climate change”.</i></li> <li>• Local Government – <i>“Local government plays a central in leading and supporting local places to become more resilient to a range of future risk and to be prepared for the opportunities from a changing climate”.</i></li> </ul>	<p>of the aims of the Programme.</p>	<p>objectives / appraisal questions which seek to promote the implementation of adaptation measures to make the area more resilient to a changing climate.</p>
<p>The National Flood and Coastal Erosion Risk Management Strategy for England (Environment Agency, 2011)</p>	<p>This Strategy sets out the national framework for managing the risk of flooding and coastal erosion. It sets out the roles for risk management authorities and communities to help them understand their responsibilities.</p> <p>The strategic aims and objectives of the Strategy are to:</p> <ul style="list-style-type: none"> <li>• <i>“manage the risk to people and their property;</i></li> <li>• <i>Facilitate decision-making and action at the appropriate level – individual, community or local authority, river catchment, coastal cell or national;</i></li> </ul> <p><i>Achieve environmental, social and economic benefits, consistent with the principles of sustainable development”.</i></p>	<p>Policies should seek to reduce and manage the risk of all types of flooding.</p>	<p>The SA framework should include sustainability objectives / appraisal questions which seek to reduce the risk and manage flooding sustainably.</p>
<p>Waste prevention programme for England: Prevention is better than cure – The role of waste prevention in moving to a more resource efficient economy (HM Government,</p>	<p>The aim of the Programme is to improve the environment and protect human health by supporting a resource efficient economy, reducing the quantity and impact of waste produced whilst promoting sustainable economic growth:</p> <ul style="list-style-type: none"> <li>• encourage businesses to contribute to a more sustainable economy by building waste reduction into design, offering alternative business models and delivering new and improved products and services;</li> </ul>	<p>Primarily an issue for the County Waste Plan and Waste Management Strategy rather than the Local Plan.</p>	<p>N/A.</p>

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
2013)	<ul style="list-style-type: none"> <li>encourage a culture of valuing resources by making it easier for people and businesses to find out how to reduce their waste, to use products for longer, repair broken items, and enable reuse of items by others;</li> <li>help businesses recognise and act upon potential savings through better resource efficiency and preventing waste, to realise opportunities for growth; and</li> </ul> <p>support action by central and local government, businesses and civil society to capitalise on these opportunities.</p>		
Future Water: The Government's Water Strategy for England (DEFRA, 2008)	<p>Sets out how the Government want the water sector to look by 2030 and an outline of the steps which need to be taken to get there.</p> <p>The vision for 2030 is one where we, as a country have:</p> <ul style="list-style-type: none"> <li>"improved the quality of our water environment and the ecology it supports, and continue to maintain high standards of drinking water quality from taps;</li> <li>Sustainably managed risks from flooding and coastal erosion, with greater understanding and more effective management of surface water;</li> <li>Ensure a sustainable use of water resources, and implement fair, affordable and cost-reflective water charges;</li> <li>Cut greenhouse gas emissions; and</li> </ul> <p><i>Embed continuous adaptation to climate change and other pressures across the water industry and water users".</i></p>	Policies should aim to contribute to the vision set out in this Strategy.	Include sustainability objectives / appraisal questions which seek to protect, manage and enhance the water environment.
The Air Quality Strategy for England vol. 1 (2007)	<p>The Air Quality Strategy sets out a way forward for work and planning on air quality issues by setting out the air quality standards and objectives to be achieved. It introduces a new policy framework for tackling fine particles, and identifies potential new national policy measures which modelling indicates could give further health benefits and move closer towards meeting the Strategy's objectives. The objectives of strategy are to:</p> <ul style="list-style-type: none"> <li>Further improve air quality in the UK from today and long term.</li> </ul> <p>Provide benefits to health, quality of life and the environment.</p>	The Local Plan policies will need to work towards further improving air quality in the UK	Include a sustainability objective relating to air quality.
Working with the grain of nature – A Biodiversity Strategy for England (2011))	This Strategy seeks to protect and improve the rural, urban, marine and global environment and lead on the integration of these with other policies across Government and internationally.	The Local Plan should minimise loss of biodiversity when allocating sites for development.	Include a sustainability objective relating to the protection and enhancement of biodiversity.
National Infrastructure Plan (2014)	The Infrastructure Plan allows for long term public funding certainty for key infrastructure areas such as: roads, rail, flood defences and science. All elements highlighted in the Plan represent firm commitment by government to supply the funding levels stipulated. The Plan also highlights what steps the government will take to ensure effective delivery of its key projects.	The Local Plan objectives and policies should support the delivery of infrastructure to	To ensure that infrastructure delivery is embedded within the SA framework.

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
		support new development.	
Water for People and the Environment: Water Resources Strategy for England and Wales (Environment Agency, 2009)	<p>The Strategy vision for water resource <i>"is for there to be enough water for people and the environment, meeting legitimate needs"</i>.</p> <p>Its aims include:</p> <ul style="list-style-type: none"> <li>• To manage water resource and protect the water environment from climate change.</li> <li>• Restore, protect, improve and value species and habitats that depend on water.</li> <li>• To contribute to sustainable development through good water management.</li> </ul> <p>People to understand how water and the water environment contribute to their quality of life.</p>	Policies should reflect the aims of the strategy where relevant.	Include sustainability objectives / appraisal questions that seek to promote water management and efficiency.
Safeguarding our Soils: A Strategy for England (DEFRA, 2009)	<p>The vision is <i>"by 2030, all England's soils will be managed sustainability and degradation threats tackled successfully. This will improve the quality of England's soils and safeguard their ability to provide essential services for future generations"</i>.</p> <p>The Strategy highlights the areas for priority including:</p> <ul style="list-style-type: none"> <li>• Better protection for agricultural soils.</li> <li>• Protecting and enhancing stores of soil carbon.</li> <li>• Building the resilience of soils to a changing climate.</li> <li>• Preventing soil pollution.</li> <li>• Effective soil protection during construction and development.</li> <li>• Dealing with our legacy of contaminated land.</li> </ul>	Ensure that site allocations and policies will help protect and enhance the quality of soils and seek to sustainably manage their quality for future generations.	Include sustainability objectives / appraisal questions that seek to safeguard and enhance the quality of soil.
The Plan for Growth implementation update (2013)	<p>The plan for growth, published alongside Budget 2011, and as part of the Autumn Statement 2011, announced a programme of structured reforms to remove barriers to growth for businesses and equip the UK to compete in the global race. These reforms span a range of policies including improving UK infrastructure, cutting red tape, root and branch reform of the planning system and boosting trade and inward investment, to achieve the governments four ambitions for growth:</p> <ul style="list-style-type: none"> <li>• Creating the most competitive tax system in the G20</li> <li>• Encouraging investment and exports as a route to a more balanced economy</li> <li>• Making the UK the best place in Europe to start, finance and grow a business</li> </ul> <p>Creating a more educated workforce that is the most flexible in Europe.</p>	The Local Plan policies will need to reflect the ambitions set out within the Plan for Growth 2013.	Include a sustainability objective relating to economic growth.
DEFRA (2007) <i>The Air Quality Strategy for England, Scotland, Wales</i>	Make sure that everyone can enjoy a level of ambient air quality in public spaces, which poses no significant risk to health or quality of life.	Develop policies that aim to meet the standards.	Include sustainability objective / appraisal questions to protect and

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
<i>and Northern Ireland</i>	Render polluting emissions harmless.		improve air quality.
<b>Legislation</b>			
Housing Act 2004	Protect the most vulnerable in society and help create a fairer and better housing market. Strengthen the Government's drive to meet its 2010 decent homes target.	Develop policies that help to create a fairer and better housing market.	Include sustainability objective / appraisal questions to improve access to good quality and affordable housing.
Housing and Planning Act (2016)	The Act makes widespread changes to housing policy at the national level. Measures introduced in the Act relate to starter homes, and permitting the sale of higher value local authority homes. Starter homes are the new affordable housing product designed by the government to specifically meet the housing needs of younger generations and to allow them to access home-ownership. The overarching aim of the Act is to promote home ownership and increase levels of house building.	The Local Plan will need to take account of the provisions of the Act in relation to housing provision.	Include a sustainability objective relating to the provision of an appropriate range of housing within the Borough.
Localism Act (2011)	<p>The Localism Act introduces a number of measures to decentralise decision making process to the local level, creating space for Local Authorities to lead and innovate, and giving people the opportunity to take control of decisions that matter to them. The Localism Act includes a number of important packages.</p> <ul style="list-style-type: none"> <li>• The new act makes it easier for local people to take over the amenities they love and keep them part of local life;</li> <li>• The act makes sure that local social enterprises, volunteers and community groups with a bright idea for improving local services get a chance to change how things are done.</li> <li>• The act places significantly more influence in the hands of local people over issues that make a big difference to their lives.</li> <li>• The act provides appropriate support and recognition to communities who welcome new development.</li> <li>• The act reduces red tape, making it easier for authorities to get on with the job of working with local people to draw up a vision for their area's future.</li> <li>• The act reinforces the democratic nature of the planning system passing power from bodies not directly to the public, to democratically accountable ministers.</li> <li>• The act enables Local Authorities to make their own decisions to adapt housing provision to local needs, and make the system fairer and more effective.</li> <li>• The act gives Local Authorities more control over the funding of social housing, helping them plan for the long- term.</li> </ul> <p>In relation to planning, the Localism Act enables the Government to abolish regional spatial strategies, introduce Neighbourhood Plans and Local Referendums.</p>	The Local Plan will need to reflect the principles of Localism as identified in the document, including Neighbourhood Planning.	<p>To ensure the concepts of the Localism Act are embedded within the SA framework.</p> <p><i>Relates to the overall SA process.</i></p>
The Climate Change Act (2008)	The Climate Change Act was passed in 2008 and established a framework to develop an economically credible emissions reduction path. It also strengthened the UK's leadership internationally by highlighting the role it would take in contributing to urgent collective action to	The Local Plan policies must reflect the objectives of The Climate Change Act, in order	Include a sustainability objective relating to climate change.



Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	<p>tackle climate change under the Kyoto Protocol.</p> <p>The Climate Change Act includes the following:</p> <ul style="list-style-type: none"> <li>2050 target. The act commits the UK to reducing emissions by at least 80% in 2050 from 1990 levels. This target was based on advice from the CCC report: Building a Low- carbon Economy. The 80% target includes GHG emissions from the devolved administrations, which currently accounts for around 20% of the UK's total emissions.</li> </ul> <p>Carbon Budgets. The Act requires the Government to set legally binding 'carbon budgets'. A carbon budget is a cap on the amount of greenhouse gases emitted in the UK over a five-year period. The first four carbon budgets have been put into legislation and run up to 2027.</p>	to contribute to reducing UK carbon emissions.	
Energy Act (2008)	<p>The Act works towards a number of policy objectives including carbon emissions reduction, security of supply, and competitive energy markets. Objectives: Electricity from Renewable Sources: changes to Renewables Obligation (RO), designed to increase renewables generation, as well as the effectiveness of the RO.</p> <p>Feed in tariffs for small scale, low carbon generators of electricity. Smart meters: the Act mandates a roll-out of smart meters to medium sized businesses over the next five years.</p> <p>Renewable heat incentives: the establishment of a financial support mechanism for those generating heat from renewable sources.</p>	Policies and site allocations will have to ensure a positive contribution in meeting the climate change challenge by capitalising on renewable and low carbon energy opportunities and adaptation measures which reduce the threat of climate change.	Include a sustainability objective relating to energy efficiency and climate change.
Flood and Water Management Act (2010)	The Act aims to reduce the flood risk associated with extreme weather. It provides for better, more comprehensive management of flood risk for people, homes and businesses, helps safeguard community groups from unaffordable rises in surface water drainage charges, and protects water supplies to the consumer.	The Local Plan should protect existing and future development as well as residents from flood risk.	The overview of flood risk management in England which is provided in the Act will need to be reflected in the Framework of the SA.
Town and country planning legislation	<p>A range of legislation published in 2017 is of relevance to the Local Plan. This includes:</p> <ul style="list-style-type: none"> <li>The Neighbourhood Planning Act 2017 – Act aims to strengthen neighbourhood planning by ensuring that planning decision- makers take account of well-advanced neighbourhood development plans and by giving these plans full legal effect at an earlier stage.</li> <li>The Town and Country Planning (Brownfield Land Register) Regulations 2017 - The <u>regulations</u> require local authorities to prepare and maintain registers of brownfield land that is suitable for residential development.</li> <li>The Town and Country Planning (Permission in Principle) Order 2017 the <u>Order</u> provides that sites entered on Part 2 of the new brownfield registers will be granted permission in principle.</li> </ul> <p>The regulations and order above aim to improve the quality and consistency of data held by local planning authorities, which will provide certainty for developers and communities,</p>	<p>The Local Plan policies should take into account well-advanced neighbourhood plans.</p> <p>The Local Plan should promote and prioritise development of brownfield land.</p>	Include a sustainability objective/appraisal question that recognises the sustainability value of development on brownfield land.

Plan or programme	Key objectives relevant to the Local Plan and SA	Implications for the Local Plan	Implications for the SA
	encouraging investment in local areas.		
Planning (Listed Buildings & Conservation Areas) Act 1990	This Act details the requirements for listing buildings of special architectural or historic interest and identifying conservation areas. The Act details requirements for works to these or that may otherwise affect these. It aims to ensure that such requirements are enforced and to prevent deterioration of and damage to special buildings and areas.	Local Plan policies should protect listed buildings and conservation areas by preventing harm to and deterioration of these.	Include a sustainability objective relating to the historic environment.
Ancient Monuments & Archaeological Areas Act 1979	This Act makes provision for investigation, preservation and recording of matters of archaeological and historic interest, in particular ancient monuments and areas of archaeological importance and activities affecting these.	Local Plan policies should protect ancient monuments and areas of archaeological interest.	Include a sustainability objective relating ancient monuments and archaeological areas.

# Appendix 3

## Updated Baseline Information

## Biodiversity and geodiversity

A number of habitats within Hertsmere have been identified as internationally important under the EU Habitats Directive, including characteristic oak-hornbeam woodlands. However, there are no EU level designations in the Borough such as Special Areas of Conservation, Special Protection Areas or Ramsar sites. As mentioned previously, an HRA will be undertaken during the plan preparation process and its results used to inform the SA.

There are two Sites of Special Scientific Interest (SSSIs) in Hertsmere Borough:

- *Redwell Wood*, a large ancient semi natural woodland which is notified primarily for its oak hornbeam stand type with healthy remnants;
- *Castle Lime Works*, a geological SSSI displaying the finest exposure of clay-filled pipes in the chalk karst of England<sup>38</sup>.

There are three Local Nature Reserves within Hertsmere: Fisher's Field, Hillfield Park Reservoir and Furzefield Wood & Lower Halfpenny Bottom. There are no National Nature Reserves located within the Borough<sup>39</sup>.

Some 130 Wildlife Sites were identified in Hertsmere in 2008, making up approximately 7% of the Borough. Six sites larger than 50ha were identified: Hillfield Park Reservoir, Little Organ Hall Farm pasture, Porters Park (Radlett) Golf Course, Dyrham Park, Tyttenhanger Gravel Pit and Redwell, Hawkshead & Mymmshall Wood<sup>40</sup>.

The Hertfordshire Biodiversity Action Plan<sup>41</sup> identified two Key Biodiversity Areas in Hertsmere:

- *Upper Colne Valley*: An area of wetlands and heath centred on the River Colne, Tyttenhanger Gravel Pit and Colney Heath in St Albans District.
- *Mymmshall Brook/Water End*: The woodland complex of Redwell Wood and the stream swallow holes and associated sites around the brook up to the major swallow hole complex just to the north.

Hertsmere contains three Regionally Important Geological Sites (RIGS): Shenley Chalk Mine, Radlett Plantation and Radlett Field.

The underlying bedrock in Hertsmere is chalk, which rises at the Chilterns to the north, and underlies London to the south. The chalk is important in influencing the general topography of the area and in providing an underground aquifer, which affects the calcareous nature of the water and the levels of rivers, streams, springs and flushes<sup>42</sup>.

In Hertsmere, the chalk occurs at the surface around Aldenham, southwest and northeast of Radlett towards North Mymms Park and the edges of the Mymmshall Brook valleys. It is edged by the overlying Reading Beds, consisting of mottled clay, sands and pebbles that occur at the surface, in a band, from Radlett to South Mimms and Potters Bar. Most of the solid geology consists of London Clay, which dominates much of the Borough, from Bushey and Borehamwood across to Potters Bar<sup>43</sup>.

## Soils and minerals

Geologically, Hertsmere lies on the boundary between the chalk of Hertfordshire to the north and the London clay and Reading Beds of the London Basin to the south. There is a marked contrast in soil types across the Borough. In the headwaters of the catchment (southern end of the Borough) across Borehamwood, Bushey and Potters Bar the soils are generally clays of low

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<sup>38</sup> Biodiversity, Trees and Landscape SPD: Part B – Biodiversity (2010) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-BD10a-BTL-SPD-2010-Part-B.pdf>

<sup>39</sup> Biodiversity, Trees and Landscape SPD: Part B – Biodiversity (2010) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-BD10a-BTL-SPD-2010-Part-B.pdf>

<sup>40</sup> Biodiversity, Trees and Landscape SPD: Part B – Biodiversity (2010) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-BD10a-BTL-SPD-2010-Part-B.pdf>

<sup>41</sup> A Local Biodiversity Action Plan (reviewed March 2006) [http://www.hef.org.uk/nature/biodiversity\\_vision/](http://www.hef.org.uk/nature/biodiversity_vision/)

<sup>42</sup> Biodiversity, Trees and Landscape SPD: Part B – Biodiversity (2010) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-BD10a-BTL-SPD-2010-Part-B.pdf>

<sup>43</sup> Biodiversity, Trees and Landscape SPD: Part B – Biodiversity (2010) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-BD10a-BTL-SPD-2010-Part-B.pdf>

permeability, seasonally waterlogged, with medium to high runoff producing potential. The soils in the lower part of the catchment (northern end of the Borough) across Radlett and Shenley are generally well-drained, loamy sandy soils permeable producing relatively low amounts of runoff<sup>44</sup>.

The geology noted above gives rise to acid-neutral soils within Hertsmere, apart from localised areas where calcareous soils may exist directly influenced by the chalk. These are largely Argillic brown earths or brown earths, clayey or loamy and with impeded drainage<sup>45</sup>.

Hertsmere contains a minerals and railhead safeguarding area. The mineral safeguarding area for sand/gravel covers a large proportion of Hertsmere, while the railhead safeguarding area is located to the north of Hertsmere, within close proximity to Radlett.

According to Natural England's Agricultural Land Classification, land within Hertsmere Borough includes best and most versatile agricultural land, with elements of Grade 2 agricultural land around Aldenham, Letchmore Heath and Colney Heath, and the majority of land being Grade 3. Over 95% of new homes were provided on previously developed land, mostly within defined urban areas, according to the Authority Monitoring Report 2013/14<sup>46</sup>. The Borough also contains important reserves of sand and gravel, which have been identified by Hertfordshire County Council as 'preferred areas' for future mineral extraction in its Minerals Local Plan.

## Landscape

There is no Area of Outstanding Natural Beauty in Hertsmere.

Hertsmere falls within the Northern Thames Basin National Character Area (NCA), which contains a diverse range of semi-natural habitats including ancient woodland, lowland heath and floodplain grazing marsh. The pattern of woodlands is varied across the area and includes considerable areas of ancient semi-natural woodland. Hertfordshire is particularly wooded in some areas. Significant areas of wood pasture and pollarded veteran trees are also present. Mixed farming is characteristic of the basin, with arable land predominating in the Hertfordshire plateaux. Landscape parklands surrounding 16<sup>th</sup> and 17<sup>th</sup> century rural estates and country houses built for London merchants are a particular feature in this NCA<sup>47</sup>.

Hertsmere contains 16 Local Character Areas (No. 014-029), the largest of which are located in the centre of Hertsmere, between the settlements of Radlett, Borehamwood and Potters Bar (Borehamwood Plateau, High Canons Valleys and Ridges and Arkley Plain). These three LCAs contain gently undulating ground, with a number of distinctive features including historic parklands, reservoirs and pasture lands.

## Open space

A total of 257 open spaces have been identified in Hertsmere, comprising 999.3 hectares. This amounts to 9.9% of the total area of the Borough<sup>48</sup>.

Hertsmere has a diverse distribution of different types of open space. However, compared to the proposed standards there are a number of deficiencies within Hertsmere. In particular, there is a shortage of play facilities across the Borough which has been identified as a key problem. Additionally, some accessibility issues were identified in Aldenham & Shenley, Borehamwood & Elstree, Bushey and Potters Bar, that need to be addressed through planning policy<sup>49</sup>.

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<sup>44</sup> Strategic Flood Risk Assessment: Volume I (2008) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB02a-SFRA-Final-Report-and-Appendix-E.PDF>

<sup>45</sup> Biodiversity, Trees and Landscape SPD: Part B – Biodiversity (2010) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-BD10a-BTL-SPD-2010-Part-B.pdf>

<sup>46</sup> Authority Monitoring Report 2013/14 (2015) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Planning-Publications/AMR-2013-2014.pdf>

<sup>47</sup> National Character Area profile: 111: Northern Thames Basin (2013) <http://publications.naturalengland.org.uk/publication/4721112340496384?category=587130>

<sup>48</sup> Hertsmere Open Space Study (2011) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB25-HBC-Open-Space-Study-Oct-2011.pdf>

<sup>49</sup> Hertsmere Open Space Study (2011) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB25-HBC-Open-Space-Study-Oct-2011.pdf>

## Green space

Some 591 sites within Hertsmere have been identified as green space or amenity land. A large majority of these are considered 'amenity greens', comprising almost 60% of the sites identified. 'Amenity greens' are defined as roadside verges or very small areas of green space. Although amenity greens tend to provide a more useable space for people than say semi natural greenspace, they do not contribute as much as other types (e.g. parks or outdoor sports facilities) to local communities in terms of recreation, social, environmental and visual amenity terms<sup>50</sup>.

Hertsmere's Green Infrastructure Plan<sup>51</sup> seeks to conserve and enhance strategic greenspaces and Green Infrastructure (GI) resources such as the Aldenham Country Park, as well as registered and minor historic parklands, areas with an intact small scale or historic field boundary network, minor watercourses and wetlands within Hertsmere.

## Air quality

The main air quality issues in Hertsmere relate to nitrogen dioxide (NO<sub>2</sub>). Hertsmere Council has recorded concentrations of NO<sub>2</sub> above the annual mean objective at a number of relevant locations outside existing Air Quality Management Areas (AQMAs)<sup>52</sup>. However, as these are all in close proximity to existing AQMAs it is not considered necessary to amend existing or create new AQMAs at these locations. All other pollutants in the Borough are meeting the objective levels. At present, there are eight AQMAs located in Hertsmere:

- AQMA 1 – An area comprised of the properties at 23-27 Dove Lane and the caravan site Brookes Place off the A1000 Barnet Road, near the M25.
- AQMA 2 – An area comprised of Charleston Paddocks, St Albans Road, South Mimms, Potters Bar, near the M25.
- AQMA 3 – An area comprised of properties 31-29 Blanche Lane South Mimms near the M25.
- AQMA 4 – An area comprised of the domestic properties 12 Grove Place, Hartspring Lane and caravans numbered 1-4, 7-8, 55-58 and 60 within Winfield Caravan site, Hartspring Lane, near the M1 at Bushey.
- AQMA 5 – An area comprised of eight properties on the east side of the A5183 High Street, Elstree around the junction with the A411 Barnet Lane.
- AQMA 6 – An area comprised of properties at 133 to 167 High Street on the east side of the High Street opposite the bus station Potters Bar.
- AQMA 7 – An area encompassing residential properties along both sides of Watling Street, Radlett, between the junctions with Park Road and Aldenham Road.
- AQMA 8 – An area encompassing residential, commercial and retail properties along both sides of Shenley Road and Theobald Street, and the roundabout joining Shenley Road and Eldon Avenue.

A managed motorway scheme was recently implemented on a section of the M25 running through the Borough between Junctions 23 and 24 (South Mimms services to Potters Bar). The air quality impacts arising from this change are currently under investigation.

## Climatic factors

There is widespread scientific consensus that the Earth's climate is changing and that human activity could be the principal cause. Scientific forecasts suggest that the UK's climate will continue to get warmer and that heavy rainfall will be more frequent. Weather extremes, such as heat waves would become more common and others such as snowfall would become less

<sup>50</sup> Green Spaces and Amenity Land Report (2012) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB26-Green-Spaces-Amenity-Land-2012.pdf>

<sup>51</sup> Hertsmere Borough Green Infrastructure Plan (2011) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Development-Framework/Hertsmere-Green-Infrastructure-Plan.pdf>

<sup>52</sup> 2015 Air Quality Updating and Screening Assessment (2015) <https://www.hertsmere.gov.uk/Documents/04-Environment-Refuse--Recycling/Environmental-Health/Pollution-Control/Updating-and-Screening-Assesment-2015.pdf>; those sites exceeding the annual mean objective that are not located within an existing AQMA are as follows: central Potters Bar; on the periphery of South Mimms; central Radlett; central Elstree; adjacent to Hartspring Lane; and in central Borehamwood.

common. Sea levels will continue to rise and storm surges will become more frequent, increasing the risk of flooding in coastal areas.

Changes to the climate will bring new challenges to the Borough's built and natural environments. Climate change estimates (at the 50% probability level) for the East of England for the 2080s, based on medium emissions scenarios, predict an increase in winter mean temperature of approximately 4°C and an increase in summer mean temperature of approximately 4°C<sup>53</sup>.

In 2015, Hertsmeire emitted the lowest amount of CO<sub>2</sub> overall amongst all local authorities in the County. However, transport in Hertsmeire produced the fourth highest amount of CO<sub>2</sub>, attributable to transport, across the County<sup>54</sup>.

### Water quality and water resources

Hertsmeire Borough falls within the catchment of the River Colne, which flows from northeast to southwest from Colney Heath through to Watford. The main tributaries of the Colne along this reach are the Hilfield Brook, Radlett Brook, Tykeswater and Mimshall Brook.

Hertsmeire mainly falls within the Colne Management and Operational Catchment. A majority of water for people and businesses is abstracted from groundwater within the catchment. Some rivers fed by this suffer from low flows during dry weather, which is exacerbated by abstraction. In the future, the demand for water for people, business and the environment may increase beyond the capacity available locally<sup>55</sup>.

Affinity Water provides the mains water supply in Hertsmeire Borough. Water consumption in Hertfordshire is thought to be above average compared to the rest of the UK. At the Hertfordshire Water Summit in 2013, it was suggested that water consumption in Hertfordshire was 166 per capita consumption (pcc), compared to the UK average of 150 pcc<sup>56</sup>. However, Affinity Water's Water Resources Management Plan<sup>57</sup> found that their Central and Southeast regions do not have sufficient water for the whole of the 25-year planning period to meet their customers' need for water. They have considered a wide range of options to rebalance supply and demand, which has resulted in a substantial investment programme for their Central region, where Hertsmeire is located.

Wastewater can have a detrimental impact on water quality, with over 2,000 residential properties and six large sewage treatment works discharging treated water into local rivers in the catchment. In addition, challenges caused when intermittent sewage is discharged (under license) during storm events, can also impact on groundwater<sup>58</sup>.

#### *Forthcoming evidence*

Hertfordshire County Council, in conjunction with 9 Hertfordshire local authorities and Chiltern District Council, has commissioned a Water Cycle Study (titled Hertfordshire Water Study 2017), which is expected to be finalised in winter 2017. This has involved collaborative working between the County and district councils, the Environment Agency, Hertfordshire LEP and the water companies that serve the area (Thames Water, Affinity Water and Anglian Water). This describes the current environmental and infrastructure capacity with regards to water infrastructure and resources in the Hertfordshire area and consider solutions to any capacity issues identified over the period 2021 to 2051. The March 2017 draft of this document recorded the following main outcomes from the evaluation of need for Hertsmeire:

- *The evaluation indicates most growth areas remain relatively unconstrained (by the wastewater system), up to and including in 2031, with only localised network capacity likely requiring strategic intervention in Potters Bar*

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<sup>53</sup> UK Climate Projections (December 2014) <http://ukclimateprojections.metoffice.gov.uk/21708>

<sup>54</sup> UK local authority and regional carbon dioxide emissions national statistics: 2005-2015 (2017)

<https://www.gov.uk/government/statistics/uk-local-authority-and-regional-carbon-dioxide-emissions-national-statistics-2005-2015>

<sup>55</sup> Catchment Data Explorer: Colne Management Catchment (2017) <http://environment.data.gov.uk/catchment-planning/ManagementCatchment/3017>

<sup>56</sup> Hertfordshire Water Summit, 14 March 2013

<sup>57</sup> Final Water Resources Management Plan, 2015-2020 (2014) <https://stakeholder.affinitywater.co.uk/docs/FINAL-WRMP-Jun-2014.pdf>

<sup>58</sup> Catchment Data Explorer: Colne Operational Catchment (2017) <http://environment.data.gov.uk/catchment-planning/OperationalCatchment/3096/Summary>



- *The potential impact of sewer discharges on watercourse quality in Borehamwood by 2051 could require the promotion of more sustainable construction solutions (for development sites) to ensure rainfall runoff is discharging to the environment (not the foul sewers)*
- *The evaluation indicates a large degree of uncertainty in 2051, with the high scenario demonstrating strategic intervention could be required across the district (mainly to improve sewer and STW capacity). This scale of intervention could require adaptation of local planning policies and / or construction methods to limit foul flows and promote large-scale water recycling*

The Study also predicted that Maple Lodge Sewage Treatment Works is limited in its capacity to accommodate expected growth and will require at least focused planning from 2021 onwards to ensure it can accommodate this.

The Study also concluded that, whilst the availability of water resources will be largely sufficient until 2021, significant improvement could be required after this date to ensure water resource availability.

### **Flood risk**

The risk of flooding posed to properties arises from a number of sources including river, groundwater, surface water and sewers. Hertsmere has a history of drainage infrastructure flooding, which has been recorded in all urban areas across the Borough, however it appears most significant in Bushey and Borehamwood and least significant in Radlett<sup>59</sup>.

The Hertsmere Borough Strategic Flood Risk Assessment (SFRA) was published in May 2008<sup>60</sup>. Hertsmere falls within the catchment of the River Colne, which has extensive partially developed floodplain with development built up to the water's edge and narrow floodplains in the headwaters, with some properties at risk of flooding. The main urban areas such as Borehamwood, Radlett and Potters Bar are at risk of flooding from a number of sources and flooding mechanisms, including overtopping of river banks, in-channel blockages and constrictions causing the back-up of water, overflow of surface water and sewerage drainage infrastructure, rapid surface water runoff from urban areas, breach or overtopping of flood storage areas and reservoirs and groundwater flooding<sup>61</sup>.

Fluvial flooding from the River Colne has resulted in frequent flooding of properties in the main urban area of Watford around the boundary of Hertsmere and Watford Borough Councils. Historical flooding within Hertsmere has mostly been in recreational areas and open space, with limited damage caused to property. Potters Bar was worst affected by fluvial flooding in 1993, while the downstream part of the Mimms Hall Brook catchment has a history of flooding with serious flooding to houses and property recorded on five occasions since 1928. The flooding in Mimms Hall Brook is thought to be attributed to insufficient channel capacity, however blockage at bridges is also thought to be a factor<sup>62</sup>.

There are a number of Source Protection Zones within the Borough to ensure that rivers and aquifers are protected from pollution, with these principally located within the northeast and west of the Borough.

Hertsmere contains a number of areas susceptible to flooding. Areas of land within Flood Zones 2 and 3 are located along the west-north boundary of the Borough, as well as The Brook, Mimms Hall Brook and Catherine Bourne.

Overall, surface water flooding is highlighted as a major cause of frequent flooding in the Borough and often occurs in combination with groundwater flooding.

<sup>59</sup> Strategic Flood Risk Assessment: Volume I (2008) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB02a-SFRA-Final-Report-and-Appendix-E.PDF>

<sup>60</sup> Strategic Flood Risk Assessment: Volume I (2008) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB02a-SFRA-Final-Report-and-Appendix-E.PDF>

<sup>61</sup> Strategic Flood Risk Assessment: Volume I (2008) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB02a-SFRA-Final-Report-and-Appendix-E.PDF>

<sup>62</sup> Strategic Flood Risk Assessment: Volume I (2008) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB02a-SFRA-Final-Report-and-Appendix-E.PDF>



### *Forthcoming evidence*

The Council has commissioned a Strategic Flood Risk Assessment update, which is expected to become available in /early 2018.

### **Historic environment**

There are many historic and heritage designations within Hertsmere, including 319 Listed Buildings, 15 Conservation Areas, 32 archaeological sites, four Registered Parks and Gardens (Wrotham Park, Aldenham House, Wall Hall, The Rose Garden, Bushey), and four Scheduled Monuments. The Rose Garden is a key local attraction, which celebrated its 100<sup>th</sup> birthday in 2013. It was created by famous landscape designer Thomas Mawson, who went on to become the first president of the Landscape Institute. The Battle of Barnet 1471 Registered Battlefield is also partially within the Borough's boundary. Hertsmere Borough also maintains a list of Locally Important Buildings, which includes 380 buildings of local significance. At present there are no heritage assets at risk within the Borough, including Grades I and II buildings and buildings of local importance.

The Hertfordshire Historic Environment Record (HER) contains information on historic buildings, archaeological remains, historic sites and military remains. It can be used to identify significant historic remains and contains information on surveys and archaeological excavations undertaken in Hertfordshire. At the time of writing, LUC was unable to access the HER, but will continue to work with the Council to ensure that any relevant data or features are taken into account in the SA.

Proximity to London and the rapid growth in development pressures in the 20<sup>th</sup> century have resulted in the growth of suburban development in the southern part of Hertfordshire. This in turn led to the designation of a large proportion of the county as Green Belt. Hertfordshire's inherited built environment is generally low rise, including in Hertsmere. Guidance from Hertfordshire County Council<sup>63</sup> states that historic buildings need to adapt and manage change to remain viable. It also encourages new development to respect historic buildings, but not to replicate them. Hertfordshire is characterised by traditional (mainly pre 1850s) building materials related to its geology and landscape.

At present, there is no information available on visitor numbers to specific heritage assets in Hertsmere.

### **Health**

The health of people in Hertsmere is generally better than the national average. Some 84.76% of people reported being in 'very good' or 'good' health, while only 4.01% of people reported being in 'bad' or 'very bad' health<sup>64</sup>. The breakdown by ward of resident general health in the 2011 Census shows that Aldenham East has the best health in Hertsmere with 90.55% reporting very good or good health. However, Borehamwood Cowley Hill ward has the worst with only 78.6% reporting 'very good' or 'good' health<sup>65</sup>.

In 2015, 61.1% of adults in Hertsmere were physically active, compared to the English average of 57%. Furthermore, between 2013 and 2015, 62.4% of adults in the area were recorded as being overweight, compared to the English average of 64.8%. Excess weight in children is also recorded as being below the national average<sup>66</sup>.

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<sup>63</sup> Hertfordshire County Council (date unavailable) Building Futures website [online] available at: <https://www.hertfordshire.gov.uk/microsites/building-futures/a-sustainable-design-toolkit/technical-modules/design/understanding-hertfordshires-character.aspx>, accessed 30/11/17

<sup>64</sup> Knowing our Community (2015) <https://www.hertsmere.gov.uk/Documents/11-Your-Council/Equality--Diversity/Knowing-Our-Community-2015-v2.pdf>

<sup>65</sup> English Indices of Deprivation (2015) <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

<sup>66</sup> Public Health and NHS Outcomes Frameworks for Children (2016) <http://fingertips.phe.org.uk/cyphof#page/4/gid/8000025/pat/102/ati/101/are/E07000098/iid/20602/age/201/sex/4>

Life expectancy for both men and women is higher than the England average. However, life expectancy is 7.2 years lower for men and 7.3 years lower for women in the most deprived areas of Hertsmere than in the least deprived areas<sup>67</sup>.

### *Forthcoming evidence*

The Council has commissioned an Indoor Sports and Outdoor Playing Field Strategy, which will be taken into account when it becomes available.

## **Deprivation**

The English Indices of Deprivation 2015<sup>68</sup> are a measure of multiple deprivations in small areas or neighbourhoods, called Lower-layer Super Output Areas (LSOAs) in England, which are a similar size to electoral wards. Seven domains of deprivation are measured: Income; Employment; Education; Health; Crime; Barriers to housing & services and Living environment. Each domain contains a number of indicators. The seven domains are combined to give a multiple deprivation score. There are 32,844 LSOAs nationally and 62 LSOAs in Hertsmere.<sup>69</sup>

According to the English Indices of Deprivation 2015<sup>70</sup>, Hertsmere is ranked 243<sup>rd</sup> for the Index of Multiple Deprivation (IMD) multiple deprivation score (rank of average score) out of 326 local authority areas in England. This means that compared to the rest of the country, Hertsmere is in the 50% least deprived areas. Hertsmere's average deprivation rank across its 62 LSOAs is 21,818, which is slightly below the Hertfordshire average of 22,160. Hertsmere is a very diverse borough with varying levels of deprivation with overall IMD levels of LSOAs ranging from 3,049 (Borehamwood Cowley Hill 006C, the most deprived LSOA in Hertfordshire and in the top 10% most deprived nationally) to 32,695 (Bushey Heath 013C in the top 1% least deprived nationally). There are eight wards within the 20% most deprived in the country which are classified as having barriers to housing and services: Aldenham West, Shenley, Borehamwood Cowley Hill, Borehamwood Hillside, Bushey North, Borehamwood Kenilworth, Potters Bar Oakmere, and Potters Bar Parkfield.

## **Population and social issues**

In 2016 the population of Hertsmere was 103,500<sup>71</sup>. This number is predicted to increase to 122,000 by 2034<sup>72</sup>. Hertsmere is projected to have a 9.75% increase in population from 2014 to 2034, of which 4.3% will be from natural change (i.e. births minus deaths), 4.9% from net migration within the UK, and 0.5% from net international migration<sup>73</sup>.

Hertsmere has a higher than the County average proportion of those aged over 75 years and this trend is predicted to continue. The proportion of those aged over 85 is projected to increase from 2.7% of the population to 3.2%, a rise of 429 people in real terms.

The 2011 Census estimates the population density of the Borough at 9.9 persons per hectare which is higher than the national average of 4.1 persons per hectare. However, of the total population, 85,007 people live in 'urban' areas (representing 85% of the population of the Borough) with a population density of 20.3 persons per hectare, while 15,024 people live in 'rural' areas with a population density of 2.5 persons per hectare<sup>74</sup>.

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<sup>67</sup> Health Profile 2016 (2016) <https://www.hertsmere.gov.uk/Documents/03-Community/Community-Information/Knowing-our-Community/Health-profile-2016.pdf>

<sup>68</sup> English Indices of Deprivation (2015) <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

<sup>69</sup> The English Indices of Deprivation, File 1: Index of multiple deprivation (2015) <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

<sup>70</sup> DCLG, English indices of deprivation 2015 (2015) <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2015>

<sup>71</sup> Nomis – Labour Market Profile, accessed 7<sup>th</sup> August 2017 (2017)

<https://www.nomisweb.co.uk/reports/lmp/la/1946157225/report.aspx?town=hertsmere>

<sup>72</sup> ONS, Subnational Population Projections for Local Authorities in England, 2014-based projections (2016)

<sup>73</sup> ONS, Understanding Projected Population Change at the Local Authority Level, 2014-based projections (2016)

<sup>74</sup> ONS, Population Density (2011)

Between Academic Year 2011/12 and Academic Year 2015/16, the percentage of pupils at Key Stage 4 attaining Level 2 including GCSE English and Maths in Hertsmere, has increased from 65.5% to 71.1%.<sup>75</sup>

Hertsmere Borough has a relatively low level of crime, with no wards classified as being within the 30% most deprived nationally. However, the total number of crimes reported in Hertsmere continues to increase. Anti-social behaviour is recorded as the most common offence in the Borough<sup>76</sup>.

### Religion

There are at least ten different types of faith in Hertsmere, comprising 70 individual groups. The area with the most faith communities is Borehamwood and Elstree, which also has the greatest population in the Borough. Bushey and Potters Bar all have a lower proportion of faith communities compared to the respective proportion of the population. Aldenham and Shenley contain 21% of the Borough's faith communities and just 16% of the population<sup>77</sup>.

According to Hertsmere's Faith community audit<sup>78</sup>, there were two communities in particular that require their own site and building for religious purposes in 2012: Shenley Jewish Community and the Borehamwood Muslim Community.

### Economy and labour market

At 86.7% of the total population, the percentage of the Borough population that is economically active is higher than the county, regional and country average. The percentage of the Borough's population that are in employment at 84.5% is also higher than the regional and British averages.

The Borough's largest employment industries are: wholesale and retail trade, and repair of motor vehicles and motorcycles (19.2%); construction (11.5%) and education (9.6%).

The proportion of people who are unemployed is 3.5% of the population, which is below the regional (3.8%) and national averages (4.8%). The three main occupations in Hertsmere in the same period were administrative and secretarial (19.1%), associate professional and technical (16.5%), and professional occupations (15.4%). Unemployment in Hertsmere has dropped significantly from 5.2% (Apr 14-Mar 15) to 4.1% (Apr 15-Mar 16) to 3.1% (Apr 16-Mar 17)<sup>79</sup>. The number of people claiming Job Seeker's Allowance is in line with the county and regional average.

The general proportion of full-time to part-time jobs, at approximately 2:1, is in line with regional and national averages.

In 2015, the average full-time weekly earnings were £552 for residents in Hertsmere, compared to £614 in Hertfordshire. Furthermore, in 2016, the average full-time annual earnings were £30,360 for residents in Hertsmere, compared to £33,820 in Hertfordshire.

The level of job density calculated as the ratio of total jobs to population ages 16-64 in Hertsmere is 0.93%, which is higher than both the regional average (0.81%) and the national average (0.83%). Of the 6,695 enterprises in Hertsmere in 2016, 91% were 'micro' size (0-9 employees), 7.1% were considered to be 'small' (10-49 employees), 1.6% were considered to be 'medium' (50-249 employees) and 0.3% were considered to be 'large' (250+ employees). According to the 2011 Census, 37% of the resident workforce commuted to London and only 41% actually work in the Borough. Hertsmere has a significant number of in-commuters and continues to be a 'net exporter' of labour resulting in a small, negative commuting balance.

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<sup>75</sup> Herts Insight, Education and Lifelong Learning Profile Selection: Hertsmere District Geo-type: Districts (2017) <http://atlas.hertslls.org/profiles/profile?profileId=119&geoTypeId=15>

<sup>76</sup> UK Crime States (2017) <http://www.ukcrimestats.com/Constituency/65994>

<sup>77</sup> Faith Community: Needs Assessment (2012) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/Faith-Community-Needs-Assessment-December-2012.pdf>

<sup>78</sup> Faith Community: Needs Assessment (2012) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/Faith-Community-Needs-Assessment-December-2012.pdf>

<sup>79</sup> Nomis – Labour Market Profile, accessed 7<sup>th</sup> August (2017) <https://www.nomisweb.co.uk/reports/lmp/la/1946157225/report.aspx?town=hertsmere>

The Hertfordshire London Arc Jobs Growth and Employment Land study<sup>80</sup> indicates that there is likely to be a small shortfall in office, industrial and warehousing floorspace in the Borough by 2026.

In 2015, the total number of day trips made to Hertsmere was 1,126,000, which is a decrease in 3.8% from the previous year. On the other hand, the total number of overnight trips to Hertsmere increased from 145,800 in 2014 to 151,300 in 2015. Overall, the largest proportion of trips made to Hertsmere were for vacation (41%).

#### *Forthcoming evidence*

The Council has commissioned a Joint Retail Study along with Watford, Dacorum and Three Rivers Councils, which will be taken into account when it becomes available.

### **Housing**

The South West Hertfordshire SHMA<sup>81</sup> considers housing need in the South West Hertfordshire Housing Market Area (HMA). The HMA comprises the following local authority areas:

- Dacorum;
- Hertsmere;
- St Albans;
- Three Rivers; and
- Watford.

Hertsmere Borough has an exceptionally high house price to earnings ratio. Average house prices in Hertsmere are above the regional and national average, at £461,800<sup>82</sup>. Yet weekly earnings in Hertsmere are below the county average.

A survey carried out of local authorities by the National Housing Federation indicated that Hertsmere was the least affordable local authority in the East of England, with parts of the Borough having amongst the greatest gaps between housing affordability and access to services in England. The wide gap between local household incomes and house prices not only means that there is high demand for affordable housing to rent but also that the cost of 'intermediate' housing is not affordable to many seeking accommodation in the Borough<sup>83</sup>.

As of 1<sup>st</sup> September 2015, there were 811 households on Hertsmere's housing register (a 7.4% increase since January 2015). Approximately 90% reside in Hertsmere and all are required to have a connection with Hertsmere so there remains an acute need for affordable housing in the Borough. The Housing Register for Hertsmere currently shows a high overall requirement for affordable dwellings with one to three bedrooms<sup>84</sup>.

#### *Forthcoming evidence*

The Council is carrying out a Housing and Employment Land Availability Assessment, which will be taken into account when available. The government recently consulted on a standard methodology for calculating housing need across the country, which will be taken into account when available.

### **Transport**

Hertsmere is well connected to London and the rest of the country. The M25 and M1 motorways and the A1 all run through the Borough, which is also serviced by main line rail services stopping

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<sup>80</sup> Hertfordshire London Arc Jobs Growth and Employment Land: Final Report (2009) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Development-Framework/Hertfordshire-London-Arc-Final-Report-March-2009.pdf>

<sup>81</sup> South West Hertfordshire Strategic Housing Market Assessment (2016) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SW-Herts-SHMA-Final-Report-Jan16.pdf>

<sup>82</sup> Herts Insight, House Prices in Hertfordshire Selection: Hertsmere District Geo-type: Districts (2017) <http://atlas.herts.gov.uk/profiles/profile?profileId=994&geoTypeId=15>

<sup>83</sup> Affordable Housing: Supplementary Planning Document (2015) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Planning-Publications/AH-SPD-Nov-2015-FINAL-AS-PRINTED.pdf>

<sup>84</sup> Affordable Housing: Supplementary Planning Document (2015) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Planning-Publications/AH-SPD-Nov-2015-FINAL-AS-PRINTED.pdf>

at Potters Bar, Radlett and Borehamwood. However, some problems are caused by road links being better than access to public transport, particularly in terms of east to west transportation, which is reflected in high levels of car ownership and traffic congestion. Congestion is a major local concern<sup>85</sup>.

According to the *Hertfordshire Infrastructure & Investment Strategy* (2009), walking, cycling, bus and coach networks are generally adequate to cater for existing demand. However, hours of bus operation can be restrictive and there is a lack of a focused centre for services in Hertfordshire. There is a severe deficit in rail services both for passengers and freight<sup>86</sup>.

The 2009 predictions for rail capacity indicate that without further substantial investment at a national scale the effectiveness of the rail network would be severely restricted post-2021, which may suppress the attractiveness of this mode<sup>87</sup>. Indeed the main issue for rail in Hertfordshire is that despite having an extensive north-south rail network traversing the County, rail use is constrained by a lack of capacity<sup>88</sup>. Without further intervention, conditions on the road network will continue to deteriorate. The *Hertfordshire Infrastructure & Investment Strategy*<sup>89</sup> identifies a number of ways to resolve the deficit on the motorway network and help improve conditions at a number of key locations on Hertfordshire's road network. The *Hertfordshire Infrastructure and Investment Strategy* identified Hartspring Roundabout on the junction of the A41/B462 Hartspring Lane, within Hertsmere as a key corridor requiring improvement works to enable future growth by 2021.

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<sup>85</sup> Local Development Plan: Infrastructure Assessment (2013) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Planning-Publications/CD12-Hertsmere-Infrastructure-Assessment.pdf>

<sup>86</sup> Hertfordshire Infrastructure & Investment Strategy: Transport Technical Report (2009) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB24b-HIIS-Study-2009-Trans-Tech-Report.pdf>

<sup>89</sup> Hertfordshire Infrastructure & Investment Strategy: Transport Technical Report (2009) <https://www.hertsmere.gov.uk/Documents/09-Planning--Building-Control/Planning-Policy/Local-Plan/SADMS-EB24b-HIIS-Study-2009-Trans-Tech-Report.pdf>

## **Appendix 4**

### Assumptions to be Applied During the SA of Site Options

**Table A4.1: Assumptions applied during the SA of site options for the Hertsmere Local Plan**

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
<b>SA Objective 1: To improve access to education, training, opportunities for lifelong learning and employability</b>						
<p><b><u>HOUSING ALLOCATIONS</u></b></p> <p>Distance to educational facilities.</p>	<p>&lt;=1km from secondary AND &lt;=500m from at least one primary school</p> <p><b>OR</b></p> <p>Provision of new facilities</p>	<p>&lt;=1km from at least one secondary school</p> <p><b>OR</b></p> <p>&lt;=500m from at least one primary/infant/junior school</p> <p><b>OR</b></p> <p>&lt;=1km from a college or other education or training facility</p>	N/A	N/A	<p>&gt;1km from secondary AND &gt;500m from at least one primary school</p> <p><b>OR</b></p> <p>Loss of facilities</p>	N/A
<b>SA Objective 2: To ensure ready access to essential services and facilities for all residents</b>						
<p><b><u>HOUSING ALLOCATIONS</u></b></p> <p>Proximity to services/facilities/assets</p>	<p>&lt;=400m) of a Town or Local Centre</p>	<p>401-800m of a Town or Local Centre</p>	<p>Where an allocation is within 800m of a Town Centre or Local Centre but there are potential barriers to access for all ages and abilities (e.g. major road, topography).</p>	<p>&gt;800m of a Town Centre or Local Centre, but &lt;= 400m of a bus stop.</p>	<p>&gt;800m of a Town Centre or Local Centre and &gt;400m of a bus stop.</p>	N/A
<p><b><u>HOUSING ALLOCATIONS</u></b></p> <p>'Geographical Barriers to Housing and Services' domain of the</p>	<p>Allocation located within one of the 20% least deprived areas within the Borough ('Geographical Barriers</p>	N/A	All other allocations.	N/A	<p>Allocation located within one of the 50% most deprived areas within the Borough ('Geographical Barriers</p>	N/A

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
Index of Multiple Deprivation	to Housing and Services' domain of the Index of Multiple Deprivation  <b>OR</b> Provision of new facility				to Housing and Services' domain of the Index of Multiple Deprivation)	
<b>SA Objective 3: To ensure the provision of housing, including affordable housing and a mix that meets local needs</b>						
<b><u>HOUSING ALLOCATIONS</u></b> Delivery of affordable housing	Significantly contributes to the delivery of affordable housing (>50 dwellings)	For <b>urban areas</b> , contributes to the delivery of affordable housing (11-50 dwellings)  <b>OR</b> For <b>rural areas</b> , contributes to the delivery of affordable dwellings (6-50 dwellings)	For <b>urban areas</b> , no contribution to affordable housing (10 dwellings or fewer).  <b>OR</b> For <b>rural areas</b> , no contribution to affordable housing (5 dwellings or fewer)	N/A	N/A	Uncertainty
<b>SA Objective 4: To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces</b>						
<b><u>HOUSING ALLOCATIONS</u></b> Reducing and preventing crime	N/A	N/A	Levels of crime and fear of crime will not be influenced by the location of development sites (rather they will be determined through the detailed proposals for each site). Therefore, the effects of the potential sites on this SA objective will be assumed to be	N/A	N/A	Uncertainty



Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
			negligible (0).			
<b><u>HOUSING ALLOCATIONS</u></b> 'Barriers to housing and services' domain of the Index of Multiple Deprivation	Allocation located within one of the 20% most deprived areas within the Borough ('Overall – Barriers to housing and services' domain of English Indices of Deprivation).	N/A	All other allocations.	N/A	N/A	N/A
<b><u>EMPLOYMENT ALLOCATIONS</u></b> 'Overall – Employment Deprivation' domain of the Index of Multiple Deprivation	Allocation located within one of the 20% most deprived areas within the Borough ('Overall – Employment Deprivation' domain of English Indices of Deprivation).	N/A	All other allocations.	N/A	N/A	N/A
<b>SA Objective 5: To improve population's health and reduce inequalities</b>						
<b><u>HOUSING ALLOCATIONS</u></b> Distance to nearest NHS GP surgery or hospital	N/A	<=800m from nearest NHS GP surgery or hospital	N/A	>800m from nearest NHS GP surgery or hospital	N/A	Uncertainty
<b><u>HOUSING ALLOCATIONS</u></b> Distance to nearest sport/recreational facility or open space/Local Green	<=800m from open space, sport or recreation facility  <b>OR</b> Provision of new facility	<=400m from PRoW but >800m of open space sport & recreation facility	N/A	Site containing PRoW (-?)	>800 m from open space, sport or recreation facility and >400 m from PROW  <b>OR</b> Loss of existing facility	Uncertainty

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
Space.						
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Development allocations that are adjacent to strategic road network (motorway or 'A' roads) or are within close proximity of waste management facilities.</p>	N/A	N/A	All other allocations.	<p>Site within 500m of an Anaerobic Digestion facility</p> <p><b>OR</b></p> <p>Within 250m of any other waste management facility</p>	Site within 200m of an A road or Motorway	
<b>SA Objective 6: To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources</b>						
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Agricultural grade of land</p>	N/A	N/A	N/A	<p>Significant proportion (&gt;=25%) of allocation on Grade 3 agricultural land.</p> <p><b>OR</b></p> <p>Site consists partly of Grades 1 or 2 agricultural land, but less than 25% of site.</p>	Significant proportion (>=25%) of allocation on Grade 1 or 2 agricultural land.	N/A
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Greenfield or brownfield land</p>	N/A	Allocation entirely or mainly (>50%) on brownfield land.	N/A	Allocation entirely or mainly (>=50%) on greenfield land.	N/A	N/A

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Minerals Safeguarding Area</p>	N/A	N/A	Allocation is not within 250m of a Minerals Safeguarding Area.	Allocation is within 250m of a Minerals Safeguarding Area.	N/A	N/A
<b>SA Objective 7: To protect or enhance historic buildings, heritage assets and archaeological sites<sup>90</sup> and their settings</b>						
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Impact on designated historic buildings, archaeological sites and other heritage assets and their settings<sup>91</sup>.</p>	N/A	Allocation would enhance the setting of an historic or heritage asset or have its significant better revealed.	No historic buildings, heritage assets or archaeological sites with views to the site or to which the site may form part of the setting or significance (a 1km area of search can be used as a starting point).	Where allocation is in proximity to (between 250m and 1km as a starting point) historic buildings, heritage assets and/or archaeological sites, and has potential to cause harm to the asset or its setting, which could be mitigated, a minor negative effect with uncertainty (-?) occurs. Uncertainty as the actual effect on historic assets will depend on whether the development is visible from the asset and the exact scale, design and layout of the new development.	A significant negative effect with uncertainty (--?) occurs where allocation is within close proximity to (250m can be used as a starting point) or includes a historic building, heritage assets or archaeological sites, and has potential to cause harm to the asset or its setting, where it is unlikely that the impact could be mitigated. Uncertainty as the actual effects on historic assets will depend on the exact scale, design and layout of the new	N/A

<sup>90</sup> This includes both designated and non-designated assets. Archaeological sites include sites with archaeological potential, in particular known Archaeological Sites as sent to LUC by the Council.

<sup>91</sup> Setting of an asset includes the surroundings in which the asset is experienced, including physical surroundings and the asset's relationship to these, views to and from the asset, noise, vibration, pollutants and other nuisances, sense of tranquillity, remoteness or enclosure and many other factors (see The Setting of Heritage Assets, Historic Environment Good Practice Advice in Planning: 3). The methodology in the Historic Environment and Site Allocations in Local Plans (Historic England Advice Note 3) will also be used to inform assessments including judgements regarding the contribution the site makes to the significance of the asset and the effects of development on this.

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
					development.	
<b>SA Objective 8: To maintain and enhance the quality of countryside and landscape</b>						
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Landscape character</p>	N/A	<p>Allocation would help to improve and restore an area with poor landscape condition, according to the Landscape Character Assessment</p> <p><b>OR</b></p> <p>Site is on brownfield or degraded land</p>	<p>Allocation within area of 'weak' strength of character according to the Landscape Character Assessment.</p>	<p>Allocation on greenfield land within an area of 'moderate' or 'strong' strength of character according to the Landscape Character Assessment.</p>	<p>Allocation would be significantly at odds with existing landscape and/or lead to loss of distinctive features of the relevant Landscape Character Area.</p>	
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Settlement coalescence</p>	N/A	N/A	<p>A negligible effect with uncertainty (0?) occurs when the allocation is within the Green Belt but unlikely to contribute towards settlement coalescence. Uncertainty as the actual effect will depend on the design, layout and landscaping of the new development.</p> <p><b>OR</b></p> <p>When an allocation is within an existing urban area or far away from neighbouring settlements, it's likely to have a negligible effect</p>	<p>A minor negative effect with uncertainty (-?) occurs when the allocation is within the Green Belt and may contribute towards coalescence of two or more settlements. Uncertainty as the actual effect will depend on the design, layout and landscaping of the new development.</p>	<p>A significant negative effect with uncertainty (--?) occurs when the allocation is within the Green Belt and would join two or more settlements. Uncertainty as the actual effect will depend on the design, layout and landscaping of the new development.</p>	N/A

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
			with no uncertainty (0).			
<b>SA Objective 9: To reduce greenhouse gas emissions, including a reduced dependence on the private car</b>						
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Distance to public transport.</p>	Within walking distance of 3 or more sustainable transport links (within 400m of a bus stop, 1km of a railway station and 400m of a cycle route)	Within walking distance of 2 sustainable transport links (within 400m of a bus stop, 1km of a railway station and 400m of a cycle route)	N/A	Within walking distance of 1 sustainable transport link (within 400m of a bus stop, 1km of a railway station or 400m of a cycle route)	Not within walking distance of any sustainable transport links (within 400m of a bus stop, 1km of a railway station or 400m of a cycle route)	N/A
<b>SA Objective 10: To protect and enhance biodiversity and geodiversity</b>						
<p><b><u>ALL ALLOCATIONS</u></b></p> <p>Distance (impacts on) to:</p> <p>National or local designated wildlife site (SSSI, NNR, LNR, LWS, Eco-site, HMWT reserve), BAP Priority Habitats, Ancient Woodland or Regionally Important Geological Site.</p> <p>Impacts on internationally designated wildlife sites as assessed via the HRA and taken into account in the SA Report.</p>	N/A	N/A	All other allocations.	<p>Significant proportion of allocated land (<math>\geq 25\%</math>) is on undesignated greenfield land.</p> <p><b>OR</b></p> <p>Allocated land is <math>\leq 100\text{m}</math> from a designated site (other than SSSI).</p>	<p>Significant negative effect (--) if significant proportion of allocated land (<math>\geq 25\%</math>) lies within designated site.</p> <p><b>OR</b></p> <p>Allocated land is <math>\leq 100\text{m}</math> from an SSSI.</p> <p><b>OR</b></p> <p>Significant negative effect with uncertainty (--?) if significant proportion of allocated land (<math>\geq 25\%</math>) lies within an SSSI Impact Risk Zone for the relevant type of development. Uncertainty relates to</p>	N/A

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
					whether potentially significant negative effects can be mitigated.	
<b>SA Objective 11: To improve water quality and manage water resources sustainably</b>						
<b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b> Allocations located within a Source Protection Zone (SPZ)	N/A	N/A	All other allocations.	Minor negative effect with uncertainty (-?) if site falls within an SPZ.	N/A	N/A
<b>SA Objective 12: To minimise the risk of flooding taking account of climate change</b>						
<b><u>ALL ALLOCATIONS</u></b> Allocations on brownfield or greenfield land and within flood zones	N/A	N/A	>5% of site within Flood Zone 3 <b>AND/OR</b> <25% within Flood Zone 2 or proposed use classified as 'water compatible development'	>=25% of site within Flood Zone 2 <b>OR</b> Smaller area (5% to 25%) within Flood Zone 3	>=25% of site within Flood Zones 3a or 3b	Uncertainty
<b>SA Objective 13: To improve local air quality</b>						
<b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b>	N/A	N/A	Not within an AQMA or likely to generate traffic that uses an AQMA route as its primary	N/A	Within an AQMA or likely to generate traffic that uses an AQMA route as its	N/A

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
Development allocations that are within, or directly connected via road, to one of the Air Quality Management Areas (AQMAs) in the Borough.			access		primary access	
<b>SA Objective 14: To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy</b>						
<p><b><u>HOUSING AND EMPLOYMENT ALLOCATIONS</u></b></p> <p>Energy consumption and potential for renewable energy use</p>	N/A	N/A	<p>The location of housing and employment allocations will not have an effect on levels of domestic energy consumption and the potential for renewable energy use. These factors are influenced more by the specific design and construction methods used, and whether renewable energy infrastructure is incorporated into development. Therefore, the effects of the potential allocations on this SA objective will be assumed to be negligible (0).</p>	N/A	N/A	N/A
<b>SA Objective 15: Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres</b>						

Site assessment criteria	Significant positive effect (++)	Minor positive effect (+)	No/negligible effect (0)	Minor negative effect (-)	Significant negative effect (--)	Uncertain effect (?)
<b><u>HOUSING ALLOCATIONS</u></b> Proximity to town centres	N/A	Allocation is within 800m of a sustainable transport link (bus stop, railway stations or cycle paths).	N/A	Allocation is further than 800m from the nearest sustainable transport link (bus stop, railway station or cycle path)	N/A	N/A
<b><u>HOUSING ALLOCATIONS</u></b> Proximity to employment opportunities	<=500m from an existing employment area	501-1000m from an existing employment area	N/A	1001-2000m from an existing employment area  <b>OR</b> Loss of existing employment area	>2000m from an existing employment area	N/A
<b><u>EMPLOYMENT ALLOCATIONS</u></b> Site size	Allocation is large (more than 0.5ha in size)	Allocation is small (0.5ha in size or smaller)	N/A	N/A	N/A	N/A



# Appendix 5

## SA Matrices for Part 2 of the Issues and Options Document

**Table A5.1: Housing requirement options**

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
SA Objective 1: To improve access to education, training, opportunities for lifelong learning and employability	++?/--?	++?/--?	+?/-?	<p>The effect of all three housing scenarios upon education will depend largely on factors such as whether additional school places are provided to accommodate population growth in order to avoid existing schools being over capacity, which cannot be determined at this stage.</p> <p>Greater housing numbers could therefore either place greater pressure on existing education infrastructure or could result in the greater amounts of funding for additional infrastructure.</p> <p>As the economic-led scenario provides for the greatest number of houses of the three scenarios, mixed uncertain significant positive and significant negative effects are likely for this scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore mixed uncertain significant positive and uncertain significant negative effects are likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, mixed uncertain minor positive and minor negative effects are likely for this scenario.</p>
SA Objective 2: To ensure ready access to essential services and facilities for all residents	++?/--?	++?/--?	+?/-?	<p>The effect of all three housing scenarios upon access to services will depend largely on factors such as whether additional services and facilities are provided to accommodate population growth in order to avoid existing services and facilities being over capacity, which cannot be determined at this stage.</p> <p>Greater housing numbers could therefore either place the greatest pressure on existing services and facilities or could result in the greatest amount of funding for additional services and facilities.</p> <p>As the economic-led scenario provides for the greatest number of houses of the three housing scenarios, mixed uncertain significant positive and significant negative effects are likely for this scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore mixed uncertain significant positive and uncertain significant negative effects are likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, mixed uncertain minor positive and minor negative effects are likely for this scenario.</p>
SA Objective 3: To ensure the provision of housing, including affordable housing	++	++	-	<p>The Council has determined that the Borough has need for an additional 600 homes per annum over the plan period. Therefore, both the selected 'Demographic-based scenario' and the alternative 'Economic-led growth scenario' would likely have a significant positive effect with regard to this SA Objective, as they would provide enough or more than enough houses to meet the demand respectively.</p>

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
and a mix that meets local needs				The alternative 10-year migration trend scenario would provide housing, however it would provide a shortfall of 132 homes per year. Therefore, this would likely have a minor negative effect with regard to this SA Objective.
SA Objective 4: To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces	0	0	0	The effects of additional housing on community cohesion, crime, deprivation and community space provision will depend on the design and location of housing. For example, via the design of street layout, provision of open space and access to local services and public transport. However, such issues will not be influenced by the overall amount of housing; rather they will be determined through the detailed proposals for individual sites. Therefore, the likely effects of all three options are negligible for this SA objective.
SA Objective 5: To improve population's health and reduce inequalities	++?/--?	++?/--?	+?/-?	<p>The effect of all three housing scenarios upon health will depend largely on factors such as whether additional health services, recreational facilities and open space are provided to accommodate population growth in order to avoid existing services and facilities being over capacity, which cannot be determined at this stage.</p> <p>Greater housing numbers could therefore either place the greatest pressure on existing health services, recreational facilities and open space or could result in the greatest amount of funding for additional health services, recreational facilities and open space.</p> <p>As the economic-led scenario provides for the greatest number of houses of the three housing scenarios, mixed uncertain significant positive and uncertain significant negative effects are likely for this housing scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore mixed uncertain significant positive and uncertain significant negative effects are likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, mixed uncertain minor positive and minor negative effects are likely for this scenario.</p>
SA Objective 6: To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources	+/-	+/-	+/-	All three housing scenarios propose the development of additional housing. Due to the constrained nature of the Borough, this development will likely be built on brownfield and greenfield land. Therefore, both brownfield sites could be redeveloped and the best and most versatile agricultural land lost. Additionally, brownfield redevelopment could help to protect mineral resources, whilst greenfield development could cause sterilisation of mineral reserves. Therefore, mixed minor positive and negative effects are likely for each housing scenario for this SA Objective.

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
SA Objective 7: To protect or enhance historic buildings, heritage assets and archaeological sites	--?	--?	-?	<p>All three housing scenarios propose the development of additional housing. Some of this development will likely be built within the settings of sensitive historic and heritage assets. Although housing may be planned to be located suitably and designed to limit harm to the Borough's historic and heritage assets, this is not known at this stage.</p> <p>The amount of housing proposed by each scenario however may influence the likelihood that housing will be located within the settings of sensitive historic and heritage assets. Scenarios proposing greater amounts of housing are more likely to result in housing located within the settings of sensitive historic and heritage assets.</p> <p>Therefore, as the economic-led scenario provides for the greatest number of houses of the three housing scenarios, an uncertain significant negative effect is likely for this housing scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of houses of the three housing scenarios, and therefore a significant negative effect is likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of houses and therefore, an uncertain minor negative effect is likely for this scenario.</p>
SA Objective 8: To maintain and enhance the quality of countryside and landscape	-?	--?	-?	<p>All three housing scenarios propose the development of additional housing. This development may be placed in locations where new development could impact the character of the surrounding landscape and settlements. Moreover, this development may be placed in the Green Belt and lead to a higher risk of settlement coalescence, impacting Green Belt openness and landscape value. Although housing may be planned to be located suitably and designed to limit and mitigate harm to the Borough's landscape, this is not known at this stage.</p> <p>The amount of housing proposed by each scenario however may influence the likelihood that housing will be placed in the Green Belt and in locations where new development could impact the character of the surrounding landscape and settlements. Scenarios proposing greater amounts of housing are more likely to result in housing located in the Green Belt and where new development could impact the character of the surrounding landscape and settlements.</p> <p>Therefore, as the economic-led scenario provides for the greatest number of homes of the three housing scenarios, an uncertain significant negative effect is likely for this housing scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore an uncertain minor negative effect is likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, an uncertain minor negative effect is likely for this scenario.</p>

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
SA Objective 9: To reduce greenhouse gas emissions, including a reduced dependence on the private car	++?/--	++?/--	+?/-	<p>All three housing scenarios propose the development of additional housing and this will result in an increase of residents within the Borough and an increase in greenhouse gas emissions, particularly due to an increase in private cars on the Borough's roads. Although housing may be planned to be located suitably and designed to incorporate sustainable transport and minimise greenhouse gas emissions, this is not known at this stage.</p> <p>Greater housing numbers could therefore result in the greatest increase in private cars on the road, and the greatest greenhouse gas emissions during housing construction and to meet energy demands of residents. Alternatively, greater housing numbers could result in the greatest amount of funding for additional sustainable transport infrastructure and reduce private car usage across the Borough.</p> <p>The economic-led scenario provides for the greatest number of homes, therefore is likely to lead to the greatest increases in domestic energy demand and cars on the road. Alternatively, it could result in the greatest amount of funding for additional sustainable transport infrastructure and reduce private car usage across the Borough. Moreover, whilst the SHMA states that the labour market of the south Hertfordshire authorities is very integrated, i.e. all authorities experience high levels of in- and out-commuting, this option presents more opportunity for future alignment of job growth and housing provision, i.e. providing houses close to suitable employment opportunities. This may help minimise in-commuting to work by providing a more local workforce. As such, this option is assessed as having mixed uncertain significant positive effects and significant negative effects.</p> <p>The demographic-led scenario also provides for a significant increase in housing provision, being the second largest quanta option, and therefore mixed uncertain significant positive and significant negative effects are likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, mixed uncertain minor positive and minor negative effects are likely for this scenario.</p>
SA Objective 10: To protect and enhance biodiversity and geodiversity	--?	--?	-?	<p>All three housing scenarios propose the development of additional housing. Due to the large number and wide distribution of biodiversity designations in the Borough, this development could be located in proximity to sensitive and designated biodiversity sites and other biodiversity features. Although housing may be planned to be located suitably and designed to limit harm to biodiversity and geodiversity, this is not known at this stage.</p> <p>The amount of housing proposed by each scenario may influence the likelihood that housing will be located in proximity to sensitive and designated biodiversity sites and other biodiversity features. Scenarios proposing greater amounts of housing are more likely to result in housing in proximity to sensitive and designated biodiversity sites and other biodiversity features, due to the greater land take required.</p> <p>As the economic-led scenario provides for the greatest number of homes of the three housing scenarios, an uncertain significant negative effect is likely for this scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing</p>

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
				<p>scenarios, and therefore an uncertain significant negative effect is likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, an uncertain minor negative effect is likely for this scenario.</p>
SA Objective 11: To improve water quality and manage water resources sustainably	-?	--?	-?	<p>The effect of all three housing scenarios upon water quality and quantity will depend largely on factors such as whether additional sewage infrastructure is provided to accommodate population growth in order to avoid existing sewage infrastructure being over capacity, which cannot be determined at this stage.</p> <p>Greater housing numbers could therefore place the greatest pressure on sewage infrastructure (although developers are required to fund any necessary upgrades to accommodate increased flows from development). In addition, greater housing growth would increase demand for potable water in Hertsmere and it is not known whether adequate supply would be available to meet this demand.</p> <p>As the economic-led scenario provides for the greatest number of houses of the three housing scenarios, uncertain significant negative effects are likely for this housing scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore uncertain negative effects are likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, uncertain minor negative effects are likely for this scenario.</p>
SA Objective 12: To minimise the risk of flooding taking account of climate change	-?	--?	-?	<p>Due to the constrained nature of the Borough, the new development proposed within each housing scenario may be located on greenfield sites, thereby increasing the impermeable land coverage and contributing to flooding, and possibly located within the small number of areas within the Borough susceptible to flooding. Although housing may be planned to be located suitably to limit flood risk, this is not known at this stage.</p> <p>The amount of housing proposed by each scenario however may influence the likelihood that housing will be located on greenfield sites or in areas susceptible to flood risk. Scenarios proposing greater amount of housing are more likely to result in housing located on greenfield sites or in areas susceptible to flood risk.</p> <p>Therefore, as the economic-led scenario provides for the greatest number of homes of the three housing scenarios, an uncertain significant negative effect is likely for this scenario.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore an uncertain minor negative effect is likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, an uncertain minor negative effect is likely for this scenario.</p>

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
SA Objective 13: To improve local air quality	++?/--	++?/--	+?/-	<p>All three housing scenarios propose the development of additional housing and this will result in an increase of residents within the Borough and an increase in private cars on the Borough's roads. Emissions from these vehicles are likely to contribute to poorer air quality within the Borough. Although housing may be planned to be located suitably and designed to incorporate sustainable transport and reduce private care usage, this is not known at this stage.</p> <p>Greater housing numbers could therefore either result in the greatest increase in private car usage and its associated impact upon air quality or could result in the greatest amount of funding for additional sustainable transport infrastructure and reduce private car usage across the Borough.</p> <p>The economic-led scenario provides for the greatest number of houses of the three housing scenarios and could therefore either result in the greatest increase in private car usage and its associated impact upon air quality or could result in the greatest amount of funding for additional sustainable transport infrastructure and reduce private car usage across the Borough. Moreover, whilst the SHMA states that the labour market of the south Hertfordshire authorities is very integrated, i.e. all authorities experience high levels of in- and out-commuting, this option presents more opportunity for future alignment of job growth and housing provision, i.e. providing houses close to suitable employment opportunities. This may help minimise in-commuting to work by providing a more local workforce. As such, this option is assessed as having mixed uncertain significant positive effects and significant negative effects.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios, and therefore mixed uncertain significant positive and significant negative effects are likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore, mixed minor positive and negative effects are likely for this scenario.</p>
SA Objective 14: To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy	--?	--?	-?	<p>Housing construction requires high levels of energy use, and new residents are likely to use substantial amounts of energy at home. The greater the quantum of housing to be delivered, the higher the overall increase in energy consumption. As such, the economic-led and demographic-based scenarios are assessed as having significant negative effects on this objective. As the 10-year migration trend scenario will provide the lowest number of homes, minor negative effects have been recorded.</p> <p>The effects of additional housing on energy efficiency will depend on the design and layout of housing, therefore effects are uncertain for all three options.</p>
SA Objective 15: Facilitate a sustainable and growing economy for	+	++?	+	<p>All three housing scenarios propose the development of additional housing. The residents of these new homes will provide an increased workforce, attracting business to the Borough.</p> <p>The amount of housing proposed by each scenario will influence the number of residents, and therefore size of the workforce, within the Borough and therefore may increase the amount of business attracted to the Borough.</p>

SA Objectives	Selected option: Demographic-based scenario	Alternative Option: Economic-led growth scenario	Alternative option: 10-year migration trend scenario	Justification
<p>the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres</p>				<p>Scenarios proposing greater amounts of housing may attract more business than those proposing smaller amounts of housing.</p> <p>The economic-led scenario provides for the greatest number of homes of the three housing scenarios, therefore providing the greatest workforce. In addition, this scenario would provide housing to match the growth in local jobs and could therefore provide a more localised workforce. An significant positive effect is likely for this housing scenario. This effect is uncertain as the SHMA recognises that the labour markets of the South Hertfordshire authorities are closely interlinked, therefore it is not known whether a high level of in and out commuting would continue even if homes were provided in line with job growth in Hertsmere.</p> <p>The selected demographic-based scenario provides for the next highest number of homes of the three housing scenarios. Whilst it does not provide housing to match the growth in local jobs, the south Hertfordshire authorities have a strongly connected labour market therefore a minor positive effect is likely for this scenario.</p> <p>The 10-year migration trend scenario provides for the lowest number of homes and therefore a minor positive effect is likely for this scenario.</p>



**Table A5.2: Affordable housing**

SA Objective	SA Score	Justification
<p><b><u>1. Education</u></b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>2. Services</u></b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>3. Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs.</p>	++?	Requiring 35 to 40% housing to be provided as affordable housing in larger developments is likely to significantly contribute towards meeting housing needs, particularly in terms of provision of affordable housing. This effect is uncertain as it is not known what threshold will be used for 'larger' developments and therefore the total amount of affordable housing to be provided is uncertain.
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>7. Historic Environment</u></b></p> <p>To protect or enhance historic buildings, heritage</p>	0	The proposed approach is not expected to have an effect on this SA objective.

assets and archaeological sites.		
<b><u>8. Landscape</u></b> To maintain and enhance the quality of countryside and landscape.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>9. Greenhouse Gas Emissions</u></b> To reduce greenhouse gas emissions, including a reduced dependence on the private car.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>10. Biodiversity and Geodiversity</u></b> To protect and enhance biodiversity and geodiversity.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>11. Water quality and quantity</u></b> To improve water quality and manage water resources sustainably.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>12. Flooding</u></b> To minimise the risk of flooding taking account of climate change.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>13. Air Quality</u></b> To improve local air quality.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>14. Energy Efficiency</u></b> To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>15. Economy</u></b> Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres.	0	The proposed approach is not expected to have an effect on this SA objective.

**Table A5.3: Self-build housing**

SA Objective	SA Score	Justification
<p><b><u>1. Education</u></b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>2. Services</u></b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>3. Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs.</p>	+	Requiring larger developments to provide land for self-build homes will contribute positively to the mix of housing types in the Borough, therefore having minor positive effects on this objective.
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources.</p>	0	The proposed approach is not expected to have an effect on this SA objective.
<p><b><u>7. Historic Environment</u></b></p>	0	The proposed approach is not expected to have an effect on this SA objective.

To protect or enhance historic buildings, heritage assets and archaeological sites.		
<b><u>8. Landscape</u></b> To maintain and enhance the quality of countryside and landscape.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>9. Greenhouse Gas Emissions</u></b> To reduce greenhouse gas emissions, including a reduced dependence on the private car.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>10. Biodiversity and Geodiversity</u></b> To protect and enhance biodiversity and geodiversity.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>11. Water quality and quantity</u></b> To improve water quality and manage water resources sustainably.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>12. Flooding</u></b> To minimise the risk of flooding taking account of climate change.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>13. Air Quality</u></b> To improve local air quality.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>14. Energy Efficiency</u></b> To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.	0	The proposed approach is not expected to have an effect on this SA objective.
<b><u>15. Economy</u></b> Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing	0	The proposed approach is not expected to have an effect on this SA objective.

for vital and viable town centres.		
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**Table A5.4: Employment requirement options**

SA Objectives	Selected Option: Employment-led Scenario	Alternative option: Labour Supply Scenario	Alternative option: Higher Growth Scenario	Justification
SA Objective 1: To improve access to education, training, opportunities for lifelong learning and employability	0	0	0	All three scenarios provide for additional jobs only and do not provide for educational facilities. Although additional jobs within the Borough may include apprenticeship and trainee opportunities, this is unknown at present and is not affected by the number of jobs provided under each scenario. Therefore, negligible effects are likely for each scenario for this SA Objective.
SA Objective 2: To ensure ready access to essential services and facilities for all residents	0	0	0	All three scenarios provide for additional jobs within the Borough. However, this is unlikely to place additional pressures on services and facilities as workers are more likely to make use of the services and facilities near their homes than their workplaces. Therefore, all three scenarios are likely to have negligible effects with regard to this SA Objective.
SA Objective 3: To ensure the provision of housing, including affordable housing and a mix that meets local needs	0	0	0	The SHMA states that the labour market of the south Hertfordshire authorities is very integrated, i.e. all authorities experience high levels of in- and out-commuting between them. Therefore, the varying levels of job growth proposed in each scenario is unlikely to place any notable pressures on housing provision in Hertsmere, as additional workers within the Borough will not necessarily require housing within the Borough. Therefore, all three scenarios are likely to have negligible effects.
SA Objective 4: To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces	0	0	0	The effects of additional job provision on community cohesion, crime, deprivation and community space provision will depend on the design and location of employment development. However, such issues will not be influenced by the overall amount of job provision; rather they will be determined through the detailed proposals for individual employment sites. Therefore, the likely effects of all three options are negligible for this SA objective.
SA Objective 5: To improve population's health and reduce inequalities	0	0	0	All three scenarios provide for additional jobs within the Borough. However, this is unlikely to place additional pressures on health services and facilities as workers are more likely to make use of the services and facilities near their homes than their workplaces. Therefore, all three scenarios are likely to have negligible effects with regard to this SA Objective.
SA Objective 6: To safeguard soil quantity and quality including reducing contamination and	+/-	+/-	+/-	All three scenarios propose the growth of job provision within the Borough and thus an increase in employment development. Due to the constrained nature of the Borough, this development will likely be built on brownfield and greenfield land. Therefore, both brownfield sites could be redeveloped and high quality agricultural land lost. Additionally, brownfield redevelopment could help to protect mineral

SA Objectives	Selected Option: Employment-led Scenario	Alternative option: Labour Supply Scenario	Alternative option: Higher Growth Scenario	Justification
prioritising previously developed land, as well as protecting mineral resources				resources, whilst greenfield and Green Belt development could cause sterilisation of mineral reserves. Therefore, mixed minor positive and negative effects are likely for each scenario for this SA Objective.
SA Objective 7: To protect or enhance historic buildings, heritage assets and archaeological sites	--?	-?	--?	<p>All three scenarios propose the growth of job provision within the Borough and thus an increase in employment development. Due to the constrained nature of the Borough, some of this development will likely be built within the settings of sensitive historic and heritage assets. Although employment development may be planned to be located suitably and designed to limit harm to the Borough's historic and heritage assets, this is not known at this stage.</p> <p>The amount of job growth proposed by each scenario however may influence the likelihood that employment development will be located within the settings of sensitive historic and heritage assets. Scenarios proposing greater amounts of job growth are more likely to result in employment development located within the settings of sensitive historic and heritage assets.</p> <p>The selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs and therefore an uncertain significant negative effect is likely for these scenarios.</p> <p>The labour supply scenario makes provision for the lowest number of jobs and therefore, an uncertain minor negative effect is likely for this scenario.</p>
SA Objective 8: To maintain and enhance the quality of countryside and landscape	--?	-?	--?	<p>All three scenarios propose the growth of job provision within the Borough and thus an increase in employment development. Due to the constrained nature of the Borough, this development may be placed in locations where new development could impact the character of the surrounding landscape and settlements. Moreover, this development may be placed in the Green Belt and lead to a higher risk of settlement coalescence, impacting its openness and landscape value. Although employment development may be planned to be located suitably and designed to limit and mitigate harm to the Borough's landscape, this is not known at this stage.</p> <p>The amount of job growth proposed by each scenario however may influence the likelihood that employment development will be placed in the Green Belt and in locations where new development could impact the character of the surrounding landscape and settlements. Scenarios proposing greater amounts of job growth are more likely to result in employment development located in the Green Belt and where new development could impact the character of the surrounding landscape and settlements.</p> <p>The selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs and therefore an uncertain significant negative effect is likely for these scenarios.</p> <p>The labour supply scenario makes provision for the lowest number of jobs and therefore an uncertain minor negative effect is likely for this scenario.</p>

SA Objectives	Selected Option: Employment-led Scenario	Alternative option: Labour Supply Scenario	Alternative option: Higher Growth Scenario	Justification
SA Objective 9: To reduce greenhouse gas emissions, including a reduced dependence on the private car	++?/--?	+?/-?	++?/--?	<p>All three scenarios propose the growth of job provision within the Borough and thus an increase in employment development. The construction of employment sites, including the manufacture of building materials, associated construction traffic and energy requirements during construction, as well as the commuter transport and energy requirements of the resultant employment operations, will increase greenhouse gas emissions within the Borough. Although development may be planned to be located suitably and designed to incorporate sustainable transport and reduced private care usage, this is not known at this stage</p> <p>The amount of job growth proposed by each scenario may influence the accessibility of employment opportunities, as providing employment opportunities in more accessible locations is more likely to decrease private car usage by workers, and may reduce out-commuting. Additionally, greater amounts of employment development could result in the greatest amount of funding for additional sustainable transport infrastructure, again reducing private car usage across the Borough.</p> <p>Therefore, as the selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs, mixed uncertain significant positive and uncertain significant negative effects are likely for these scenarios.</p> <p>The labour supply scenario makes provision for the lowest number of jobs and therefore a mixed uncertain minor positive and uncertain minor negative effect is likely for this scenario.</p>
SA Objective 10: To protect and enhance biodiversity and geodiversity	--?	-?	--?	<p>All three scenarios propose the growth of job provision within the Borough and thus an increase in employment development. Due to the constrained nature of the Borough, this development could be located in proximity to sensitive and designated biodiversity sites and other biodiversity features. Although development may be planned to be located suitably and designed to limit harm to biodiversity and geodiversity, this is not known at this stage.</p> <p>The amount of job growth proposed by each scenario may influence the likelihood that employment development will be located in proximity to sensitive and designated biodiversity sites and other biodiversity features, due to greater land take. Scenarios proposing greater amount of job growth are more likely to result in employment land in proximity to sensitive and designated biodiversity sites and other biodiversity features.</p> <p>The selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs and therefore uncertain significant negative effects are likely for these scenarios.</p> <p>The labour supply scenario make provision for the lowest number of jobs and therefore uncertain minor negative effects are likely for this scenario.</p>
SA Objective 11: To improve water quality and manage	--?	-?	--?	The effect of all three scenarios upon water quality and quantity will depend largely on factors such as whether additional sewage infrastructure is provided to accommodate job growth in order to avoid

SA Objectives	Selected Option: Employment-led Scenario	Alternative option: Labour Supply Scenario	Alternative option: Higher Growth Scenario	Justification
water resources sustainably				<p>existing sewage infrastructure being over capacity, which cannot be determined at this stage.</p> <p>Greater job growth could therefore place the greatest pressure on sewage infrastructure (although developers are required to fund any necessary upgrades to accommodate increased flows from development). In addition, greater job growth would increase demand for potable water in Hertsmere and it is not known whether adequate supply would be available to meet this demand.</p> <p>The selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs and therefore uncertain significant negative effects are likely for these scenarios.</p> <p>The labour supply scenario makes provision for the lowest number of jobs and therefore uncertain minor negative effects are likely for this scenario.</p>
SA Objective 12: To minimise the risk of flooding taking account of climate change	--?	-?	--?	<p>Due to the constrained nature of the Borough, the resultant employment development from each job growth scenario may be located on greenfield sites, thereby increasing the impermeable land coverage and contributing to flooding, and possibly located within the small number of areas within the Borough susceptible to flooding. Although employment development may be planned to be located suitably to limit flood risk, this is not known at this stage.</p> <p>The amount of job growth proposed by each scenario however may influence the likelihood that employment development will be placed on greenfield sites or in areas susceptible to flood risk. Scenarios proposing greater amounts of job growth are more likely to result in housing located on greenfield sites or in areas susceptible to flood risk.</p> <p>Therefore, as the selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs, uncertain significant negative effects are likely for these scenarios.</p> <p>The labour supply scenario makes provision for the lowest number of jobs and therefore uncertain minor negative effects are likely for this scenario.</p>
SA Objective 13: To improve local air quality	++?/--?	+?/-?	++?/--?	<p>All three scenarios propose the growth of job provision within the Borough and thus an increase in employment development. This could result in additional private car usage by the increase in commuters. Emissions from these vehicles are likely to contribute to poorer air quality within the Borough. Although development may be planned to be located suitably and designed to incorporate vegetation, sustainable transport and reduced private care usage, this is not known at this stage</p> <p>The amount of job growth proposed by each scenario however may influence the accessibility of employment opportunities, as providing employment opportunities in more accessible locations is likely to decrease private car usage by workers, and may reduce out-commuting. Additionally, greater amounts of employment development could result in the greater amounts of funding for additional sustainable</p>



SA Objectives	Selected Option: Employment-led Scenario	Alternative option: Labour Supply Scenario	Alternative option: Higher Growth Scenario	Justification
				<p>transport infrastructure, again reducing private car usage across the Borough.</p> <p>Therefore, as the selected employment led scenario and the alternative higher growth scenario provide for the greatest number of jobs, mixed uncertain significant positive and uncertain significant negative effects are likely for these scenarios.</p> <p>The labour supply scenario makes provision for the lowest number of jobs and therefore a mixed uncertain minor positive and uncertain minor negative effect is likely for this scenario.</p>
SA Objective 14: To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy	--?	-?	--?	<p>Construction of employment sites will require high levels of energy use, and businesses are likely to use substantial amounts of energy in their normal operations. The greater the quantum of employment to be delivered, the higher the overall increase in energy consumption. As such, the employment-led and higher growth scenarios are assessed as having significant negative effects on this objective. As the labour supply scenario will provide the lowest number of jobs, minor negative effects have been recorded.</p> <p>The effects of job growth on energy efficiency will depend on the design of employment development, therefore effects are uncertain for all three options..</p>
SA Objective 15: Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres	++	-	++	<p>The Council has determined that the Borough has need for an additional 9,000 jobs over the plan period. Therefore, the selected employment led scenario and the alternative higher growth scenario would likely have a significant positive effect with regard to this SA Objective, as they would provide enough or more than enough jobs to meet the demand.</p> <p>The labour supply scenario makes provision for less than the required need and therefore a minor negative effect is likely for this scenario.</p>

# Appendix 6

## SA Matrices for Potential Development Approaches

**Table A6.1: Redevelopment of urban brownfield sites**

SA Objective	SA Score	Justification
<p><b><u>1. Education</u></b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	++	Option 1 states that provision will be made for additional primary and secondary school places, or one or more new primary schools. A significant positive effect is therefore likely.
<p><b><u>2. Services</u></b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	++	Urban brownfield sites are more likely to be located in Town or Local Centres, which contain numerous services and facilities. Option 1 also makes provision for a range of services including education, healthcare, open space, leisure, recreation and community facilities. These are likely to be easily accessible due to proposed improvements to pedestrian/cycle connectivity, bus services and local and wider strategic highway networks. A significant positive effect is therefore likely.
<p><b><u>3. Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs.</p>	++	Option 1 makes provision for up to 3,000 new homes. This will contribute significantly to the provision of housing in the Borough, including those which are affordable.
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	+	Option 1 states that provision will be made for community spaces including open space, leisure, recreation and community facilities.  Levels of crime and fear of crime will be influenced through more detailed design proposals.
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	++	Option 1 states that provision will be made for additional healthcare provision, as well as leisure and recreation facilities. This is likely to have a significant positive effect on people's health by improving access to these facilities and local capacity. Furthermore, improvements to pedestrian and cycle connectivity could encourage active travel, therefore increasing physical activity of residents. In addition, improved public transport services, may reduce inequalities by enhancing accessibility and reducing reliance on the private car.
<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising</p>	+	The redevelopment of as much brownfield land as possible is likely to reduce the loss of greenfield land or Grade 1, 2 or 3a agricultural land. In addition, a very large proportion of the Borough is located within a Minerals Safeguarding Area, therefore all options are likely to result in development within this. However, prioritising use of brownfield land is likely to minimise sterilisation of mineral

previously developed land, as well as protecting mineral resources.		resources, as resources at these sites are likely to have been sterilised by previous development. A minor positive effect is therefore likely.
<p><b><u>7. Historic Environment</u></b></p> <p>To protect or enhance historic buildings, heritage assets and archaeological sites.</p>	+/-/?	The development of up to 3,000 homes on urban brownfield sites could change the character and appearance of towns. This could have adverse effects on the historic environment, particularly heritage assets present in the urban area and their settings. However, this effect is uncertain because the actual effect on heritage assets will depend on the location, scale, design and layout of the new development. For example, the urban area of Bushey contains a large number of Listed Buildings whereas Borehamwood does not. Conversely, Option 1 could lead to the regeneration of degraded land, which could improve the setting of heritage assets.
<p><b><u>8. Landscape</u></b></p> <p>To maintain and enhance the quality of countryside and landscape.</p>	+/-	The development of up to 3,000 homes on urban brownfield sites will involve a significant increase in densities in central locations according to Option 1. This could have an adverse effect on the quality of the townscape. However, the fact that Option 1 encourages the redevelopment of urban brownfield sites is likely to have a positive effect on the countryside and landscape by reducing the extent to which Green Belt land needs to be built on, which may contribute to reducing the risk of settlement coalescence. Furthermore, the redevelopment of urban brownfield sites may also regenerate degraded land. A mixed minor positive and minor negative effect is therefore likely.
<p><b><u>9. Greenhouse Gas Emissions</u></b></p> <p>To reduce greenhouse gas emissions, including a reduced dependence on the private car.</p>	++/--	Option 1 states that improvements will be made to pedestrian/cycle connectivity, as well as bus services within and between towns. Option 1 also makes provision for more electric charging points. This is expected to significantly reduce greenhouse gas emissions, at the same time as reducing dependence on the private car. However, the development of up to 3,000 homes is expected to increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion in urban areas. A mixed significant positive and minor negative effect is therefore likely.
<p><b><u>10. Biodiversity and Geodiversity</u></b></p> <p>To protect and enhance biodiversity and geodiversity.</p>	+?	The redevelopment of urban brownfield sites is likely to have a positive effect on biodiversity by minimising development of greenfield land. Generally, greenfield land is more likely to support a greater number and range of species than developed land. In addition, the majority of Hertsmere's biodiversity designations are located in rural areas. Furthermore, Option 1 states that enhancements will be made to green infrastructure within new development (including parks, green spaces and other natural features). However, brownfield land can also be important for wildlife and redevelopment may result in a loss of biodiversity. A minor positive but uncertain effect is therefore likely.
<p><b><u>11. Water quality and quantity</u></b></p> <p>To improve water quality and manage water</p>	-?	The development of up to 3,000 homes across a large number of small sites, as is the case in Option 1, may not provide the funding needed for the additional infrastructure required. As such, it is also uncertain how sufficient wastewater infrastructure will be provided. As water resources are

resources sustainably.		limited in the Borough, it is also uncertain how the needs of new development will be met in this regard. Source Protection Zones are located to the north west of the Borough. Whether these are affected by this option will depend on the location of the proposed development sites. Overall, a minor negative effect with uncertainty is likely.
<p><b>12. Flooding</b></p> <p>To minimise the risk of flooding taking account of climate change.</p>	0?	There are a limited number of areas at risk of flooding in Hertsmere. The redevelopment of brownfield sites is not likely to result in significant increases in surface water flooding. This is because brownfield sites already contain some form of development (or have done in the past). Despite this, the risk of flooding depends on the existing permeability and location of proposed development sites. A negligible but uncertain effect is therefore recorded.
<p><b>13. Air Quality</b></p> <p>To improve local air quality.</p>	++/-/?	Option 1 states that improvements will be made to pedestrian/cycle connectivity, as well as bus services within and between towns. Option 1 also makes provision for more electric charging points. This is expected to significantly reduce emissions of air pollutants associated with traffic, by reducing dependence on the private car. However, the development of up to 3,000 homes is expected to increase the amount of cars on the road despite availability of more sustainable transport modes. This may have adverse effects on local air quality. Furthermore, the industrial development proposed by this option may also have an adverse effect on local air quality, although this depends on the type of industry. It is unknown at this stage whether these brownfield sites will be located in Air Quality Management Areas (AQMAs), but focusing development in urban areas is more likely to lead to increases in traffic in AQMAs, which could exacerbate existing air quality issues. Overall, a mixed significant positive and minor negative effect is likely.
<p><b>14. Energy Efficiency</b></p> <p>To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.</p>	0	Option 1 is not expected to have an effect on this SA objective.
<p><b>15. Economy</b></p> <p>Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres.</p>	++	Option 1 makes provision for additional industrial and commercial development across built up areas within the Borough. This is likely to help facilitate a sustainable and growing economy for the Borough, by creating economic and employment opportunities. The allocation of housing and commercial development to built up areas will provide for vital and viable town centres, due to an increase in the number of people and associated increase in spending. Some types of commercial development may also attract more people into the town centres. In addition, this option would include high speed broadband network improvements, which may make the area more attractive to business and may increase opportunities for residents to work from home. A significant positive effect is therefore likely.



**Table A6.2: Growth through new garden suburbs**

SA Objective	SA Score	Justification
<p><b><u>1. Education</u></b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	++	Option 2 states that provision will be made for one or more new primary schools and additional secondary school places. A significant positive effect is therefore likely.
<p><b><u>2. Services</u></b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	++	Option 2 will see the expansion of Borehamwood, Potters Bar, Bushey and Radlett. Although the expansion of these towns may increase pressure on existing services and facilities, Option 2 proposes the development of new neighbourhood centres. Option 2 also makes provision for a range of services including education, healthcare, open space, leisure, recreation and community facilities. These and the neighbourhood centres are likely to be easily accessible due to proposed improvements to pedestrian/cycle connectivity, bus services and local and wider strategic highway networks. A significant positive effect is therefore likely.
<p><b><u>3. Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs.</p>	++	Option 2 makes provision for up to 300 to 500 new homes in each garden suburb (although no overall figure is given). This will contribute significantly to the provision of housing in the Borough, including those which are affordable.
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	+	<p>Option 2 states that provision will be made for community spaces including open space, leisure, recreation and community facilities.</p> <p>Levels of crime and fear of crime will be influenced through more detailed design proposals, which are unknown at this stage.</p>
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	++	Option 2 states that provision will be made for additional healthcare provision, as well as leisure and recreation facilities. This is expected to have a significant positive effect on people's health by improving access to these facilities and local capacity. Furthermore, improvements to pedestrian and cycle connectivity could encourage active travel, therefore increasing physical activity of residents. In addition, improved public transport services, may reduce inequalities by enhancing accessibility and reducing reliance on the private car.
<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising</p>	-	Growth through new garden suburbs is likely to result in a loss of greenfield land, which in the areas of search consists of Grade 3 agricultural land. In addition, a very large proportion of the Borough is located within a Minerals Safeguarding Area, therefore all options are likely to result in

previously developed land, as well as protecting mineral resources.		development within this. A minor negative effect is therefore likely.
<p><b><u>7. Historic Environment</u></b></p> <p>To protect or enhance historic buildings, heritage assets and archaeological sites.</p>	-?	<p>The development of up to 300 to 500 homes at each of Borehamwood, Potters Bar, Bushey and Radlett could change the character and appearance of these urban areas. This could have adverse effects on the historic environment, particularly heritage assets present within these urban areas and their settings. However, this effect is uncertain because the actual effect on heritage assets will depend on the location, scale, design and layout of the new development. For example, the urban area of Bushey contains a large number of Listed Buildings. Borehamwood, on the other hand, has fewer.</p>
<p><b><u>8. Landscape</u></b></p> <p>To maintain and enhance the quality of countryside and landscape.</p>	-?	<p>The development of up to 300 to 500 homes at each of Borehamwood, Potters Bar, Bushey and Radlett could have an adverse effect on the quality of the countryside and townscape. This is because the development of new garden suburbs may result in development of Green Belt land, which could contribute to settlement coalescence. For example, the development of a garden suburb to the west of Borehamwood may result in settlement coalescence with Elstree. Likewise, the development of a garden suburb to the north east of Radlett may result in settlement coalescence with Shenley.</p> <p>Furthermore, the development of a garden suburb in a Landscape Character Area considered to be 'strong' in character could have an adverse effect on quality of landscape. Bushey and Borehamwood are both located within close proximity to a Landscape Character Area considered to be 'strong' in character, namely LCA 23 (Elstree Ridge and Slopes).</p> <p>Overall, a minor negative but uncertain effect is likely.</p>
<p><b><u>9. Greenhouse Gas Emissions</u></b></p> <p>To reduce greenhouse gas emissions, including a reduced dependence on the private car.</p>	+/-/?	<p>Option 2 states that improvements will be made to pedestrian/cycle connectivity, as well as inter-urban bus services. This is expected to encourage more people to travel by sustainable modes of transport, therefore reducing greenhouse gas emissions by reducing dependence on the private car. However, the development of up to 300 to 500 homes is expected to increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion in urban areas. In addition, improvements to the wider strategic highway network<sup>92</sup> may make driving a more attractive mode of travel, thus encouraging more people to travel by car, although increased efficiency of the highways network may reduce congestion, thus minimising greenhouse gas emissions. A mixed minor positive and negative effect with uncertainty is therefore likely.</p>

<sup>92</sup> Note that improvements to the local highway network are expected to be focused on enhancing safety; therefore these are not expected to make significant differences to the attractiveness of driving. Improvements to the strategic highways network is more likely to increase capacity and efficiency, therefore are considered more likely to have significant effects on the number of cars on the road.



<p><b><u>10. Biodiversity and Geodiversity</u></b></p> <p>To protect and enhance biodiversity and geodiversity.</p>	<p>+/-/?</p>	<p>The development of new garden suburbs may have an adverse effect on biodiversity due to a loss in greenfield land, which is more likely to support a greater number and range of species than previously developed land and garden suburbs are most likely to be located on greenfield land on the fringes of existing settlements. The areas of search to the East of Bushey, west of Borehamwood, and north of Potters Bar include Ecosites and the area of search to the south of Borehamwood includes an Ecosite and Wildlife site adjacent to the urban area. Development at any of the areas of search has potential to lead to loss or degradation of nature conservation sites lying either within or next to the areas of search. However, Option 2 states that enhancements will be made to green infrastructure (including parks, green spaces and other natural features), which may lead to habitat improvements and therefore benefit biodiversity. A mixed minor positive and negative effect is therefore likely. This effect is uncertain as effects on biodiversity depend on the exact location and design of development.</p>
<p><b><u>11. Water quality and quantity</u></b></p> <p>To improve water quality and manage water resources sustainably.</p>	<p>-/?</p>	<p>The development of up to 300 to 500 homes in each new garden suburbs will increase demand for water and wastewater services. However, it is uncertain how sufficient wastewater infrastructure will be provided. Additionally, as water resources are limited in the Borough, it is uncertain how the needs of new development will be met in this regard. Lastly, garden suburbs located at Radlett and Potters Bar could lead to degradation of water quality in Source Protection Zones located to the north west of the Borough. A mixed uncertain and negative effect is therefore likely.</p>
<p><b><u>12. Flooding</u></b></p> <p>To minimise the risk of flooding taking account of climate change.</p>	<p>-?</p>	<p>There are a limited number of areas at risk of flooding in Hertsmere, therefore the risk of flooding depends on the location of proposed development sites. The development of garden suburbs to the east of Bushey, to the north east of Radlett and adjacent to Potters Bar could fall into Flood Zones 2 or 3, which would have a significant negative effect on this objective, as homes may be at a high risk of flooding. However, the incorporation of flood mitigation into the design of these new garden suburbs could reduce this risk of flooding, therefore downgrading the significant effect to a minor effect. Overall, a minor negative but uncertain effect is expected.</p>
<p><b><u>13. Air Quality</u></b></p> <p>To improve local air quality.</p>	<p>+/-/?</p>	<p>Option 2 states that improvements will be made to pedestrian/cycle connectivity, as well as inter-urban bus services. This is expected to reduce dependence on the private car, therefore minimising local air pollution. However, the development of up to 300 to 500 homes in each garden suburb is expected to increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion in urban areas. This may have adverse effects on local air quality. Furthermore, the development of a garden suburb to the south of Potters Bar would be in an Air Quality Monitoring Area (AQMA), namely Dove Lane (AQMA 1). Development here would lead to an increase in traffic movements within the AQMA, exacerbating existing air quality issues. In addition, improvements to the wider strategic highway network may make driving a more attractive mode of travel, thus encouraging more people to travel by car, although increased efficiency of the highways network may reduce congestion, thus minimising air</p>

		pollution from transport. A mixed minor positive and negative effect with uncertainty is therefore likely.
<p><b>14. Energy Efficiency</b></p> <p>To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.</p>	0	Option 2 is not expected to have an effect on this SA objective.
<p><b>15. Economy</b></p> <p>Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres.</p>	+	Option 2 proposes the development of neighbourhood centres, which are expected to include a range of shops, services and small business units. This is expected to help facilitate a sustainable and growing economy for the Borough, by creating economic and employment opportunities, although these may be limited in number. Overall, a minor positive effect is expected.

**Table A6.3: Supporting larger rural communities – growth of key villages**

SA Objective	SA Score	Justification
<p><b>1. Education</b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	++	Option 3 states that any development with up to 300 to 500 new homes will require one or more primary schools and additional secondary school places. Additionally, Option 3 states that any development with up to 100 new homes will require additional primary and secondary school places. Overall, a significant positive effect is likely.
<p><b>2. Services</b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	++	Option 3 will see the expansion of Elstree and Shenley. Although the expansion of these villages will increase pressure on services and facilities, Option 3 proposes the development of a new neighbourhood centre/village focus. Option 3 also makes provision for a range of services including education, healthcare, open space, leisure, recreation and community facilities. These and the neighbourhood centre/village focus are likely to be easily accessible due to proposed improvements to pedestrian/cycle connectivity, inter-urban bus services and local and wider strategic highway networks. A significant positive effect is therefore likely.
<p><b>3. Housing Provision</b></p> <p>To ensure the provision of housing, including</p>	++	Option 3 makes provision for up to 1,000 new homes across Elstree and Shenley. This will contribute significantly to the provision of housing in the Borough, including those which are

affordable housing and a mix that meets local needs.		affordable.
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	++	<p>Option 3 states that provision will be made for a neighbourhood centre/village focus, as well as a number of community spaces including open space, leisure, recreation and community facilities.</p> <p>Development to the west of Shenley would contribute to providing housing and supporting services within one of the 20% most deprived areas in terms of barriers to housing and services.</p> <p>Levels of crime and fear of crime will be influenced through more detailed design proposals, which are unknown at this stage.</p>
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	++	<p>Option 3 states that provision will be made for additional healthcare provision, as well as leisure and recreation facilities. This is expected to have a significant positive effect on people's health by improving access to these facilities and local capacity. Furthermore, improvements to pedestrian and cycle connectivity could encourage active travel, therefore increasing physical activity of residents. In addition, improved public transport services, may reduce inequalities by enhancing accessibility and reducing reliance on the private car.</p>
<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources.</p>	-	<p>The expansion of Elstree and Shenley is likely to result in a loss of greenfield land, which in the area of search consists of Grade 3 agricultural land. In addition, a very large proportion of the Borough, including the areas of search, is located within a Minerals Safeguarding Area, therefore all options are likely to result in development within this and therefore sterilisation of mineral resources. A minor negative effect is therefore likely.</p>
<p><b><u>7. Historic Environment</u></b></p> <p>To protect or enhance historic buildings, heritage assets and archaeological sites.</p>	-?	<p>The development of up to 1,000 homes at Elstree and Shenley could change the character and appearance of these urban areas. This could have adverse effects on the historic environment, particularly heritage assets present within these urban areas and their settings. Both Elstree and Shenley contain Conservation Areas, archaeological sites and a number of Listed Buildings. However, the actual effect of development on these heritage assets is uncertain because it depends on the location, scale, design and layout of the new development.</p>
<p><b><u>8. Landscape</u></b></p> <p>To maintain and enhance the quality of countryside and landscape.</p>	-?	<p>The development of up to 1,000 new homes at Elstree and Shenley could have an adverse effect on the quality of the countryside and landscape. The expansion of Shenley to the west may contribute towards future settlement coalescence with Radlett, although it is uncertain whether this would occur.</p> <p>Furthermore, the expansion of Elstree into the area of search for housing, to the south of the village, would result in development within a Landscape Character Area (LCA) considered to be 'strong' in character ( LCA 23, Elstree Ridge and Slopes) and could therefore have an adverse effect</p>

		on quality of landscape.
<p><b><u>9. Greenhouse Gas Emissions</u></b></p> <p>To reduce greenhouse gas emissions, including a reduced dependence on the private car.</p>	+/-	<p>Option 3 states that improvements will be made to pedestrian/cycle connectivity, as well as inter-urban bus services. This is expected to reduce greenhouse gas emissions, at the same time as reducing dependence on the private car. Additionally, high speed broadband network improvements may increase the ability of residents to work from home, reducing the number of journeys they make by car. However, the development of up to 1,000 homes is expected to increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion. A mixed minor positive and negative effect is therefore likely.</p>
<p><b><u>10. Biodiversity and Geodiversity</u></b></p> <p>To protect and enhance biodiversity and geodiversity.</p>	+/-/?	<p>The expansion of Elstree and Shenley may have an adverse effect on biodiversity, as development is likely to lead to a loss in greenfield land, which is more likely to support a greater number and range of species than previously developed land. The area of search for employment to the west of Elstree coincides with Composers Park Wildlife Site and Land South of Watford Road Ecosite. In addition, there are a number of Wildlife Sites and Ecosites within proximity to Shenley, which could be lost to or degraded by development in the area. However, Option 3 states that enhancements will be made to green infrastructure (including parks, green spaces and other natural features), which may contribute to habitat creation and an increase in local biodiversity. A mixed minor positive and negative effect is therefore likely. This effect is uncertain as effects on biodiversity depend on the exact location and design of development.</p>
<p><b><u>11. Water quality and quantity</u></b></p> <p>To improve water quality and manage water resources sustainably.</p>	-/?	<p>The development of up to 1,000 homes at Elstree and Shenley provides an opportunity to plan comprehensively for the future of each village, including infrastructure. However, it is uncertain how sufficient wastewater infrastructure will be provided. Additionally, as water resources are limited in the Borough, it is uncertain how the needs of new development will be met in this regard. A mixed minor negative and uncertain effect is therefore likely.</p>
<p><b><u>12. Flooding</u></b></p> <p>To minimise the risk of flooding taking account of climate change.</p>	-?	<p>There are a limited number of areas at risk of flooding in Hertsmere and the risk of flooding depends on the location of proposed development sites. The expansion of Shenley to the south could result in development falling within Flood Zones 2 or 3. Yet the incorporation of flood mitigation into the design of development could reduce the risk of flooding. Elstree is not located near Flood Zones 2 or 3 so development here would not be at risk of flooding. Overall, a minor negative but uncertain effect is expected.</p>
<p><b><u>13. Air Quality</u></b></p> <p>To improve local air quality.</p>	+/-	<p>Option 3 states that improvements will be made to pedestrian/cycle connectivity, as well as inter-urban bus services. This is expected to reduce dependence on the private car, therefore minimising local air pollution. Furthermore, high speed broadband network improvements may increase the ability of residents to work from home, reducing the number of journeys they make by car. This</p>

		may also help reduce local air pollution. However, the development of up to 1,000 homes is expected to increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion. This may have adverse effects on local air quality. Furthermore, the increase in number of cars on the road as a result of the expansion of Elstree is likely to exacerbate air quality issues in the Elstree Crossroads AQMA (AQMA 5). Overall, a mixed minor positive and negative effect is likely.
<p><b><u>14. Energy Efficiency</u></b></p> <p>To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.</p>	0	Option 3 is not expected to have an effect on this SA objective.
<p><b><u>15. Economy</u></b></p> <p>Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres.</p>	++?	Option 3 proposes the development of a new neighbourhood centre/village focus, which will contain a range of shops and services. Option 3 also states that the extension of either village could incorporate additional local employment opportunities, for example in Elstree's case an expansion of the nearby business park at Centennial Park and/or adjacent business estates on Watford Road. As this is 'potential', there is some uncertainty with regards to effects on this objective. This is expected to help facilitate a sustainable and growing economy for the Borough, by creating economic and employment opportunities. This option would also include high speed broadband network improvements, which may make the area more attractive to businesses and/or increase the ability of residents to work from home, thus further broadening employment opportunities and economic growth. Overall, a significant positive effect is expected.

**Table A6.4: Meeting the needs of other villages**

SA Objective	SA Score	Justification
<p><b><u>1. Education</u></b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	++	Option 4 states that any development with up to 250 new homes or 100 new homes will require new primary school places and additional secondary school place in nearby towns. A significant positive effect is therefore likely.
<p><b><u>2. Services</u></b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	++	Option 4 will see the expansion of smaller villages, namely South Mimms, Letchmore Heath, Aldenham, Ridge and Patchetts Green. Although the expansion of these villages will increase pressure on services and facilities, Option 4 would require the development of a neighbourhood centre in any development with up to 250 new homes. Option 4 also makes provision for a range of services including education, healthcare, open space, leisure, recreation and community facilities. These and the neighbourhood centre are likely to be easily accessible due to proposed improvements to pedestrian/cycle connectivity, improvements to bus services and local and wider strategic highway networks. A significant positive effect is therefore likely.
<p><b><u>3. Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs.</p>	++	Option 4 makes provision for up to 300 new homes. This will contribute significantly to the provision of housing in the Borough, including those which are affordable.
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	++	<p>Option 4 states that provision will be made for a neighbourhood centre as well as a number of community spaces including open space, leisure, recreation and community facilities.</p> <p>The areas of search identified for this option lie primarily within areas classified as 20% most deprived with regards to housing and services. As such, development at these locations may help to overcome such barriers.</p> <p>Levels of crime and fear of crime will be influenced through more detailed design proposals, which are unknown at this stage.</p>
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	++	Option 4 states that provision will be made for additional healthcare provision, as well as leisure and recreation facilities. This is expected to have a significant positive effect on people's health by improving access to these facilities and local capacity. Furthermore, improvements to pedestrian and cycle connectivity could encourage active travel, therefore increasing physical activity of residents. In addition, improved public transport services, may reduce inequalities by enhancing accessibility and reducing reliance on the private car.

<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources.</p>	<p>-?</p>	<p>The expansion of smaller villages is likely to result in a loss of greenfield land, which is likely to be either Grades 2 or 3 agricultural land around Aldenham, Letchmore Heath and Patchetts Green and Grade 3 agricultural land around South Mimms, Ridge and Junction 23 of the M25. In addition, a very large proportion of the Borough is located within a Minerals Safeguarding Area, therefore all options are likely to result in development within this and may sterilise mineral resources. However, this option includes some areas of search that are outside of the Minerals Safeguarding Area. A minor negative effect is therefore likely, although this is uncertain as effects depend on the exact location of development.</p>
<p><b><u>7. Historic Environment</u></b></p> <p>To protect or enhance historic buildings, heritage assets and archaeological sites.</p>	<p>-?</p>	<p>The development of up to 300 homes in smaller villages (including South Mimms, Letchmore Heath, Aldenham, Ridge and Patchetts Green) could change the character and appearance of these areas. This could have adverse effects on the historic environment, particularly heritage assets present within these areas and their settings. Each of the villages mentioned previously contain a Conservation Area and a number of Listed Buildings. Additionally, Aldenham, South Mimms and Ridge each lie include archaeology sites, therefore development in these villages has potential to reduce access to these and lead to the damage or loss of archaeological artefacts. However, the actual effect of development on these heritage assets is uncertain because it depends on the location, scale, design and layout of the new development.</p>
<p><b><u>8. Landscape</u></b></p> <p>To maintain and enhance the quality of countryside and landscape.</p>	<p>-?</p>	<p>The development of up to 300 homes in smaller villages (including South Mimms, Letchmore Heath, Aldenham, Ridge and Patchetts Green) could have an adverse effect on the quality of the countryside and landscape. This is because the expansion of these villages may result in development within the Green Belt land and contribute towards subsequent settlement coalescence. For example, the expansion of Aldenham, Patchetts Green and Letchmore Heath may contribute towards settlement coalescence between these three villages. None of the villages mentioned fall within an LCA considered 'strong' in character. A mixed minor negative but uncertain effect is expected overall.</p>
<p><b><u>9. Greenhouse Gas Emissions</u></b></p> <p>To reduce greenhouse gas emissions, including a reduced dependence on the private car.</p>	<p>+/-/?</p>	<p>Option 4 states that improvements will be made to pedestrian/cycle connectivity, as well as improvements to bus services. This is expected to reduce greenhouse gas emissions, at the same time as reducing dependence on the private car. Additionally, high speed broadband network improvements may increase the ability of residents to work from home, reducing the number of journeys they make by car. However, the development of up to 300 homes is expected to increase</p>

		the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion. In addition, improvements to the wider strategic highway network may make driving a more attractive mode of travel, thus encouraging more people to travel by car, although increased efficiency of the highways network may reduce congestion, thus minimising greenhouse gas emissions. A mixed minor positive and negative effect with uncertainty is therefore likely.
<p><b><u>10. Biodiversity and Geodiversity</u></b></p> <p>To protect and enhance biodiversity and geodiversity.</p>	+/-/?	The expansion of smaller villages may have an adverse effect on biodiversity due to a loss of greenfield land, which is more likely to support a greater number and range of species than previously developed land. In addition, there are a number of nature conservation designations in these more rural areas, including a number of Wildlife Sites and Ecosites to the south and east of South Mimms, which may be lost or degraded as a result of development. However, Option 4 states that enhancements will be made to green infrastructure (including parks, green spaces and other natural features), which is likely to increase habitat area and connectivity, which would benefit wildlife. A mixed minor positive and negative effect is therefore likely. This effect is uncertain as effects on biodiversity depend on the exact location and design of development.
<p><b><u>11. Water quality and quantity</u></b></p> <p>To improve water quality and manage water resources sustainably.</p>	-/?	The development of up to 300 homes in smaller villages provides an opportunity to plan for the future of each village in a coordinated, rather than piecemeal, way, which may help to ensure that sufficient infrastructure will come forward with any development. However, it is uncertain how sufficient wastewater infrastructure will be provided. Additionally, as water resources are limited in the Borough, it is uncertain how the needs of new development will be met in this regard. Lastly, expansion of Aldenham, Patchetts Green, Letchmore Heath and South Mimms could lead to a negative effect on water quality in Source Protection Zones located to the north west of the Borough. A mixed minor positive and negative effect is therefore likely.
<p><b><u>12. Flooding</u></b></p> <p>To minimise the risk of flooding taking account of climate change.</p>	-?	There are a limited number of areas at risk of flooding in Hertsmere, therefore the risk of flooding depends on the location of proposed development sites. None of the villages mentioned previously (with the exception of South Mimms) are located near Flood Zones 2 or 3 so are not likely to be at high risk of flooding. The expansion of South Mimms may result in development falling within Flood Zones 2 or 3. However, the incorporation of flood mitigation into the design of development could reduce this risk of flooding. Overall, a minor negative but uncertain effect is expected.
<p><b><u>13. Air Quality</u></b></p> <p>To improve local air quality.</p>	+/-/?	Option 4 states that improvements will be made to pedestrian/cycle connectivity, as well as improvements to bus services. This is expected to reduce dependence on the private car, therefore minimising local air pollution. Furthermore, high speed broadband network improvements may increase the ability of residents to work from home, reducing the number of journeys they make by car. This may also help reduce local air pollution. However, the development of up to 300 homes is expected to increase the amount of cars on the road overall, despite availability of more sustainable



		transport modes, and therefore may increase congestion in the villages mentioned previously. This may have adverse effects on local air quality. Furthermore, the increase in number of cars on the road as a result of the expansion of South Mimms may exacerbate poor air quality on Blanche Lane (AQMA 2). In addition, improvements to the wider strategic highway network may make driving a more attractive mode of travel, thus encouraging more people to travel by car, although increased efficiency of the highways network may reduce congestion, thus minimising air pollution from traffic. Overall, a mixed minor positive and negative effect with uncertainty is likely.
<p><b>14. Energy Efficiency</b></p> <p>To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.</p>	0	Option 4 is not expected to have an effect on this SA objective.
<p><b>15. Economy</b></p> <p>Facilitate a sustainable and growing economy for the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres.</p>	++?	Option 4 proposes the development of a new neighbourhood centre for developments with up to 250 new homes <sup>93</sup> . Option 4 also makes provision for additional local services and rural employment opportunities with potential business growth around South Mimms Services. This is likely to help facilitate a sustainable and growing economy for the Borough, by creating economic and employment opportunities. This option would also include high speed broadband network improvements, which may make the area more attractive to businesses and/or increase the ability of residents to work from home, thus further broadening employment opportunities and economic growth. Overall, a significant positive effect is expected, although this is uncertain.

**Table A6.5: New garden village**

SA Objective	SA Score	Justification
<p><b>1. Education</b></p> <p>To improve access to education, training, opportunities for lifelong learning and employability.</p>	++	Option 5 states that provision will be made for up to four new primary schools and one new secondary school. A significant positive effect is therefore likely.

<sup>93</sup> As this requirement is not included for 'Any development with up to 100 new homes' it is assumed that the requirements listed in 'Any development with up to 250 new homes' will only apply to developments of over 100 homes.

<p><b><u>2. Services</u></b></p> <p>To ensure ready access to essential services and facilities for all residents.</p>	++	<p>Option 5 makes provision for a range of services including education, healthcare, open space, leisure, recreation and community facilities. Option 5 also proposes the development of a village centre with local shops, services and leisure facilities. Comprehensive masterplanning of a new village can ensure that these services and the village centre can all be located where they are most accessible to residents because they will not have to fit around existing development, making them easily accessible. Provision of pedestrian and cycle routes is also expected to make these services and the village centre easily accessible. Overall, a significant positive effect is expected.</p>
<p><b><u>3. Housing Provision</u></b></p> <p>To ensure the provision of housing, including affordable housing and a mix that meets local needs.</p>	++?	<p>Option 5 makes provision for up to 4,000 new homes with the scope to increase by at least 50% in the future. This will contribute significantly to the provision of housing in the Borough, including those which are affordable. Furthermore, the development of such a large area (200 ha) enables the provision of more plots for self-building housing, also contributing to the mix of housing. However, development of a new village is likely to have a longer lead-in time and will need infrastructure to be in place before residents can move in. As such, housing might not be able to be provided through this option until later in the plan period, leading to some uncertainty. Overall, significant positive effects with uncertainty are considered likely.</p>
<p><b><u>4. Community Cohesion</u></b></p> <p>To improve community cohesion by reducing and preventing crime and deprivation, as well as providing sufficient community spaces.</p>	++	<p>Option 5 states that provision will be made for a village centre as well as a number of community spaces including open space, leisure and sports facilities.</p> <p>The area of search includes areas within the 20% most deprived in terms of access to housing and services. Development at this location may help to overcome barriers to these.</p> <p>Whilst levels of crime and fear of crime will be influenced through more detailed design proposals, which are unknown at this stage, planning a new village provides greater opportunities to design out crime. As such, an overall significant positive effect is likely.</p>
<p><b><u>5. Health</u></b></p> <p>To improve population's health and reduce inequalities.</p>	++	<p>Option 5 states that provision will be made for new healthcare provision, as well as leisure and sports facilities. This is expected to have a significant positive effect on people's health by improving access to these facilities and local capacity. Furthermore, improvements to pedestrian and cycle connectivity could encourage active travel, therefore increasing physical activity of residents. In addition, improved public transport services, may reduce inequalities by enhancing accessibility and reducing reliance on the private car.</p>
<p><b><u>6. Soil and minerals</u></b></p> <p>To safeguard soil quantity and quality including reducing contamination and prioritising previously developed land, as well as protecting mineral resources.</p>	-	<p>A new garden village is likely to result in a loss of greenfield land, which is classified as Grades 2 and 3 agricultural land, within the area of search. In addition, the area of search is located entirely within a Minerals Safeguarding Area, therefore this option may sterilise mineral resources. A minor negative effect is therefore likely.</p>

<p><b><u>7. Historic Environment</u></b></p> <p>To protect or enhance historic buildings, heritage assets and archaeological sites.</p>	<p>--?</p>	<p>The development of up to 4,000 homes through a new garden village could have adverse effects on the historic environment, particularly heritage assets present within close proximity to the development site. The area of search contains a number of Grade II Listed Buildings and archaeological sites. The scale of development required for a new garden village is likely to result in some negative effects on historic and heritage features, although this effect is uncertain because the actual effect on heritage assets will depend on the location, scale, design and layout of the new development.</p>
<p><b><u>8. Landscape</u></b></p> <p>To maintain and enhance the quality of countryside and landscape.</p>	<p>--?</p>	<p>The development of up to 4,000 homes through a new garden village would have significant effects on the landscape, due to the scale of such development in a predominantly rural area. The development of a new garden village would result in development of a large area of Green Belt land, therefore good design would be important to avoid coalescence with Potters Bar, Shenley, Radlett and London Colney. However, Option 5 states that enhancements will be made to the green infrastructure network including parks, green spaces and other natural features, which may help to ensure the new village is an attractive settlement. The north eastern corner of Hertsmere does not fall within a Landscape Character Area considered to be 'strong' in character. Overall, a significant negative but uncertain effect is likely, as effects depend on the exact size, location and design of development.</p>
<p><b><u>9. Greenhouse Gas Emissions</u></b></p> <p>To reduce greenhouse gas emissions, including a reduced dependence on the private car.</p>	<p>+/--/?</p>	<p>Option 5 states that improvements will be made to pedestrian/cycle connectivity, as well as the provision of bus routes with possible guided busways to connect with other town centres. This is expected to minimise dependence on the private car and greenhouse gas emissions. Additionally, high speed broadband network improvements may increase the ability of residents to work from home, reducing the number of journeys they make by car. The development of such a large site (200 ha) provides opportunities to allocate land and buildings for local employment, minimising out-commuting for work. However, the development of up to 4,000 homes is expected to significantly increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion. A mixed minor positive and significant negative effects is therefore likely.</p>
<p><b><u>10. Biodiversity and Geodiversity</u></b></p> <p>To protect and enhance biodiversity and geodiversity.</p>	<p>+/--/?</p>	<p>The development of new garden village may have an adverse effect on biodiversity due to a loss of greenfield land, which is more likely to support a greater number and range of species than developed land. A number of designated nature conservation sites lie within or close to the area of search, including a number of Wildlife Sites along the northeastern border of the Borough and Redwell Wood SSSI. These features may be directly lost to or damaged by development, or may be degraded through an increase in urban edge effects, including predation of species by cats and dogs, trampling and arson. Option 5 states that enhancements will be made to green infrastructure (including parks, green spaces and other natural features), which may enhance areas of habitat and connectivity of habitat. However, due to the scale of development, it is considered unlikely that all</p>

		effects on biodiversity can be avoided. A mixed minor positive and significant negative effect is therefore likely. This effect is uncertain as this depends on the exact location and detailed design proposals of development.
<p><b><u>11. Water quality and quantity</u></b></p> <p>To improve water quality and manage water resources sustainably.</p>	+/-	The development of up to 4,000 homes through a new garden village is may put pressure on existing infrastructure, but this is likely to be limited by the ability of such a large development to provide and fund new infrastructure, including services and facilities. It is uncertain how sufficient wastewater infrastructure will be provided, although the scale of this development may be able to provide sufficient funding to address this. Additionally, as water resources are limited in the Borough, it is uncertain how the needs of new development will be met in this regard. Lastly, development in the area of search has potential to negatively impact water quality in Source Protection Zones located to the north of the Borough. A mixed minor positive and negative effect is therefore likely.
<p><b><u>12. Flooding</u></b></p> <p>To minimise the risk of flooding taking account of climate change.</p>	-	There are a limited number of areas at risk of flooding in Hertsmere and risk of flooding depends on the location of proposed development sites. The development of a garden village in the north eastern corner of Hertsmere is unlikely to fall within Flood Zones 2 and 3. However, the extent of new development is likely to lead to a large increase in impermeable surfaces in the north west of Hertsmere, and therefore reduce the drainage ability of the ground. This may result in increases in surface water flooding, therefore a minor negative effect is expected.
<p><b><u>13. Air Quality</u></b></p> <p>To improve local air quality.</p>	+/-	Option 5 makes provision for pedestrian and cycle routes, as well as bus routes with possible guided busways to connect with other town centres. This is likely to reduce dependence on the private car, therefore minimising local air pollution. Furthermore, high speed broadband network improvements may increase the ability of residents to work from home, reducing the number of journeys they make by car. This may also help reduce local air pollution. However, the development of up to 4,000 homes is expected to significantly increase the amount of cars on the road overall, despite availability of more sustainable transport modes, and therefore may increase congestion. This may have adverse effects on local air quality. A mixed minor positive and negative effect is therefore likely.
<p><b><u>14. Energy Efficiency</u></b></p> <p>To minimise the need for energy, increase energy efficiency, and to increase the use of renewable energy.</p>	0	Option 5 is not expected to have an effect on this SA objective.
<p><b><u>15. Economy</u></b></p> <p>Facilitate a sustainable and growing economy for</p>	++	Option 5 proposes the development of a village centre with local shops, services, leisure and community facilities and a new office/high tech business park. This is likely to help facilitate a sustainable and growing economy for the Borough, by creating economic and employment

the Borough that creates economic and employment opportunities, as well as providing for vital and viable town centres.

opportunities. This option would also include high speed broadband network improvements, which may make the area more attractive to businesses and/or increase the ability of residents to work from home, thus further broadening employment opportunities and economic growth. Overall, a significant positive effect is expected.

